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The Proper Test for Assessing the Admissibility of Nonscientific Expert Evidence under Federal Rule of Evidence 702, 1997 John M. Manos Writing Competition on Evidence

Peter B. Oh

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THE PROPER TEST FOR ASSESSING THE ADMISSIBILITY
OF NONSCIENTIFIC EXPERT EVIDENCE UNDER FEDERAL
RULE OF EVIDENCE 702

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A former actor arranges to purchase some marijuana.² Over the next three years, he completes multiple transactions involving a group of six individuals and thousands of pounds of Colombian marijuana. The former actor falls

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²These facts are drawn from *United States v. Johnson*, 575 F.2d 1347 (5th Cir. 1978).

behind in his payments, and the group of suppliers decide to murder the actor. Before this plan can be implemented, however, federal agents arrest and charge all of the individuals for conspiring to import marijuana³ and operating a continuous criminal enterprise.⁴

After being named as a defendant, the former actor negotiates a deal with the government to testify as an expert on the marijuana's origin. Excusing the jury, the judge conducts a *voir dire* hearing. When asked to provide a qualifying basis for expertise, the former actor cites "the experience of being around a great deal and smoking marijuana."⁵ The court admits him as an expert on identifying Colombian marijuana.⁶

This case is not an anomaly: ascertaining legitimate nonscientific⁷ expert evidence is an increasingly common problem in our federal courts. A recent study concludes that approximately forty percent of all expert witnesses introduced in civil trials are of the nonscientific variety.⁸ Further, expert witnesses have testified on a variety of subjects, ranging from the reliability of

³21 U.S.C. § 952(a) (1996).

⁴21 U.S.C. § 848 (1996).

⁵*Johnson*, 575 F.2d at 1360.

⁶Affirming the decision at trial, the Fifth Circuit stated: "[o]n the record before us we cannot say that the claim of an ability to identify Colombian marijuana is so inherently implausible that, as a matter of law, a jury should not be permitted to hear testimony on the identification." *Id.* at 1362.

⁷Drawing a line between scientific and nonscientific expert evidence is not an easy task. One problem is that there are indistinguishable gradations between evidence that is and is not scientifically valid. *See, e.g.,* Rochelle Cooper Dreyfuss, *Is Science a Special Case? The Admissibility of Scientific Evidence after Daubert v. Merrell Dow*, 73 TEX. L. REV. 1779, 1792 (1995) (Scientific "theories are always considered works in progress; indeed, scientists sometimes find it productive to hold several contradictory theories in mind simultaneously."); Cathleen C. Herasimchuk, *A Practical Guide to the Admissibility of Novel Expert Evidence in Criminal Trials under Federal Rule 702*, 22 ST. MARY'S L.J. 181, 198-99 (1990) ("somewhere between the two extremes of the highly subjective, "soft" sciences and the highly objective, "hard" sciences lies the middle ground of expertise which should be, or purports to be, objectively reliable and conclusive but is not necessarily so [P]rofessionals in these fields frequently disagree in their interpretations of the test results.). The Federal Rules of Evidence, however, suggest three helpful, albeit loose, categories of expertise: scientific (e.g., medical), specialized (e.g., behavioral), and technical (e.g., mechanical). FED. R. EVID. 702. These categories will be used here for the sake of convenience. "Nonscientific" expertise thus refers to specialized and technical knowledge.

⁸Samuel R. Gross, *Expert Evidence*, 1991 WIS. L. REV. 1113, 1119 (1991). The study draws its data from 529 civil trials that were decided by juries in California courts from 1985 to 1986. *Id.* Eighty-six percent of these trials involved experts, of which, an average of 3.3 percent appeared in a particular case. *Id.* Approximately fifty percent of the experts used were medical doctors, approximately twenty percent were engineers, and approximately eleven percent were business professionals. *Id.*

hypnotically-refreshed memories⁹ to the fidelity of Greek translations.¹⁰ That such evidence would become an integral part of our legal landscape was presciently foreseen by Dean Wigmore, who remarked that the introduction of expert knowledge into our courts "has done more than any one rule . . . to reduce our litigation to a state of legalized gambling."¹¹

Since Wigmore's time, one enduring problem is federal courts have no established mechanism by which to deal with the growing influx of nonscientific expert knowledge.¹² In the absence of such a mechanism, courts simply devised their own means for determining the admissibility of such knowledge. Although Federal Rule of Evidence 702, *Testimony by Experts*,¹³ was an attempt to solve this murky area, ambiguities within the statute have prevented federal courts from applying Federal Rule of Evidence 702 in a consistent fashion.¹⁴ In response, courts have fashioned various common law standards to determine the admissibility of nonscientific expert evidence.

This Article examines these different standards to evince the need for harmony. Part I of this article examines the admissibility tests for nonscientific expert evidence administered by federal courts before Federal Rule of Evidence

⁹See, e.g., *Rock v. Arkansas*, 438 U.S. 44 (1987).

¹⁰See, e.g., *Evans v. Romer*, 882 P.2d 1335 (Colo. 1994) (admitting testimony by classicists and philosophers on the moral bases of homosexuality to ascertain whether Colorado had a compelling state interest to deny possible protected status to bisexuals, gays, and lesbians).

¹¹JOHN HENRY WIGMORE, 7 A TREATISE ON THE ANGLO-AMERICAN SYSTEM OF EVIDENCE IN TRIALS AT COMMON LAW: INCLUDING THE STATUTES AND JUDICIAL DECISIONS OF ALL JURISDICTIONS OF THE UNITED STATES AND CANADA § 1929, at 39 (3d ed. 1978). At the very least, Dean Wigmore was correct in believing expert evidence would become an established phenomenon. See, e.g., *Report of the Federal Courts Study Committee* 97 (Apr. 2, 1990) ("Economic, statistical, technological, and natural and social scientific data are becoming increasingly important in both routine and complex litigation."); Charles Ehrhardt, *The Conflict Concerning Expert Witnesses and Legal Conclusions*, 92 W. VA. L. REV. 645 (1990) ("The increasing use of expert witnesses in almost every type of litigation has resulted in trial lawyers attempting to expand the traditional limits that have been placed on the scope of opinion testimony.").

¹²See, e.g., *Development in the Law: Confronting the New Challenges of Scientific Evidence*, 108 HARV. L. REV. 1481, 1523-24 (1995) (lamenting that "[t]he current doctrinal framework provides judges with little guidance about how to approach expert testimony pertaining to the 'soft' sciences and other technical issues as opposed to the 'hard' sciences").

¹³FED. R. EVID. 702 promulgates that "scientific, technical, or other specialized knowledge" is admissible only when shown it "will assist the judge or jury in understanding or resolving a factual dispute." Such evidence must be rendered by an individual qualified by virtue of "knowledge, skill, experience, training or education." *Id.*

¹⁴Compare *Brock v. Merrell Dow Pharm., Inc.*, 884 F.2d 167 (5th Cir. 1989) (using FED. R. EVID. 702 to admit expertise on the causal link between Bendectin and birth defects), with *Richardson v. Richardson-Merrell, Inc.*, 857 F.2d 823 (D.C. Cir. 1988) (using FED. R. EVID. 702 to exclude expertise on the causal link between Bendectin and birth defects).

702. The first such test appears in *Frye v. United States*,¹⁵ which establishes only expert knowledge based on a method or principle that has gained sufficient "general acceptance" can be admitted.¹⁶ Part I concludes by discussing the problems that plague these different applied tests and beckon for a single standard.

Part II of this Article examines the Supreme Court's attempt to establish Federal Rule of Evidence 702 as this single standard in *Daubert v. Merrell Dow Pharm.*¹⁷ Part II critically analyzes this case, which involves expert evidence that an anti-nausea drug is a human teratogen.

Daubert's holding fails in two important respects. First, the ruling applies only to *scientific* expert evidence and thus provides no assistance in determining the admissibility of *nonscientific* expert evidence.¹⁸ Second, the ruling retains the *Frye* test as one among many factors to be used in assessing the admissibility of expert evidence.¹⁹ *Daubert* merely adds to the confusion over the standard for admitting nonscientific expert evidence.

Part III of this Article surveys how federal courts currently assess nonscientific expert evidence. There are two primary tests embraced by federal courts. First, some courts maintain that *Daubert's* reasoning can be applied to nonscientific expertise. Second, some courts interpret *Daubert* as being inapplicable to nonscientific expertise and instead rely on Federal Rule of Evidence 702. Part III critically examines the application of these tests.

Part IV of this Article proposes a more promising test than the current alternatives. Part IV argues that courts should reconsider the *Frye* test as the best way to determine the admissibility of nonscientific expert evidence. This article concludes with the assertion the "general acceptance" test is more effective than the current alternatives.

¹⁵293 F. 1013 (D.C. Cir. 1923).

¹⁶*Id.* at 1014.

¹⁷509 U.S. 579 (1993). A year before *Daubert* was decided, the Supreme Court declined an opportunity to settle the standard for determining the admissibility of expert evidence in *Christophersen v. Allied-Signal Corp.*, 939 F.2d 1106 (5th Cir. 1991) (*per curiam*) (expertise on the connection between fumes and colon cancer). In joining the dissent, Justice Blackmun, the author of *Daubert*, observed the "Courts of Appeals are in disagreement" over the "important and recurring issue" of the proper standard of admissibility. *Christophersen*, 503 U.S. at 913 (Blackmun, J., dissenting).

¹⁸*Daubert*, 509 U.S. at 590 & n.8 ("Our discussion is limited to the scientific context because that is the nature of the expertise offered here.").

¹⁹Although refusing to establish a "definitive checklist or test," the majority nevertheless suggested multiple factors that should be considered whenever scientific expertise is weighed for admissibility, *inter alia*, testability, peer review or publication, the known or potential rate of error, and widespread acceptance. *Id.* at 593-95.

I. ADMISSIBILITY TESTS FOR NONSCIENTIFIC EXPERT EVIDENCE BEFORE FEDERAL RULE OF EVIDENCE 702

The earliest experts in American courts typically testified about technical matters. By virtue of their experiences and training, engineers,²⁰ physicians,²¹ and shipmasters²² served as expert witnesses on their occupations.²³ Although highly skeptical about the competence of such witnesses, the Supreme Court erected a loose admissibility standard in *The Schooner Catharine v. Dickinson*.²⁴ Reversing the district court's decision to admit expert testimony on the schooner's value, the Court recommended that only experts "whose occupations and experience enabled them to express opinions . . . upon which [a] court might rely with some confidence in making up its judgment" be admitted.²⁵ This subjective determination of reliability served as the standard for assessing the admissibility of expert evidence until the advent of *Frye v. United States*.²⁶

A. The "General Acceptance" Test

Faced with an increasing influx of expert evidence, the D.C. Circuit attempted to establish a more rigorous and systematic admissibility standard than "subjective reliability."²⁷ In *Frye*, the defendant attempted to introduce expert evidence concerning a "systolic blood pressure deception test," a precursor to the modern polygraph test.²⁸ The expert, who had conducted the test on the defendant, was offered as a witness either to testify about the results

²⁰ See, e.g., *McGowan v. American Tan Bark Co.*, 121 U.S. 575, 587 (1887) ("The plaintiff offered evidence of experts tending to show that the machinery and material of which it was constructed were poor and insufficient to sustain the required pressure.").

²¹ See, e.g., *Davis v. United States*, 165 U.S. 373, 375-76 (1897) ("He [the defendant] also called two medical witnesses, Dr. J. C. Amis and Dr. T. J. Wright . . . enough is disclosed to show that the court permitted full inquiry of each as to . . . give fully his opinion as to the mental condition of defendant.").

²² See, e.g., *Ogden v. Parsons*, 64 U.S. 167, 169 (1859) ("What was 'a full cargo' under all the circumstances . . . was a question which could be solved only by experienced shipmasters.").

²³ See also Learned Hand, *Historical and Practical Considerations Regarding Expert Testimony*, 15 HARV. L. REV. 40, 42-49 (1901) (outlining cases from the 14th to the 19th centuries that involve expertise in paternity, medicine and physics).

²⁴ 58 U.S. 170 (1854).

²⁵ *Id.* at 175.

²⁶ 293 F. 1013 (D.C. Cir. 1923).

²⁷ *Id.*

²⁸ *Id.*

or to conduct another test before the court.²⁹ The district court denied both of these offerings and convicted the defendant.³⁰

On appeal, the D.C. Circuit addressed the deception test's admissibility.³¹ As a way to assess such evidence, the court considered the test along two axes: probative function and prejudicial effect.³² Fearing an inexperienced jury might impute an undue aura of reliability to a quasi-scientific test, the court chose to establish a standard designed to safeguard against prejudicial evidence. Ruling that such evidence "must be sufficiently established to have gained general acceptance in the particular field in which it belongs,"³³ the court thereby linked the admissibility of evidence to its credibility. In so doing, the *Frye* test erected a threshold which required proposed expert evidence to be sufficiently recognizable by a court of law to be admissible.³⁴ While admitting that "[j]ust when a scientific principle or discovery crosses the line between the experimental and demonstrable stages is difficult to define," the court concluded the deception test to have insufficient standing to be admissible.³⁵

²⁹*Id.*

³⁰*Id.*

³¹*Frye*, 293 F. at 1013.

³²*See, e.g.*, MCCORMICK ON EVIDENCE § 203, 364 (John Strong ed., 4th ed. 1992) ("Any relevant conclusions supported by a qualified expert witness should be received unless there are distinct reasons for exclusion. These reasons are the familiar ones of prejudicing or misleading the jury or consuming undue amounts of time."); *In re "Agent Orange" Prods. Liability Litig.*, 611 F. Supp. 1223, 1245 (E.D.N.Y. 1985).

[T]he court may not abdicate its independent responsibilities to decide if the bases meets minimum standards of reliability as a condition of admissibility. . . . If the underlying data are so lacking in probative force and reliability that no reasonable expert could base an opinion on them, an opinion which rests entirely upon them must be excluded.

In re "Agent Orange," 611 F. Supp. at 1245.

³³*Frye*, 293 F. at 1013.

³⁴*See, e.g.*, Jay Kesan, Note, *An Autopsy of Scientific Evidence in a Post-Daubert World*, 84 GEO. L.J. 1985 (1996).

Under *Frye*, a trial judge needs to obtain a bird's-eye view of a . . . discipline to determine if the proffered testimony is based on . . . principles or methodologies that are generally accepted in the [respective] community. She only needs to determine whether . . . [members of that community] . . . have significantly challenged the validity of a particular . . . theory or methodology.

Id. at 1990.

³⁵*Frye*, 293 F. at 1014.

B. Problems with the "General Acceptance" Test

Although adopted by most federal courts,³⁶ the *Frye* "general acceptance" test was heavily criticized. Commentators attacked the test for its ambiguity as to what actually constitutes "general acceptance,"³⁷ as manifest by its inconsistent application in federal courts.³⁸ Moreover, "general acceptance" was a stringent standard that could exclude novel, but nonetheless valid, expert knowledge.³⁹

During the 1960's, for example, the Warren Court stiffened the admissibility standards for physical evidence and lay testimony by creating exclusionary rules based on the Fourth, Fifth, and Sixth Amendments.⁴⁰ These rules compelled prosecutors to utilize recently developed forensic techniques.⁴¹ To counteract these techniques, defense attorneys in criminal cases resorted to the *Frye* test.⁴² Capitalizing on the high threshold of "general acceptance," defense attorneys successfully argued that forensic evidence was too experimental to be admissible in court.⁴³

³⁶See, e.g., *United States v. Downing*, 753 F.2d 1224, 1234 (3d Cir. 1985) ("[T]he general acceptance standard set out in *Frye* was the dominant view within the federal courts at the time the Federal Rules of Evidence were considered and adopted. . . .").

³⁷See, e.g., Paul Giannelli, *The Admissibility of Novel Scientific Evidence: Frye v. United States, A Half-Century Later*, 80 COLUM. L. REV. 1197, 1219 (1980). Giannelli writes:

Courts that accept the *Frye* test often have difficulty deciding when to apply it. . . . Indeed, the selective application of the general acceptance standard is one of its most notable features - inconsistencies in application abound. Part of the problem may lie in defining what types of evidence should be classified as 'scientific evidence' and thus subject to the *Frye* test.

Id.

³⁸Compare, e.g., *Standard Oil Co. of Cal. v. Moore*, 251 F.2d 188 (9th Cir. 1957) (finding that the lower court did not abuse its discretion in admitting expert testimony on value of business), with *Drayton v. Jiffee Chem. Corp.*, 591 F.2d 352, 364 (6th Cir. 1978) (modifying lower court's decision to receive and seriously consider expert testimony on future loss of income "which well outrun[s] any reasonable prediction").

³⁹See, e.g., Paul Tyler, *VII. Evidence*, 22 PEPP. L. REV. 1274, 1275-76 (1995) ("[The] process of moving from the experimental stage to the demonstrable stage takes time. Therefore, scientific techniques in the process of passing through this state will likely not be admissible [under the *Frye* general acceptance standard], even though they may in fact prove to be reliable."); *United States v. Addison*, 498 F.2d 741, 743 (D.C. Cir. 1974) (noting that the *Frye* test "retards somewhat the admission of proof based on new methods of . . . investigation by requiring that they attain sufficient currency and status to gain the general acceptance. . . .").

⁴⁰Edward Imwinkelried, *A New Era in the Evolution of Scientific Evidence: A Primer on Evaluating the Weight of Scientific Evidence*, 23 WM. & MARY L. REV. 261, 261-62 (1981).

⁴¹*Id.*

⁴²*Id.*

⁴³*Id.*

II. THE ATTEMPT TO RECONCILE COMMON LAW ADMISSIBILITY TESTS WITH FEDERAL RULE OF EVIDENCE 702

Since the *Frye* test's emergence, there have been two significant developments with respect to admissibility standards for nonscientific expert evidence. First, the Federal Rules of Evidence were enacted in 1975, creating a statutory standard of "factual assistance" which conflicts with *Frye*. The resulting conflicts among federal courts regarding the appropriate admissibility test prompted the second development, the Supreme Court's attempt to resolve the matter in *Daubert v. Merrell Dow Pharm.* The Court, however, inadvertently created a multi-factor test which only applies to scientific expert evidence.

This section examines the tests established by the Federal Rules of Evidence and *Daubert*.

A. Federal Rule of Evidence 702

The emergence of numerous common law tests for the admissibility of expert evidence culminated in the introduction of the Federal Rules of Evidence. Of the Rules governing expert evidence, 702 is the most relevant here.⁴⁴ It provides:

If scientific, technical, or other specialized knowledge will assist the trier of fact to understand the evidence or to determine a fact in issue, a witness qualified as an expert by knowledge, skill, experience, train-

⁴⁴While FED. R. EVID. 702 is the primary subject of controversy concerning the admissibility of expert evidence, there are four other Federal Rules of Evidence that explicitly apply to expert knowledge. See FED. R. EVID. 703, *Bases of Opinion Testimony by Experts*; FED. R. EVID. 704, *Opinion on Ultimate Issue*; FED. R. EVID. 705, *Disclosure of Facts or Data Underlying Expert Opinion*; FED. R. EVID. 706, *Court Appointed Experts*. These rules are discussed here only as they relate to FED. R. EVID. 702. For a more direct examination of these other rules, see Margaret Berger, *United States v. Scop: The Common-Law Approach to an Expert's Opinion About a Witness's Credibility Still Does Not Work*, 55 BROOK. L. REV. 559 (1989). Berger writes:

[FED. R. EVID.] 703 authorizes an expert to testify upon the basis of facts not admissible in evidence provided the underlying data is of a kind that is reasonably relied upon by experts reaching conclusions in the particular field. In criminal cases, however, Rule 703 must be reconciled with the demands of the confrontation clause.

Id. at 576. See also Michael Mullane, *The Truthsayer and the Court: Expert Testimony on Credibility*, 43 ME. L. REV. 53, 67 (1991) ("[FED. R. EVID.] 704 eliminated the last obstacle [to excluding expert testimony on credibility]. Expert testimony was admissible, even if it went to the ultimate issue."); Faust Rossi, *The Federal Rules of Evidence Past, Present, and Future: A Twenty-Year Perspective*, 28 LOY. L.A. L. REV. 1271, 1278 (1995) ("[FED. R. EVID.] 705 has eliminated some traditional foundation formalities restricting the manner of presenting expertise. . . . eliminat[ing] the need for the hypothetical question and permit[ting] the expert to give an opinion without first testifying to the underlying facts which support it.").

ing, or education, may testify thereto in the form of an opinion or otherwise.⁴⁵

Federal Rule of Evidence 702 thus requires a two-fold showing: (1) that the proposed witness possesses an acceptable degree of expertise on a "scientific," "technical," or "specialized" matter; and (2) that the evidence will facilitate the resolution of a purely factual dispute.⁴⁶ The rule therefore does not explicitly recognize "general acceptance" as a means by which to determine the admissibility of expert evidence.⁴⁷

The first element of Federal Rule of Evidence 702, its demand for credentials, is problematic. While it establishes the factors that a federal court must consider to assess a witness's expertise, Federal Rule of Evidence 702 fails to provide a threshold standard for the factors, both individually and collectively.⁴⁸ Much of the current confusion about what constitutes admissible nonscientific expertise is thus traceable to this provision of Federal Rule of Evidence 702.⁴⁹

The second element of Federal Rule of Evidence 702, its purpose, is also problematic. "Factual assistance" is a highly subjective determination of the trier of fact's capacity to benefit from the proffered expert evidence.⁵⁰ This task

⁴⁵Beyond the federal courts, twenty-six states adopted FED. R. EVID. 702 without modification. JACK WEINSTEIN & MARGARET BERGER, *WEINSTEIN'S EVIDENCE: COMMENTARY ON RULES OF EVIDENCE FOR THE UNITED STATES COURTS AND STATE COURTS* § 702(06), at 64-85 (1993).

⁴⁶*See, e.g.,* DeLuca v. Merrell Dow Pharm., Inc., 911 F.2d 941, 954 (3d Cir. 1990) ("Admission of expert testimony so long as it is rendered by a qualified expert and is helpful to the trier of fact.")(citing American Tech. Resources v. United States, 893 F.2d 651 (3d Cir. 1990)); Habecker v. Copperloy Corp., 893 F.2d 49, 51-53 (3d Cir. 1990); Breidor v. Sears, Roebuck & Co., 722 F.2d 1134, 1138-39 (3d Cir. 1983)). *See also* Little Oil Co. v. Atlantic Richfield Co., 852 F.2d 441, 446 (9th Cir. 1988) (citing United States v. Gwaltney, 790 F.2d 1378, 1381 (9th Cir. 1986); United States v. Arenal, 768 F.2d 263, 269 (8th Cir. 1985)).

⁴⁷The precise relationship between *Frye* and FED. R. EVID. 702, however, is unsettled. Some courts have concluded that FED. R. EVID. 702 implicitly incorporates *Frye*. *See, e.g.,* United States v. Two Bulls, 918 F.2d 56, 60 (8th Cir. 1990) ("[W]e feel Rule 702 and *Frye* both require the same general approach to the admissibility of new scientific evidence. . . ."); United States v. Christophe, 833 F.2d 1296, 1299 (9th Cir. 1987) (ruling FED. R. EVID. 702's requirement of "appreciable help" requires that the proffered expert testimony "[c]onforms to a generally accepted explanatory theory"). Neither congressional records on the Federal Rules nor FED. R. EVID. 702's advisory committee notes, however, mention *Frye*. Paul Giannelli, *Daubert: Interpreting the Federal Rules of Evidence*, 15 CARDOZO L. REV. 1999 (1994). In contrast, some courts have concluded *Frye* and FED. R. EVID. 702 are not mutually exclusive and have applied both tests in conjunction with each other. *See, e.g.,* Christophersen, 939 F.2d at 1110 (applying *Frye* and FED. R. EVID. 702 as a threshold inquiry of admissibility).

⁴⁸*See* FED. R. EVID. 702.

⁴⁹*Id.*

⁵⁰For this very reason, some commentators proposed more objective tests of whether expert knowledge was "beyond the ken of the average layman" or "not within the common knowledge of the average layman." MCCORMICK ON EVIDENCE § 13, at 29

can be difficult in light of the diverse and wide pool of jurors that may be present in any particular case. Thus, courts enjoy a significant degree of latitude as to when expert evidence should be admitted or excluded.⁵¹

B. Daubert v. Merrell Dow Pharm., Inc.

Recognizing the tension between Federal Rule of Evidence 702 and *Frye* which faced federal courts, the Supreme Court attempted to establish the definitive standard for assessing the admissibility of expert evidence. The Petitioners were two children who alleged that a pharmaceutical company's anti-nausea drug had caused their birth defects. In support of its motion for summary judgment, the company submitted a well-credentialed expert's affidavit, which reviewed all literature on the drug, Bendectin, and found no attributable risk. Vacating the district court's grant of summary judgment, the majority, led by Justice Blackmun, ruled that "[i]n principle, under the Federal Rules [of Evidence] no common law [standard for determining the admissibility] of [expert] evidence remains."⁵²

The Court, however, explicitly undermined its ruling by embracing reliability as the primary criterion for admitting expert evidence. Stating "[t]hat the *Frye* test was displaced by the [Federal] Rules of Evidence does not mean, however, that the Rules themselves place no limits on the admissibility of purportedly scientific evidence,"⁵³ the majority retained peer review as an important factor for determining the "general acceptance" of scientific evidence.⁵⁴ Although refusing to establish a "definitive checklist or test," the

(Edward Cleary et al. eds., 1972). See also *Downing*, 753 F.2d at 1229 (embracing an admissibility test predicated on whether expertise is "helpful to the [jury] in understanding evidence that is simply difficult (though) not beyond ordinary understanding") (quoting STEPHEN SALTZBERG & KENNETH REDDEN, FEDERAL RULE OF EVIDENCE MANUAL 451 (3d ed. 1982)). Other courts, however, did not adopt these tests. See, e.g., *In re Japanese Elec. Prod. Antitrust Litig.*, 723 F.2d 238, 279 (3d Cir. 1983) ("[T]he requirement for admissibility that expert testimony be 'beyond the jury's sphere of knowledge' adopts a formulation which was rejected by the drafters of Rule 702.").

⁵¹ See, e.g., *Fellner v. Supreme Corp.*, No. 92-3080, 1995 U.S. Dist. LEXIS 2166, at *3 (D.N.J. Feb. 21, 1995) ("District Courts are afforded broad discretion in determining the admissibility of expert testimony under Federal Rule of Evidence 702 . . .").

⁵² *Daubert*, 509 U.S. at 588 (quoting Professor Cleary). For an illuminating discussion of *Daubert* and its implications, see REFORMING THE CIVIL JUSTICE SYSTEM 162-279 (Larry Kramer ed., 1996) (A section entitled "Science in the Courts" contains background on *Daubert* and a panel discussion about the case's implications involving academics, experts, federal judges, and litigators.).

⁵³ *Daubert*, 509 U.S. at 589.

⁵⁴ *Id.* at 593-94. This decision to retain peer review is curious since the Court was attempting to suggest a way to apply FED. R. EVID. 702, which conflicts with *Frye*. See, e.g., Alan Tamarelli, Jr., *Daubert v. Merrell Dow Pharm.: Pushing the Limits of Scientific Reliability: The Questionable Wisdom of Abandoning the Peer Review Standard for Admitting Expert Testimony*, 47 VAND. L. REV. 1175, 1182 (1994). Tamarelli writes:

The Federal Rules of Evidence do not invoke peer review as a prerequisite for admitting expert testimony. Neither the Advi-

majority nevertheless suggested multiple factors to be considered whenever scientific expertise is weighed for admissibility. Among these factors are: testability, peer review or publication, the known or potential rate of error and widespread acceptance.⁵⁵

This embrace of reliability was qualified. According to the majority, while "scientists typically distinguish between 'validity' (does the principle support what it purports to show?) and 'reliability' (does application of the principle produce consistent results?),"⁵⁶ whenever there is "a case involving scientific evidence, evidentiary reliability will be based upon scientific validity."⁵⁷ *Daubert* thus collapses the scientific standards of reliability and validity into a legal standard of "reliability."

In his dissent, Justice Rehnquist attacked the ruling's ambiguous scope and formless test for evaluating the admissibility of expert scientific evidence. Rehnquist poignantly asked: "[w]hat is the difference between scientific

sory Committee Notes regarding [FED. R. EVID.] 702, the relevant congressional floor debates and hearings, nor the relevant congressional committee reports shed light on Congress's intent to perpetuate or eliminate [the peer review standard established in] *Frye*.

Id.

⁵⁵*Daubert*, 509 U.S. at 592-94.

⁵⁶*Id.* at 590 & n.9.

⁵⁷*Id.* The Court's analysis here refers to the standards by which scientific methods are assessed. The "Scientific Method" consists of a four-step process: (1) systematic observation of experiments; (2) formation of a hypothesis; (3) further experimentation; and (4) rejection or validation of the hypothesis. HENRY BAUER, *SCIENTIFIC LITERACY AND THE MYTH OF THE SCIENTIFIC METHOD* 3 (1992). See also CARLO LASTRUCCI, *THE SCIENTIFIC APPROACH: BASIC PRINCIPLES OF THE SCIENTIFIC METHOD* 6 (1967) (asserting "[r]eliable knowledge is synonymous with exact or correct knowledge. Science strives constantly for exactness; it is not satisfied with half-truths and is intolerant of careless procedures."); Chauncey White, *The Origins of Modern Science*, *THE STRUCTURE OF SCIENTIFIC THOUGHT: AN INTRODUCTION TO PHILOSOPHY OF SCIENCE* 15 (1960) ("[I]t is indisputable that verification is essential to the completeness of scientific method."). There is, however, considerable debate about whether this process is an accurate description of actual scientific methodology. See, e.g., PAUL FEYERABEND, *AGAINST METHOD: OUTLINE OF AN ANARCHIST THEORY OF KNOWLEDGE* 18-19 (1975) ("[a]re we really to believe that the naive and simple-minded rules which methodologists take as their guide are capable of account for such a 'maze of interactions'?"); THOMAS KUHN, *THE STRUCTURE OF SCIENTIFIC REVOLUTIONS* 35-42 (1962) (arguing scientific research essentially consists of puzzle-solving). Science, however, undeniably commands a degree of consensus unrivaled by another discipline. See, e.g., LARRY LAUDAN, *SCIENCE AND VALUES: THE AIMS OF SCIENCE AND THEIR ROLE IN SCIENTIFIC DEBATE* 3-4 (1984). Laudan notes:

[f]or the most part, natural scientists working in any field or subfield tend to be in agreement about most of the assertions of their discipline . . . so impressed were many philosophers and sociologists by the extent of agreement in science that they often took the degree of agreement to be the central, even the defining, epistemic and cognitive feature of science.

Id.

knowledge and technical knowledge; does [Federal Rule of Evidence] 702 actually contemplate the phrase 'scientific, technical, or other specialized knowledge be broken down into numerous subspecies of expertise, or did its authors simply pick general descriptive language . . . ?'⁵⁸ Rehnquist's question illustrates a significant failing of the majority's opinion: its reliance on scientific principles, which restrict *Daubert* from interpreting Federal Rule of Evidence 702 as to nonscientific expert knowledge.

Missing the thrust of this point, the majority merely confirms Rehnquist's fear. The majority's response to the dissent is: "[o]ur discussion is limited to the scientific context because that is the nature of the expertise offered here."⁵⁹ *Daubert* thus provides no test for determining the admissibility of nonscientific expert evidence.⁶⁰

III. ADMISSIBILITY TESTS FOR NONSCIENTIFIC EXPERT EVIDENCE AFTER FEDERAL RULE OF EVIDENCE 702 AND *DAUBERT*

Trial courts enjoy significant discretion in determining whether to admit or exclude expert evidence.⁶¹ A sign of this discretion is the various connections between different evidentiary rules. The possibility that potentially prejudicial, and therefore excludable, information nevertheless may be admissible as impeachment evidence, permits a judge to place greater weight on a case's particulars in admissibility rulings.

Another sign of this discretion is the esoteric level of knowledge that, by definition, accompanies expertise and can be used to disguise any extant personal biases.⁶² As one judge has noted, because "[e]xpert evidence can be both powerful and quite misleading [due to] the difficulty in evaluating it . . .

⁵⁸*Daubert*, 509 U.S. at 600 (Rehnquist, C.J., dissenting). See also David Faigman, *The Evidentiary Status of Social Science under Daubert: Is It "Scientific," "Technical," or "Other" Knowledge*, 1 PSYCHOL., PUB. POL'Y & L. 960 (1995) (discussing the applicability of *Daubert*'s evidentiary standard to psychological research).

⁵⁹*Daubert*, 509 U.S. at 590 & n.8.

⁶⁰See, e.g., *Sinclair*, 74 F.3d at 757 ("*Daubert* does not create a special analysis for answering questions about the admissibility of all expert testimony.").

⁶¹*Salem v. United States Lines Co.*, 370 U.S. 31, 35 (1962).

⁶²This problem is especially acute when a party seeks to introduce scientific expert knowledge. See, e.g., *United States v. Baller*, 519 F.2d 463, 466 (4th Cir. 1975). The Court stated:

[t]here 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. In addition, it is difficult to rebut such an opinion except by other experts or by cross-examination based on a thorough acquaintance with the underlying principles.

Id.

the judge . . . exercises more control over experts than over lay witnesses."⁶³ Accordingly, trial courts possess a greater degree of responsibility to guard against confusing or slanted expert opinions.

These concerns are compounded when nonscientific expert knowledge is involved. The fields comprising such knowledge are numerous and diverse. Accordingly, the factors used to evaluate the reliability of one field may not be applicable to another field.

A relevant consequence of these complexities is organizing a survey of expert admissibility rulings can be a difficult task. One commonly deployed strategy is to examine the admissibility of one expert field across different circuits.⁶⁴ In order to provide a more comprehensive survey of nonscientific expert knowledge, this strategy is not adopted here.

Instead, this section evaluates federal admissibility rulings by the test applied. The choice of a particular test is a two-step process.⁶⁵ First, a determination must be made as to whether the expert knowledge in question is scientific or nonscientific.⁶⁶ Second, relevant considerations must be selected to assess the admissibility of the proffered knowledge.⁶⁷

Identifying the appropriate test is useful because it permits a comprehensive and systematic survey of current federal trends. As the sort of expertise proffered does not influence the test applied, different fields can be analyzed as a collective group. Further, as the test applied does not turn on a case's factual particulars, which can result in different admissibility rulings, circuit-wide trends can be gleaned.

⁶³Jack Weinstein, *Rule 702 of the Federal Rules of Evidence Is Sound; It Should Not be Amended*, 138 F.R.D. 631, 632 (1991).

⁶⁴See, e.g., Thomas Airone, Note, *Hedonic Damages and the Admissibility of Expert Testimony in Connecticut after Daubert v. Merrell Dow Pharm., Inc.*, 15 Q.L.R. 235 (1995); Robert Handberg, *Expert Testimony on Eyewitness Identification: A New Pair of Glasses for the Jury*, 32 AM. CRIM. L. REV. 1013 (1995); Christopher Hockett & Frank Hinman, *Admissibility of Expert Testimony in Antitrust Cases: Does Daubert Raise a New Barrier of Entry for Economists?*, 10 SUM. ANTITR. 40 (1996); James McCall, *Misconceptions and Re-evaluation Polygraph Admissibility after Rock and Daubert*, 1996 U. ILL. L. REV. 363 (1996); Deon Nossel, Note, *The Admissibility of Ultimate Issue Expert Testimony by Law Enforcement Officers in Criminal Trials*, 93 COLUM. L. REV. 231 (1993); Jeremy O. Pasternak, Comment, *Sexual Harassment and Expertise: The Admissibility of Expert Witness Testimony in Cases Utilizing the Reasonable Woman Standard*, 35 SANTA CLARA L. REV. 651 (1995); Myrna Raeder, *Proving the Case: Battered Women and Battered Syndrome: The Double-Edged Sword: Admissibility of Battered Woman Syndrome By and Against Batterers in Cases Implicating Domestic Violence*, 67 U. COLO. L. REV. 789 (1996); Jennifer Sparks, Comment, *Admissibility of Expert Psychological Evidence in the Federal Courts*, 27 ARIZ. ST. L.J. 1315 (1995).

⁶⁵*Daubert*, 509 U.S. 579, 592 ("[T]he trial judge must determine at the outset, pursuant to Rule 104(a), whether the expert is proposing to testify to (1) scientific knowledge that (2) will assist the trier of fact to understand or determine a fact in issue.").

⁶⁶*Id.*

⁶⁷*Id.*

Two primary types of tests have emerged for nonscientific expert evidence since the Supreme Court's attempt to clarify the proper admissibility standard.⁶⁸ First, despite its explicit limitation to scientific expertise, *Daubert* has been utilized by some courts as a source of guidance on how to apply Federal Rule of Evidence 702 to proffered nonscientific expertise.⁶⁹ Second, some courts have ruled *Daubert* is inapplicable to such situations and instead have interpreted Federal Rule of Evidence 702's mandate of factual assistance in determining the admissibility of expert evidence.⁷⁰ As this section critically examines cases illustrating both tests, admissibility rulings from various circuits are noted for each type of expertise involved.

A. Applying *Daubert*

Although *Daubert* was limited explicitly to establishing the proper admissibility test for expert scientific evidence,⁷¹ no nonscientific equivalent of *Daubert* exists. Numerous courts have responded by trying to fill this void with the guidance of *Daubert*. These attempts all interpret *Daubert* as requiring judges to guard against questionable types of expert evidence.⁷² For some courts, *Daubert's* requirement of vigilance entails a determination of the proffered nonscientific expert evidence's validity and relevancy.⁷³ Other courts, however, have concluded that in addition to a validity and relevancy assessment, *Daubert's* suggested guidelines should be applied.⁷⁴ The cases within this section therefore illustrate varying degrees to which courts have

⁶⁸Though they exist, cases that do not involve the application of either *Daubert* or FED. R. EVID. 702 to determine the admissibility of expert evidence are highly unusual and therefore of limited utility. *See, e.g., Borawick v. Shay*, 68 F.3d 597, 608 (2d Cir. 1995) (eschewing both *Daubert* and FED. R. EVID. 702 in favor of a hybrid common law test requiring trial courts to conduct "a detailed factual analysis on a case-by-case basis" that determines reliability "in view of all the circumstances") (citing *Sprynczynatyk*, 771 F.2d at 1122; *McQueen v. Garrison*, 814 F.2d 951, 958 (4th Cir. 1987)). *Borawick's* amorphous test was fashioned to account for the case's unusual factual demands, *id.* at 606, and for the court's conclusion that "the law continues to be in a state of flux regarding the reception of hypnotically-enhanced testimony." *Id.* at 606 (citing CHARLES WRIGHT & VICTOR GOLD, FED. PRAC. & PROC.: EVIDENCE § 6011, at 123 (1990)). The test, therefore, does not illuminate general federal trends.

⁶⁹*See, e.g., Borawick*, 68 F.3d at 597.

⁷⁰*See, e.g., Thomas v. Newton Intern. Enter.*, 42 F.3d 1266 (9th Cir. 1944).

⁷¹*Daubert*, 509 U.S. at 579.

⁷²*See, e.g., United States v. Sepulveda*, 15 F.3d 1161 (1st Cir. 1993).

⁷³*Daubert's* requirement of relevance is a species distinct from the relevancy requirement established in FED. R. EVID. 401. *See, e.g., GRAHAM LILLY, AN INTRODUCTION TO THE LAW OF EVIDENCE* § 12.4, at 569 (3d ed. 1996) (asserting "[t]he question to be asked [under *Daubert*] is whether the reasoning or methodology relied upon can be usefully applied to help develop the facts in dispute"). Under FED. R. EVID. 401's conception of relevance, a party must establish a connection between a fact and the instant dispute.

⁷⁴*See, e.g., United States v. 14.38 Acres of Land*, 80 F.3d 1074 (5th Cir. 1996).

applied *Daubert* as the standard for determining the admissibility of nonscientific expert evidence.

1. Gatekeeping under *Daubert*

The cornerstones of *Daubert's* analysis are two-fold. First, the evidence must be reliable.⁷⁵ Second, the proposed expertise must be relevant.⁷⁶ These mandates are predicated on a conception of trial judges as "gatekeepers" whenever faced with the decision to admit or exclude expertise.⁷⁷ Courts that have assumed this role, however, differ as to the amount of responsibility entailed by gatekeeping under *Daubert*. Some courts have adopted a conception of gatekeeping that conditions admission on a showing of the proffered expert evidence's scientific validity.⁷⁸ Other courts have embraced a broader conception of gatekeeping that conditions admission on a showing of both scientific validity and relevance.⁷⁹

At a minimum, all courts that have adopted the role of gatekeepers under *Daubert* require admissible expert evidence to be scientifically valid.⁸⁰ In *Bowers v. Northern Telecommunication, Inc.*,⁸¹ the Northern District of Florida cited gatekeeping as the basis for admitting an expert on the link between computer keyboards and "cumulative trauma disorders."⁸² Gatekeeping, as understood by the court, entailed only a determination that the expert's reasoning or methodology be scientifically valid.⁸³ According to the Eleventh Circuit, *Daubert* thus governs the scientific validity of proffered expert knowledge as a way to measure its reliability.⁸⁴

As other circuits have noted, there are problems with this conceptualization of gatekeeping. First, determining whether proffered expert evidence is "scientific" is a difficult task to perform. Second, reliability is but one element

⁷⁵*Daubert*, 509 U.S. at 579.

⁷⁶Relevancy under *Daubert*, as used hereafter, is distinct from relevancy as set forth in FED. R. EVID. 401. See *supra* text accompanying note 56.

⁷⁷See *Daubert*, 509 U.S. at 589.

⁷⁸See, e.g., *Valentine v. Pioneer Chlor Alkali Co., Inc.*, 921 F. Supp. 666 (D. Nevada 1996); *Jones v. United States* 933 F. Supp. 894 (N.D. Calif. 1996).

⁷⁹See *supra* text accompanying note 56.

⁸⁰905 F. Supp. 1004.

⁸¹*Id.*

⁸²*Id.* at 1006.

⁸³*Id.* at 1007 ("A *Daubert* inquiry . . . does not focus on whether the expert's opinion is correct; rather, it focuses on whether the opinion is . . . based on methods and procedures of science.") (citing *In re Paoli R.R. Yard PCB Litig.*, 35 F.3d 717, 744 (3d Cir. 1994)).

⁸⁴*Id.*

of Federal Rule of Evidence 702; evaluating scientific validity does not address the relevance of expert evidence.

As presciently observed by the Ninth Circuit on remand of *Daubert*,⁸⁵ federal judges are ill-equipped to identify the characteristics of "scientific" expertise.⁸⁶ Lamenting that "we [federal judges] are largely untrained in science and certainly no match for any of the witnesses whose testimony we are reviewing,"⁸⁷ the court predicted that "[f]ederal judges ruling on the admissibility of expert scientific testimony [will] face a far more complex and daunting task in a post-*Daubert* world than before."⁸⁸ Indeed, determining what evidence constitutes "scientific knowledge" much less "good science" has proved to be a challenge. Recent seminars and manuals by the Federal Judicial Center on scientific methods and principles are but indicia that federal judges need assistance to apply *Daubert*.⁸⁹

Another problem with this conception of gatekeeping is that *Daubert* also requires a showing of relevance.⁹⁰ The Fifth Circuit made this clear in *Guillory v. Domtar Industries, Inc.*⁹¹ There, the trial court excluded expert evidence on a product's design.⁹² On appeal, the court interpreted *Daubert* as imposing two tasks in admissibility rulings: "(1) to ensure that an expert's testimony rests upon a reliable foundation, [and] (2) to ensure that all scientific testimony or evidence is reliable and relevant."⁹³ Applied to the instant case, the *Guillory*

⁸⁵*Daubert*, 43 F.3d at 1311.

⁸⁶*Id.* at 1316.

⁸⁷*Id.* at 1315-16. In fact, after considering *Daubert* on remand, the Ninth Circuit has made "what seem to be conflicting pronouncements as to whether *Daubert* applies to all expert testimony or only to scientific knowledge."

⁸⁸*Id.* at 1315. See also *McKendall v. Crown Control Corp.*, 122 F.3d 803, 806 (9th Cir. 1997)(citing *Cordoba*, 104 F.3d at 230). See also *Thomas v. Newton Int'l Enter.*, 42 F.3d 1266, 1270 & n.3 (9th Cir. 1994)("Daubert was clearly confined to the evaluations of scientific expert testimony."); *Clear v. Burlington N. R.R. Co.*, 29 F.3d 499, 501 & n.2 (9th Cir. 1994)(noting that *Daubert's* requirements apply to all proffered expert testimony").

⁸⁹See, e.g., Margaret Berger, *Evidentiary Framework*, in FEDERAL JUDICIAL CENTER, REFERENCE MANUAL ON SCIENTIFIC EVIDENCE 50 (1994) (asserting that "[w]hile courts are unlikely to undertake the inquiry envisioned by *Daubert* whenever scientific evidence is proffered, it is not yet clear when they must do so").

⁹⁰See *supra* note 56.

⁹¹95 F.3d 1320 (5th Cir. 1996).

⁹²For other cases involving expertise in products liability, see *Brock v. Caterpillar, Inc.*, 94 F.3d 220 (6th Cir. 1996) (excluding expertise), *cert. denied*, 117 S. Ct. 1428 (1997); *American and Foreign Ins. Co. v. General Elec. Co.*, 45 F.3d 135 (6th Cir. 1995) (excluding expertise); *Cummins*, 93 F.3d at 362 (excluding expertise); *Pestel v. Vermeer Mfg. Co.*, 64 F.3d 382 (8th Cir. 1995) (excluding expertise).

⁹³*Guillory*, 95 F.3d at 1330-31 (citing *Marcel v. Placid Oil Co.*, 11 F.3d 563, 567 (5th Cir. 1994)). The court in *Guillory* also mentioned its general responsibility under FED. R. EVID. 403 to ensure that the evidence's probative value outweighs its actual or potential prejudicial value. *Id.*

court found that the expert's opinions, although inspired by a reliable field, were too speculative to "speak to the case at hand and hence [were] irrelevant."⁹⁴ Citing its role as a gatekeeper under *Daubert*,⁹⁵ the court concluded that the plaintiffs' insufficient showing of relevance justified their expert's exclusion.

2. Extending *Daubert's* Guidelines to Nonscientific Expert Evidence

A few courts, however, have not only assumed the role of gatekeepers but also completely grafted *Daubert's* suggested guidelines onto nonscientific expert evidence. *Daubert's* explicit limitations present a challenge that has resulted in experimentation by different circuits. Some courts have interpreted *Daubert's* objectives as requiring a showing of sufficient peer review and general acceptance.⁹⁶ Other courts, however, have settled on a more moderate interpretation of *Daubert's* objectives as concerning only an expert's methods or principles.⁹⁷ The common thread between these various approaches is a belief expert knowledge must approximate scientific reliability to be admissible.⁹⁸

As a way to measure reliability, some courts have adopted *Daubert's* guidelines of peer review and general acceptance. In *Ohio ex rel. Montgomery v. Louis Trauth Dairy, Inc.*,⁹⁹ the Southern District of Ohio assessed the admissibility of expert economic testimony.¹⁰⁰ Although acknowledging "the proffered experts' testimony may not qualify as 'scientific knowledge,'"¹⁰¹ the

⁹⁴*Id.* (citing *Christophersen*, 939 F.2d at 1114).

⁹⁵The Fifth Circuit, however, has cautioned against expanding gatekeeping beyond the explicit dictates of *Daubert*. For example, the court in *United States v. 14.38 Acres of Land*, 80 F.3d 1074 (5th Cir. 1996) observed gate-keeping "is not intended to serve as a replacement for the adversary system." *Id.* at 1078. Moreover, *Daubert* "did not otherwise work a sea change over federal evidence law." *Id.* (citing *United States v. Sinclair*, 74 F.3d 753, 757 (7th Cir. 1996)).

⁹⁶*See, e.g.*, *United States v. Bonds*, 12 F.3d 5401 (1993).

⁹⁷*See, e.g.*, *In re Paoli R.R. Yard PCB Litig.*, 35 F.3d 717 (3d Cir. 1994).

⁹⁸*Tassin v. Sears, Roebuck & Co.*, 946 F. Supp. 1241 (M.D. La. 1996).

⁹⁹925 F. Supp. 1247 (S.D. Ohio 1996).

¹⁰⁰For other cases involving expertise in economics, see *FDIC v. Castetter*, 86 F.3d 1162 (9th Cir. 1996) (admitting expertise); *Frymire-Brinati v. KPMG Peat Marwick*, 2 F.3d 183 (7th Cir. 1993) (excluding expertise); *Ayers v. Robinson*, 887 F. Supp. 1049 (N.D. Ill. 1995) (excluding expertise); *Tuscaloosa v. Harcros Chemicals, Inc.*, 877 F. Supp. 1504 (N.D. Ala. 1995) (excluding expertise); *Hein v. Merck & Co.*, 868 F. Supp. 230 (M.D. Tenn. 1994) (excluding expertise).

¹⁰¹*Louis Trauth Dairy*, 925 F. Supp. at 1252 (citing David Kaye & David A. Freedman, *Reference Guide to Statistics*, in FEDERAL JUDICIAL CENTER, REFERENCE MANUAL ON SCIENTIFIC EVIDENCE 336)).

court concluded that "the general framework of *Daubert* applies to all expert testimony."¹⁰²

The court, recognizing *Daubert's* scientific grounding, essentially synthesized its guidelines to arrive at an admissibility test for the disputed experts: whether "the proffered testimony is based upon valid economic, statistical or econometric methodologies and reasoning."¹⁰³ Applying this test, the court required that the experts' methods be "testable, generally accepted and reproducible."¹⁰⁴ Satisfied that the evidence comported with *Daubert's* guidelines, the court admitted the experts.¹⁰⁵

In contrast, some courts have adopted an abstract reading of *Daubert's* mandate instead of its framework. In *Rosen v. Ciba-Geigy Corp.*,¹⁰⁶ the Seventh Circuit looked to *Daubert* for guidance in determining the admissibility of evidence on the risks of nicotine patches.¹⁰⁷ Under the *Rosen* court's reading of *Daubert*, trial judges have two tasks: (1) to ensure that experts are held to their professional standards; and (2) to admit a proffered expert if these standards are satisfied, regardless of whether the methods used are generally accepted.¹⁰⁸ While conceding the expert's credentials, the *Rosen* court disapproved of his opinions' and speculative basis and excluded the physician's testimony.¹⁰⁹

Applying either a strict or liberal interpretation of *Daubert's* guidelines is a problematic way to assess questionable expertise. Scientific validity is a stringent standard that could exclude all but the most reliable types of expert evidence. As the *Rosen* court recognized, there are significant differences between scientific and nonscientific evidence. Indeed, the unilateral acceptance of a singular method and standard is a hallmark of scientific fields.¹¹⁰

To avoid such a restrictive standard, courts have only one other possible option with *Daubert*: undermine it by relaxing the test's scientific-specific standards for nonscientific expert evidence. This test is typically more

¹⁰²*Id.* (citing *Cook v. American S.S. Co.*, 53 F.3d 733, 738 (6th Cir. 1995); *American College of Trial Lawyers, Standards and Procedures for Determining Admissibility of Expert Testimony after Daubert*, reprinted in, 157 F.R.D. 571 (1994) (arguing *Daubert* should be used to analyze nonscientific expert knowledge)). See also *Berry v. Detroit*, 25 F.3d 1342, 1350 (6th Cir. 1994) (ruling that gatekeeping is a "function of federal judges [that] is applicable to all expert testimony offered under Rule 702").

¹⁰³*Louis Trauth Dairy*, 925 F. Supp. at 1252.

¹⁰⁴*Id.*

¹⁰⁵*Id.*

¹⁰⁶78 F.3d 316 (7th Cir.), cert. denied, 117 S.Ct. 73 (1996).

¹⁰⁷*Id.*

¹⁰⁸*Id.* at 318-19.

¹⁰⁹*Id.*

¹¹⁰See, e.g., *United States v. Cordoba*, 104 F.3d 225, 230 (9th Cir. 1997) ("In order to qualify as scientific knowledge, an inference or assertion must be derived from the scientific method.").

unreliable than its scientific counterpart.¹¹¹ Because it is unique to scientific fields, the process of hypothesis verification cannot be applied to social science or other nonscientific types of expertise. Accordingly, courts that respect these differences would have to lower *Daubert's* requirements to a level that more closely approximates those of Federal Rule of Evidence 702.

The Tenth Circuit adopted a variant of this approach by strictly limiting *Daubert* to cases involving a principle or methodology. In *Compton v. Subaru of America, Inc.*,¹¹² the defendant unsuccessfully sought to exclude an expert on product design. As understood by the court, *Daubert's* explicit focus was "solely on principles and methodology, not on the conclusions they generate."¹¹³ Accordingly, the court reasoned *Daubert's* reach did not extend to cases where experience- or training-based knowledge was involved.¹¹⁴ The court stated that "*Daubert* [does not] completely change [the] traditional analysis under Rule 702. Instead, *Daubert* sets out additional factors the trial court should consider under Rule 702" ¹¹⁵ In finding that the expert's conclusions were drawn from his extensive work experiences and from general engineering principles, the court declined to apply *Daubert* and admitted the testimony under Federal Rule of Evidence 702.

¹¹¹See, e.g., Michael Green, *Expert Witnesses and Sufficiency of Evidence in Toxic Substances Litigation: The Legacy of Agent Orange and Bendectin Litigation*, 86 NW. U. L. REV. 643, 645 (1992) ("Scientific methodology today is based on generating hypotheses and testing them to see if they can be falsified; indeed, this methodology is what distinguishes science from other fields of human inquiry.").

¹¹²82 F.3d 1513 (10th Cir.), cert. denied, 117 S. Ct. 611 (1996).

¹¹³*Id.* at 1518 (citing *Daubert*, 509 U.S. at 594).

¹¹⁴*Id.* at 1519 (admitting specialized knowledge of drug trafficking under FED. R. EVID. 702 and *Daubert*); *United States v. Markum*, 4 F.3d 891 (10th Cir. 1993) (admitting a fire chief's personal observations under FED. R. EVID. 702 and not *Daubert*). The Eleventh Circuit, in *United States v. Lee*, 25 F.3d 997 (11th Cir. 1994), however, has extended *Daubert's* reach to the application of scientific concepts. Further, Seventh Circuit dicta has expressed sympathy for this view stating:

[W]e believe that . . . *Daubert* counsels against a wholesale abandonment of the *Daubert* analysis simply because the issue before the court . . . involves the application of science to a concrete and practical problem It may be that, in some "as applied" situations, some of the non-exhaustive factors noted by the Supreme Court in *Daubert* are worthy of less emphasis than in situations involving more abstract or novel scientific theory.

Lee, 25 F.3d at 997 (citing *Buckner v. Sam's Club, Inc.*, 75 F.3d 290, 292-94 (7th Cir. 1996)). See *Cummins v. Lyle Indus.*, 93 F.3d 362, 362 & n.2 (7th Cir. 1996). See also *Deimer*, 58 F.3d at 341. Finally, by way of embracing *Cummins*, the Fifth Circuit has declined to accept *Compton's* self-limitations. See *Watkins v. Telsmith, Inc.*, 121 F.3d 984, 990-92 (5th Cir. 1997).

¹¹⁵*Id.*

B. *Applying* FEDERAL RULE OF EVIDENCE 702

For a few federal courts, the self-limitation of *Daubert* to scientific knowledge leaves only one test for nonscientific expertise: Federal Rule of Evidence 702. In a variety of contexts and jurisdictions, courts have cabined the use of *Daubert* and instead applied Federal Rule of Evidence 702's admissibility test of "assisting the trier of fact."

In *United States v. Starzecpyzel*,¹¹⁶ the Southern District of New York made the clearest statement of *Daubert*'s restriction to the context of scientific expertise. In order to block the introduction of an expert forensic document examiner,¹¹⁷ the defendants advocated the application of *Daubert*'s suggested guidelines.¹¹⁸ After an extensive review of *Daubert*'s context and purposes, the court concluded there was

no support for the proposition that *Daubert* extends past the 'scientific' branch of Rule 702 to other forms of expert testimony. In other words, *Daubert* does not impose any new standard, other than what is found in the text of the Federal Rules of Evidence, for the admissibility of nonscientific experts¹¹⁹

Instead, the court relied on Federal Rule of Evidence 702, which only requires a showing of assistance to the trier of fact.¹²⁰ While noting that Federal Rule of Evidence 702 implicates obligations from other Rules,¹²¹ the court found document analysis to be a form of evidence which a jury could evaluate competently, and was therefore admissible: "[t]o the extent that experts possess knowledge not 'within the common knowledge and experience of jurors,' reasonable reliance on the expert, rather than formal proof by the expert, will often inform the fact-finder."¹²² Under Federal Rule of Evidence 702, expert evidence therefore needs only to offer knowledge helpful to the trier of fact in order to be admitted.¹²³

There are two primary problems with this admissibility standard. First, "factual assistance" is an extremely low threshold requirement. Cases such as *Starzecpyzel* only require that the expert present specialized or technical

¹¹⁶880 F. Supp. 1027 (S.D.N.Y. 1995).

¹¹⁷For other cases involving expertise in forensics, see *United States v. Savage*, 23 F.3d 404 (4th Cir. 1994) (admitting expertise); *United States v. Robinson*, 59 F.3d 1318 (D.C. Cir. 1995) (admitting expertise).

¹¹⁸*Id.*

¹¹⁹*Starzecpyzel*, 880 F. Supp. at 1041.

¹²⁰FED. R. EVID. 702.

¹²¹See FED. R. EVID. 104(a) (assessment of witness's qualifications); FED. R. EVID. 706 (allowing procuring of expert assistance).

¹²²*Starzecpyzel*, 880 F. Supp. at 1047 (citation omitted).

¹²³FED. R. EVID. 702.

knowledge useful to the trier of fact.¹²⁴ This is essentially a tautological requirement because Federal Rule of Evidence 702 defines experts by virtue of their specialized or technical background. As a basis for comparison, *Daubert's* suggested guidelines condition admission on a showing of the expert's reliability and the evidencies verifiability.¹²⁵

Second, "factual assistance" does not require an inquiry into the reliability and soundness of the evidence. A proffered witness whose field of expertise rests on shaky grounds or whose reasoning is suspect nevertheless can be admitted under Federal Rule of Evidence 702.¹²⁶ Such an admission is troubling as experts have incentives to shape their testimony so that it supports their paying client's needs. Without an inquiry into the testimony's substance, a trial court relying solely on "factual assistance" effectively gambles that an expert is qualified.¹²⁷ Federal Rule of Evidence 702 thus makes demands that are too lax to guard against hired guns and unreliable evidence.

Another problem with Federal Rule of Evidence 702 is that trial courts may compensate for the low threshold of "factual assistance" by placing undue emphasis on the expert's qualifications. In *United States v. Locascio*,¹²⁸ the Government sought to introduce an expert on the structure of crime families to decipher incriminating tape-recorded conversations.¹²⁹

To evaluate the expert's admissibility, the Court applied Federal Rule of Evidence 702. Following the rule's mandate that expert evidence be shown to assist the trier of fact, the court reasoned that admissibility determinations must be conducted as a "common sense inquiry" about the evidence's informative utility to laypersons.¹³⁰ The court, applying a "manifestly erroneous" standard

¹²⁴In order to exclude such knowledge, an opposing party must establish that the trier of fact possesses the proposed expert's knowledge. This is a difficult burden to bear in light of a jury's typically diverse composition.

¹²⁵*Daubert*, 509 U.S. at 587.

¹²⁶FED. R. EVID. 702.

¹²⁷*Id.*

¹²⁸6 F.3d 924 (2d Cir. 1993).

¹²⁹For other cases involving expertise in criminal organizations, see *United States v. Skowronski*, 968 F.2d 242 (2d Cir. 1992) (upholding decision to admit expertise); *United States v. McGlory*, 968 F.2d 309 (3d Cir. 1992) (upholding decision to admit expertise on international heroin trafficking); *United States v. Van Dorn*, 925 F.2d 1331 (11th Cir. 1991) (upholding decision to admit expertise); *United States v. Angiulo*, 897 F.2d 1169 (1st Cir. 1989) (upholding decision to admit expertise); *United States v. Pinelli*, 890 F.2d 1461 (10th Cir. 1989) (upholding decision to admit expertise); *United States v. Patterson*, 819 F.2d 1495 (9th Cir. 1987) (admitting expertise); *United States v. Scavo*, 593 F.2d 837 (8th Cir. 1979) (upholding decision to admit expertise); *United States v. Alfonso*, 552 F.2d 605 (5th Cir. 1977) (upholding decision to admit expertise).

¹³⁰*Locascio*, 6 F.3d at 937 (quoting Mason Ladd, *Expert Testimony*, 5 VAND. L. REV. 414, 418 (1952)). For cases involving spectrographic analysis, see *United States v. Smith*, 869 F.2d 348 (7th Cir. 1989) (admitting expertise); *United States v. Love*, 767 F.2d 1052 (4th

of review, found legitimate need for an explication of the crime family's organizational structure.¹³¹ Emphasizing that the value of expert knowledge hinges on the jury's presumed background in the field, the court concluded that jurors may be misinformed about criminal organizations.¹³² Based on the foregoing arguments, the expert's testimony was admitted.

More significant, however, was the court's emphasis on the expert's credentials. Though admitting the witness had never served as an expert in a court, the court remarked "even the most qualified expert must have his first day in court."¹³³ Citing the expert's experiences as an FBI agent, the court ruled he possessed sufficient credentials to meet Federal Rule of Evidence 702's threshold.¹³⁴

Cir. 1985) (admitting expertise); *United States v. Maivia*, 728 F. Supp. 1471 (D. Haw. 1990) (admitting expertise).

¹³¹*Locascio*, 6 F.3d at 937 (citing *United States v. DiDomenico*, 985 F.2d 1159, 1163 (2d Cir. 1993)); *United States v. Rivera*, 971 F.2d 876, 887 (2d Cir. 1992). The Supreme Court however, has rejected the "manifestly erroneous" standard of review in favor of abuse of discretion. *See General Elec. Co. v. Joiner*, No. 96-188, 1997 U.S. LEXIS 7503, at *5-6 (1997) ("We granted certiorari in this case to determine what standard an appellate court should apply in reviewing a trial court's decision to admit or exclude expert testimony under *Daubert v. Merrell Dow Pharm., Inc.* We hold that abuse of discretion is the appropriate standard.") (citation omitted).

¹³²*Locascio*, 6 F.3d at 937. In making this argument, Judge Altamari indirectly raised a question about the competence of jurors and untrained persons to deal with expert knowledge. Altamari's general stance is more fully expressed in his article, *Evidence Symposium: A Comparative Study of Federal and New York Evidence Law*, 11 *TOURO L. REV.* 1, 2-6 (1994).

Given that the law of evidence is based upon certain assumptions that we make about people . . . ordinary citizens are in the best position to make impartial decisions. Jurors are well-schooled in discerning truth and verifying facts as well as recognizing exaggerations, misstatements, half-truths, and lies . . . I for one, trust them. This trust is born of experience and necessity.

Id.

The issue of whether jurors and persons untrained in the offered field of expertise, however, is by no means resolved. *See, e.g., Nancy Miller, Daubert and Junk Science: Have Admissibility Standards Changed?*, 61 *DEF. COUNS. J.* 501, 503 (1994) ("Controversy exists over whether lay jurors, persons with little or no scientific expertise, are capable of sufficiently understanding the esoteric methods being employed so as to render an accurate and reliable judgment.").

¹³³*Locascio*, 6 F.3d at 937.

¹³⁴*Id.* (upholding decision to admit DEA agent as expert about narcotics terminology). *See also United States v. Roldan-Zapata*, 916 F.2d 795, 804-05 (2d Cir. 1990) (upholding decision to admit narcotics investigator as expert about general drug trafficking techniques). For other cases involving expertise in drug trafficking, see *United States v. Gatiaburo*, 16 F.3d 582 (4th Cir. 1994) (admitting expertise on the modus operandi of drug dealers); *United States v. Rivera*, 971 F.2d 876 (2d Cir. 1992) (admitting expertise in the production, distribution and use of heroin); *United States v. Foster*, 939 F.2d 445 (7th Cir. 1991) (admitting expertise); *United States v. McDonald*, 933 F.2d 1519 (10th Cir. 1991) (admitting expertise); *United States v. Straughter*, 950 F.2d 1223 (6th Cir. 1991) (admitting expertise on pricing cocaine); *United States v. Pearce*, 912 F.2d 159 (6th Cir.

This emphasis on credentials, however, is misdirected. Unlike assessing the methodologies and principles underlying a field, examining an expert background provides no assurance that valid views will be presented. Further, credentials alone do not establish a connection between the expert's knowledge and the particular factual dispute before the court.

Moreover, assessing credentials is a subjective determination. This judgment can be distorted by undue emphasis on an expert's accolades and positions, which may serve no other function but to impress the trier of fact.¹³⁵ The standing possibility is that parties may seek to bolster a weak case with well-credentialed experts.¹³⁶

Recognizing these problems, the Advisory Committee on Rules of Practice and Procedure of the U.S. Judicial Conference has considered amending Federal Rule of Evidence 702.¹³⁷ Most notably, the proposal suggested the addition of a "reasonable reliability" condition. This suggestion has also been made elsewhere in conjunction with the multiple factors suggested in *Daubert*.¹³⁸

This proposal, however, suffers from a fundamental problem: "What if there is no consensus within a particular non-scientific community as to its essential principles of knowledge?"¹³⁹ The fields that comprise nonscientific knowledge are so varied judges would be required to acquire sufficient proficiency in a

1990) (admitting expertise). See also J. Allison DeFoor II, *Consumer Testimony as Proof of Identity of the Controlled Substance in a Narcotics Case*, 33 U. FLA. L. REV. 682 (1981).

¹³⁵See, e.g., Warren Eginton, *A View from the Bench The Expert in the Courtroom*, 3 PROD. LIAB. L.J. 114, 117 (1992) (asserting that "[o]bviously, the curriculum vitae of the expert will be most important . . . If the academic credentials are not strong the expert should be used only if the attorney is convinced that his practical experiences will impress a jury.").

¹³⁶See, e.g., *Evans*, 882 P.2d 1335 (where the Government introduced expert philosophers with impressive credentials). See also *United States v. Posado*, 57 F.3d 428, 431 (5th Cir. 1995) (refusing to admit a polygraph examination's results out of a fear that they would "lead to an impossible situation where we will . . . get into the same battle of experts that we get into in so many areas of the law").

¹³⁷The proposed amendment read:

Testimony providing scientific, technical, or other specialized information in the form of an opinion or otherwise, may be permitted only if (1) the information is reasonably reliable and will substantially assist the trier of fact to understand the evidence or to determine a fact in issue, and (2) the witness is qualified as an expert by knowledge, skill, experience, training, or education to provide such testimony.

Preliminary Draft of Proposed Amendments to the Federal Rules of Civil Procedure and the Federal Rules of Evidence, 137 F.R.D. 53, 156 (1991). This proposal was thoroughly attacked, although for reasons different than those argued here.

¹³⁸See *Standards and Procedures for Determining the Admissibility of Expert Evidence After Daubert*, 157 F.R.D. 571 (1994).

¹³⁹*Id.*

wide range of expertise. The Ninth Circuit has captured this predicament succinctly: "[W]e [federal judges] are largely untrained in science and certainly no match for any of the witnesses whose testimony we are reviewing."¹⁴⁰

IV. THE PROPER TEST FOR ASSESSING THE ADMISSIBILITY OF NONSCIENTIFIC EXPERT KNOWLEDGE

The preceding section critically examined the two primary types of admissibility tests, and their variations, that federal courts currently apply in order to evaluate proffered nonscientific expert knowledge. Both *Daubert*, with respect to its conception of gatekeeping, as well as its suggested guidelines, and Federal Rule of Evidence 702 suffer from a common problem: the diversity of fields that comprise nonscientific knowledge.

The problem with applying *Daubert* to such knowledge appears in two ways. First, there is no unilateral standard of reliability in and across all nonscientific fields. Second, methods or principles resistant to scientific methods may nevertheless be valid.

The problem with simply applying Federal Rule of Evidence 702 to nonscientific knowledge also appears in two ways. First, "factual assistance" erects a low threshold which permits even the most questionable knowledge to be admitted. Second, to compensate for this permissiveness, trial judges sometimes place undue weight on an expert's credentials, which are no indicia of the accuracy of the evidence.

This section argues that the most viable solution to these concerns is to reinstate *Frye's* "general acceptance" test for the purposes of nonscientific expert evidence.¹⁴¹ First, this section delineates the components of *Frye's* test; furthermore, the advantages of each component will be discussed briefly. Second, this section evaluates potential problems that might militate against reinstating *Frye* for the purposes of nonscientific expert evidence; criticisms of the test during its tenure will also be addressed. Third, this section presents justifications for shifting from the current framework to *Frye*.

A. The "General Acceptance" Test

Under *Frye*, a party seeking to introduce expert knowledge must demonstrate its "general acceptance."¹⁴² There are two components to this test.

¹⁴⁰*Daubert*, 43 F.3d at 1315.

¹⁴¹An existing alternative to *Frye* is for the federal court to appoint an expert in the field to assess the proffered expert witness's competence under FED. R. EVID. 706. This Rule, however, is rarely utilized by federal courts due to the expense and difficulty that accompanies the decision as to which expert should be appointed. See Margaret Farrell, *Daubert v. Merrell Dow Pharmaceuticals, Inc.: Epistemology and Legal Process*, 15 CARDOZO L. REV. 2183, 2200-01 (1994) (commenting that proposals, ranging from the creation of advisory panels to expert administrative agencies and even specialized courts, have not gained support).

¹⁴²*Frye*, 293 F. at 1014.

First, the trial court must be satisfied that the expert conclusions represent an established view within the respective field.¹⁴³ Second, the trial court must be satisfied that the expert conclusions are sufficiently accurate to be reliable.¹⁴⁴ Unlike *Daubert's* conception of gatekeeping and its suggested guidelines, both of which focus on the evidence's underlying methods and principles, "general acceptance" is concerned with the validity and reliability of the expert's conclusions.¹⁴⁵

The first step towards "general acceptance" involves an assessment of the expert conclusions' validity. This is a contextual inquiry in that the trial court must determine whether the expert's conclusions comport with the field's predominant view. For the most part, this determination requires the party proffering the expert to present a survey of relevant scholarship. As in common law research, a nonscientific field's literature on a particular issue will typically overlap, from which certain consensus positions can be gleaned. These positions can be an effective source by which the trial court can sense the proffered expert evidence's standing.

The second step towards "general acceptance" involves an assessment of the expert conclusions' accuracy. The disputing parties perform the bulk of this task. Constrained by time, no trier of fact can acquire the requisite knowledge to evaluate esoteric views competently and critically.¹⁴⁶ Instead, under *Frye*, the disputing parties assume the responsibility of rebutting an opposing expert's conclusions with contradictory expert evidence. While divergent viewpoints can coexist within a particular field, the judge need only assess and weigh each party's arguments. The traditional division of responsibilities between courts and counsel is therefore preserved.

¹⁴³*Id.*

¹⁴⁴*Id.*

¹⁴⁵*Id.*

¹⁴⁶*See, e.g.,* Tamarelli, *supra* note 49, at 1198 (stating that "[n]either courts, parties, nor juries have the time, expertise, or money to evaluate independently" the methods used by each expert offered into a court). Other commentary suggests an even more fundamental problem, that judges are laypersons who thereby are dependent on experts. *See, e.g.,* Edward DiLello, Note, *Fighting Fire with Firefighters: A Proposal for Expert Judges at the Trial Level*, 93 COLUM. L. REV. 480-81 (1993). DiLello argues:

[t]he judge, as one such layperson, is confronted with two obvious problems First, she must arrive at 'an accurate definition of the field' and determine who its experts are, and second, she must figure out whether the data could be 'reasonably relied upon' by those experts. The circularity in both of these problems is evident: only someone familiar with the practices and professionals in the field - namely, an expert, would have the information necessary to make these two determinations.

Id.

B. Re-evaluating Criticisms of Frye

Until the introduction of the Federal Rules of Evidence, most courts applied *Frye* in spite of significant academic criticism.¹⁴⁷ Two problems were frequently charged. First, the standard of "general acceptance" was too ambiguous.¹⁴⁸ Second, "general acceptance" erects a high threshold which can exclude novel, but nonetheless valid, expert evidence.¹⁴⁹

The alleged problem of ambiguity, however, more precisely refers to *Frye's* reliance on the standards embraced by the expert's field to determine what views are "generally accepted."¹⁵⁰ To demonstrate the validity and accuracy of an expert's conclusion, the introducing party must present relevant, independent scholarship.¹⁵¹ As fields vary in their underlying conceptual premises,¹⁵² the respective experts will arrive at consensus viewpoints for different reasons. The *Frye* test accounts for these differences by subjecting the proffered expert conclusions to the professional standards embraced by the respective field's members.

The alleged problem of an unnecessarily high threshold is perhaps accurate, but also self-correcting. An instructive example is *United States v. Addison*,¹⁵³ where the D.C. Circuit reviewed a decision admitting expert voiceprint evidence. At the time of the trial, voiceprint analysis was a novel technique. To assess the technique's admissibility, the court applied *Frye*.¹⁵⁴ Examining studies on voiceprint analysis,¹⁵⁵ the court also considered the testimony of a

¹⁴⁷*Daubert*, 509 U.S. at 585 (citing ERIC GREEN & CHARLES NESSON, PROBLEMS, CASES, AND MATERIALS ON EVIDENCE 649 (1983)); PAUL GIANNELLI & EDWARD IMWINKELRIED, SCIENTIFIC EVIDENCE § 1-5, at 10-14 (1986 and Supp. 1991)).

¹⁴⁸*See, e.g.*, Giannelli, *supra* note 37, at 1206-07; Lawrence Ebert, Comment, *Frye after Daubert: The Role of Scientists in Admissibility Issues as Seen Through Analysis of the DNA Profiling Cases*, 1993 U. CHI. L. SCH. ROUNDTABLE 219, 225 (1993) (arguing that ambiguities exist in *Frye's* standard of "general acceptance" and its scope).

¹⁴⁹*See, e.g.*, MCCORMICK ON EVIDENCE § 203, at 363 (John William Strong ed., 4th ed. 1992) (noting that, under *Frye*, courts have excluded, *inter alia*, ion microprobe mass spectroscopy, infrared sensing of aircraft, retesting of breath samples for alcohol content, and blood group typing).

¹⁵⁰*Frye*, 293 F. at 1014.

¹⁵¹*Id.*

¹⁵²*Compare*, Farrell, *supra* note 141, at 2189 (scientific knowledge, which presumes "value-free, empirically ascertainable facts that exist independent of the minds that perceive them"), with Laurens Walker & John Monahan, *Social Frameworks: A New Use of Social Science in Law*, 73 VA. L. REV. 559, 559 (1987) (social science knowledge, which presumes "social frameworks . . . [that] are used to construct a frame of reference or background context").

¹⁵³498 F.2d 741 (D.C. Cir. 1974).

¹⁵⁴*Id.* at 7343.

¹⁵⁵*Addison*, 498 F.2d at 744 (citing Oscar Tosi et al., *Experiment on Voice Identification*, 51 J. ACOUST. SOC. AM. 2030 (1972)).

respected professor who had once opposed but had since suspended his stance on the technique.¹⁵⁶ Arbitrating between these two viewpoints, the court turned to numerous articles from individuals other than the study's author and the professor. Concluding that "[t]he literature of the field affirms . . . that the scientific community has thus far failed to determine whether spectrographic analysis is a valid technique," the court held the district court had admitted the evidence erroneously.¹⁵⁷

The next year, however, the Fourth Circuit explicitly overruled *Addison's* admissibility ruling.¹⁵⁸ The admissibility of voiceprint analysis was again at issue. Observing that "[m]ost of the earlier cases excluded [such] evidence on the ground that the technique had not been adequately tested under field conditions," the Fourth Circuit reexamined the professor, who had abandoned his early skepticism of such expertise for optimism.¹⁵⁹ Citing recent evidence that this professor now supported admission of voiceprint analysis, the court admitted the proffered expert evidence.¹⁶⁰ *Addison* and *Baller* therefore demonstrate that "general acceptance" can be sensitive to emerging evidence demonstrating a field's validity and accuracy.

C. Justifications for Reinstating *Frye* for Nonscientific Expert Evidence

Since *Daubert*, there has been significant debate over the proper admissibility test for nonscientific expert evidence. The predominant focus of this debate has been on *Daubert's* merits and effectiveness.¹⁶¹ One commentator, however, has entertained the possibility of reinstating *Frye* to assess the admissibility of nonscientific expert evidence.¹⁶² According to him, there are two reasons to support "general acceptance." First, evaluating the proffered expert conclusions' standing would stem the potentially prejudicial effects that

¹⁵⁶*Id.* at 744-45 (citing Peter Ladefogel, a Professor of Phonetics at UCLA, who had written various papers, testified in numerous trials, and advised the President's Science Advisor. The Professor had concluded that "we do not at the moment know the [technique's] probable error rate" and had adopted a position of "abatement of skepticism towards voiceprint.").

¹⁵⁷The court, however, further reviewed the record and concluded that the error was not fatal and, therefore, that reversal was not necessary. *Id.* at 745-47.

¹⁵⁸*Baller*, 519 F.2d at 463.

¹⁵⁹*Id.*

¹⁶⁰*Id.* at 465-66 (citing *Addison*, 498 F.2d at 745 & n.9).

¹⁶¹See, e.g., Krista Duncan, Note, "*Lies, Damned Lies, and Statistics*"? *Psychological Syndrome Evidence in the Courtroom after Daubert*, 71 IND. L.J. 753, 754 (1996) (furthering that "[t]here is no agreement on how [*Daubert*] will affect the admissibility of . . . evidence. In fact, recent commentary runs the gamut.").

¹⁶²Edward Imwinkelried, *The Next Step After Daubert: Developing a Similarly Epistemological Approach to Ensuring the Reliability of Nonscientific Expert Testimony*, 15 CARDOZO L. REV. 2271 (1994).

experts can have on juries.¹⁶³ Second, evaluating the proffered expert conclusions' accuracy would encourage competent testimony.¹⁶⁴

Questioning these reasons, the commentator has concluded that insufficient grounds warrant a shift to *Frye*. The commentator's criticism of the first reason supporting *Frye* is the lack of empirical evidence demonstrating these prejudicial effects. The commentator's criticism of the second reason supporting *Frye* is the litigating parties are usually vigilant about rebutting the introduction of an expert witness.

The commentator's first criticism, however, is merely an attempt to sidestep the well-known phenomenon of expert bias. In *Sanchez v. The Black Bros. Co.*,¹⁶⁵ one expert explained his technique for testifying to juries:

I want the jury to understand what I say when I feel there are certain conditions. Under direct examination, the jury understands everything that I say. Under cross examination, there are some things that I will allow the jury to understand and there are some things that I will not allow the jury to understand.¹⁶⁶

While this technique is not deployed by all experts,¹⁶⁷ the predominant view among attorneys is expert evidence can influence juries. A recent survey of attorneys revealed forty-three percent acknowledged shopping for experts and thirty-nine percent believed experts would present evidence in favor of the retaining party.¹⁶⁸ Accordingly, parties may introduce highly-credentialed

¹⁶³*Id.* at 2286. A common problem plaguing expert evidence concerns the way that witnesses sometimes obscure their points. See, e.g., Dreyfuss, *supra* note 76, at 1799 (noting "[p]arties sometimes follow strategies that prevent the jury from hearing all of the . . . evidence that supports [or diminishes] their position"). Further, expert witnesses frequently present conclusory testimony and opinions that can implicate legal issues. See, e.g., Herasimchuk, *supra* note 7, at 199.

¹⁶⁴Imwinkelried, *supra* note 162, at 2286-87. He also proposes his own standard, an "epistemological approach" that entails an examination of the experiential bases for the nonscientific expert's conclusions. *Id.* at 2289. This proposal, however, suffers from two problems. First, inquiring into an expert's experiences is no easier than inquiring into an expert's data and methods. Courts simply do not have the resources and time to examine all of these experiences, even when the offered expert is cooperating in an honest fashion. Second, the proposed inquiry requires a validating principle, that is, by what standard can a court's epistemological inquiry be assessed for validity? The commentator provides no answer. The *Frye* test, however, avoids these problems because it requires the expert to establish her admissibility and according to the standards accepted by her field. *Frye*, 293 F.2d at 1014.

¹⁶⁵423 N.E.2d 1309, 1320 (Ill. App. 1981).

¹⁶⁶*Id.* at 1320.

¹⁶⁷See, e.g., *Expert Witnesses Found Credible by Most Jurors*, NAT'L L.J., Feb. 22, 1993, at S4 (a recent nationwide survey revealing eighty-nine percent of 800 civil and criminal jurors found paid experts to be believable).

¹⁶⁸Daniel Shuman et al., *An Empirical Examination of the Use of Expert Witnesses in the Courts-Part II: A Three-City Study*, 34 JURIMETRICS J. 193, 202 (1994).

experts for persuasive effect.¹⁶⁹ More than adequate evidence of potential prejudice therefore exists.

Frye's prong of validity mitigates the influence of these prejudices. An expert's credentials are relevant to "general acceptance" only as an indicia of competence.¹⁷⁰ Under *Frye*, being qualified is not equivalent to being valid. Instead, a party seeking to introduce an expert must present supporting scholarship from the relevant field.¹⁷¹

The commentator's second criticism is actually one of the most attractive features of *Frye*. The very function of experts is to provide information which the trier of fact cannot acquire, either because of the subject's technical nature or the prohibitive sunk cost of acquiring a competent level of knowledge. For the same reasons, trial judges are ill-equipped to evaluate the accuracy of the proffered expert's conclusions.¹⁷² Instead, under *Frye*, the disputing parties bear the responsibility of presenting rebuttal evidence.¹⁷³ To determine "general acceptance," the trial court need only perform its traditional task of examining and weighing conflicting evidence.

These advantages of *Frye* appear even more attractive when compared to *Daubert's* inadequacies. Beyond its explicit self-limitation to scientific knowledge, *Daubert* concerns only the expert's methods and principles.¹⁷⁴ This focus is problematic whenever a party introduces nonscientific knowledge, which, by definition, consists of fields that do not adhere to a single methodological standard or set of principles. Furthermore, gatekeeping under *Daubert* requires that the judge, and not the disputing parties, be vigilant against questionable types of expert evidence.¹⁷⁵

One possible counterargument is that federal courts currently consider "general acceptance" while applying *Daubert*. Among the Supreme Court's suggested guidelines for assessing the admissibility of expert knowledge are

¹⁶⁹*See, e.g.,* United States v. Amarel, 488 F.2d 1148, 1152 (9th Cir. 1973) (finding expert testimony has a heightened potential to sway a jury "because of its aura of special reliability and trustworthiness"). One mechanism by which courts can combat prejudice is Fed. R. Evid. 403, which excludes evidence whose prejudicial effect outweighs its probative value. Courts, however, rarely apply FED. R. EVID. 403, especially when there is no jury. *See, e.g.,* DeLuca, 911 F.2d at 941 ("[FED. R. EVID.] 403 is an unlikely basis for exclusion" of expert testimony.). At the very least, the *Frye* test can be seen as an additional safeguard against this perceived problem.

¹⁷⁰*Frye*, 498 F.2d at 743-46.

¹⁷¹*Id.*

¹⁷²*Daubert*, 43 F.3d at 1315.

¹⁷³*Frye*, 498 F.2d at 743.

¹⁷⁴*Daubert*, 509 U.S. at 594.

¹⁷⁵*Id.* at 589. *But see* United States v. 14.38 Acres of Land, 80 F.3d 1074, 1078 (5th Cir. 1996)(holding that *Daubert* ensures "that an expert's testimony both rests on a reliable foundation and is relevant without replacing the adversarial systems traditional methods for assessing the admissibility of questionable expert evidence).

peer review as well as widespread acceptance.¹⁷⁶ In this sense, *Daubert* incorporates *Frye*.¹⁷⁷ If a distinction exists between these two tests, the counterargument goes, it is that *Daubert's* guidelines permit a more flexible inquiry.¹⁷⁸ Federal courts applying *Daubert* may admit a novel field so long as it is sufficiently reliable.

Though they may permit such a result, *Daubert's* suggested guidelines are predicated on reasoning ill-suited to nonscientific expert knowledge. The threshold for admission can be reliability only when it is conceptualized in a similar way by all fields. That Federal Rule of Evidence explicitly refers to scientific, specialized and technical expert knowledge evinces that significant distinctions exist between each category.¹⁷⁹

In contrast, "general acceptance" adopts the reliability standard used within the proffered expert's own field.¹⁸⁰ To evaluate the validity and accuracy of the expert's conclusions, *Frye* requires trial courts to survey relevant scholarship.¹⁸¹ Admission is predicated on a showing that the expert's conclusions command an independent, supporting consensus.¹⁸² Under *Frye*, trial courts therefore assess expert evidence in its native context, a process that does not discriminate between different nonscientific fields.¹⁸³

¹⁷⁶*Daubert*, 509 U.S. at 592-94.

¹⁷⁷See, e.g., *American Nat'l Adjustment Co. v. Galvin*, 86 F.3d 1455, 1465 (Posner, C.J., dissenting) ("*Daubert* makes clear that it is the responsibility of the district court to make sure that when scientists testify in court they adhere to the same standards of intellectual rigor that are demanded in their professional work."). See also *Rosen v. Ciba-Geigy Corp.*, 78 F.3d 316, 318 (7th Cir. 1996); *Bammerlin v. NavistarInt'l Trans. Corp.*, 30 F.3d 898, 901 (7th Cir. 1994).

¹⁷⁸See, e.g., *Joiner*, 1997 U.S. LEXIS 7503, at *11 ("*Daubert* . . . h[e]ld that the 'austere' *Frye* standard of 'general acceptance' had not been carried over into the Federal Rules of Evidence.").

¹⁷⁹See, e.g., Gordon Beggs, *Novel Expert Evidence in Federal Civil Rights Litigation*, 45 AM. U. L. REV. 1, 51-2 (1995). Professor Beggs argues:

[s]cientific, technical and other types of specialized knowledge are distinct types of evidence requiring different types of expertise . . . The proof of reliability for these categories of evidence should likewise differ. A requirement of proof based on scientific method is unnecessary to demonstrate the reliability of technical evidence which is based on settled principles. Such a requirement is also inappropriate for other specialized evidence that is by definition subjective in nature.

Id.

¹⁸⁰*Frye*, 293 F. at 1015.

¹⁸¹*Id.*

¹⁸²*Id.*

¹⁸³*Id.*

V. CONCLUSION

Expert witnesses, both of the scientific and nonscientific variety, perform a valuable service for our federal courts. The knowledge these experts convey to the trier of fact can play an integral role in clarifying or resolving a factual dispute. Although problematic, the use of experts should thus remain a feature of our legal landscape.

This Article has offered a different way to understand the growing body of cases involving nonscientific expertise, by the admissibility test applied. Examining whether Federal Rule of Evidence 702, *Daubert*, or a circuit standard has been applied can be an effective way to approach the use of nonscientific expertise in our federal courts. This article has demonstrated that there are distinct features to each admissibility test and thus has provided a partial explanation for the current confusion over how the admissibility of nonscientific expert evidence should be determined.

The problems plaguing each test, however, beckon for a new, single admissibility standard and *Daubert's* inapplicability to nonscientific knowledge and Federal Rule of Evidence 702's deficiencies militate against their use. Instead, federal courts should consider revisiting the merits of *Frye's* "general acceptance" test. Only by evaluating nonscientific expertise according to the relevant field's standards can federal courts make admissibility rulings in an effective and fair manner.