
ADMITTING EXPERT TESTIMONY IN FEDERAL COURTS AND ITS IMPACT ON WEST VIRGINIA JURISPRUDENCE

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I.	INTRODUCTION	486
II.	PRE- <i>FRYE</i> ADMISSIBILITY OF EXPERT TESTIMONY	486
	<i>A. Qualified Expert Witnesses</i>	488
	<i>B. Relevancy And Helpfulness</i>	489
	<i>C. Criticism of Pre-Frye Approach to Admissibility of Expert Testimony</i>	489
III	<i>FRYE'S</i> GENERAL ACCEPTANCE TEST	492
IV	EXPERT TESTIMONY UNDER THE FEDERAL RULES OF EVIDENCE	495
	<i>A. Daubert Resolves the Conflict Between Frye and Rule 702</i>	496
	<i>B. Kumho Clarifies Daubert</i>	500
	<i>C. Federal Courts Now Have a Level Playing Field for Admitting Expert Testimony</i>	502
V.	ADMITTING EXPERT TESTIMONY IN WEST VIRGINIA PRIOR TO 1980	503
VI.	WEST VIRGINIA'S ADOPTION OF <i>FRYE</i> IN 1980	507
VII.	EXPERT TESTIMONY UNDER THE WEST VIRGINIA RULES OF EVIDENCE	508
	<i>A. Wilt Adopts Daubert</i>	509
	<i>B. Gentry Expands Wilt</i>	511

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C.	<i>The Current Status of Admitting Expert Testimony in West Virginia</i>	513
VIII.	CONCLUSION	516

I. INTRODUCTION

West Virginia jurisprudence has an evidentiary rule for scientific expert testimony and a different rule for non-scientific expert testimony. In order to understand the distinction between scientific and non-scientific expert testimony, a careful examination of the legal development of admitting expert testimony in both the federal and West Virginia judicial systems is required.

This Article is divided into six parts. In Part II, a discussion is provided concerning the pre-*Frye*¹ admissibility of expert testimony in federal courts. Part III looks at the development of *Frye*'s general acceptance test in federal courts. In part IV, an examination is made of expert testimony under the Federal Rules of Evidence. The Article then turns to West Virginia. In Part V, an analysis is provided on expert testimony admission in West Virginia prior to 1980. Part VI looks at the adoption of *Frye* in 1980 by West Virginia. Finally, in Part VII, a discussion is provided regarding expert testimony admission under the West Virginia Rules of Evidence.

II. PRE-FRYE ADMISSIBILITY OF EXPERT TESTIMONY

Most discussions concerning the evolution of the use of expert testimony in federal trials begin with the 1923 decision in *Frye v. United States*.² However, the issue of admitting expert testimony during a federal trial has a long history that predates *Frye*.³ In a decision rendered by the United States Supreme Court in 1884, the following general contour of expert and other witness testimony was given:

The general rule undoubtedly is that witnesses are restricted to proof of facts within their personal knowledge, and may not express their opinion or judgment as to matters which the jury or the court are required to determine, or which must constitute elements in such determination. To this rule there is a

¹ *Frye v. United States*, 293 F. 1013 (D.C. Cir. 1923).

² *Id.*

³ See Mark Lewis & Mark Kitrick, *Kumho Tire Co. v. Carmichael: Blowout from the Overinflation of Daubert v. Merrell Dow Pharmaceuticals*, 31 U. TOL. L. REV. 79, 80 (1999) ("The history of federal court expert testimony is a fairly modern tale that began in the mid-1800s."). See also MODEL CODE OF EVIDENCE, 198 (1942) ("Precedents beginning in the fourteenth century show the judges availing themselves of the aid of experts without formally calling them as witnesses; from that time to this, expert testimony has been received in the common law courts.").

well-established exception in the case of witnesses having special knowledge or skill in the business, art, or science, the principles of which are involved in the issue to be tried.⁴

The United States Supreme Court, in the 1877 decision of *Transportation Line v. Hope*,⁵ held that “[i]t is upon subjects on which the jury are not as well able to judge for themselves as is the witness that an expert as such is expected to testify.”⁶ *Hope* illustrated that expert testimony

is often given upon subjects requiring medical knowledge and science, but it is by no means limited to that class of cases. It is competent upon the question of the value of land, or as to the value of a particular breed of horses, or upon the value of the professional services of a lawyer, or on the question of negligence in moving a vessel, or on the necessity of a jettison.⁷

The rule regarding the decision as to whether to admit expert testimony was noted in *Spring Co. v. Edgar*.⁸ *Edgar* held that

[w]hether a witness is shown to be qualified, or not, as an expert, is a preliminary question, to be determined in the first place by the court; and the rule is that, if the court admits the testimony, then it is for the jury to decide whether any, and, if any, what weight is to be given to the testimony.⁹

Prior to *Frye*, the central, though not exclusive, focus of trial courts when confronted with the admissibility of proffered expert testimony was whether the expert was “qualified.”¹⁰ Other considerations involved the relevancy and help-

⁴ Conn. Mut. Life Ins. Co. v. Lathrop, 111 U.S. 612, 618 (1884). See also *Spring Co. v. Edgar*, 99 U.S. 645, 657 (1878) (“Witnesses are not ordinarily allowed to give opinions as to conclusions dependent upon facts not necessarily involved in the controversy; but an exception to that rule is recognized in the case of experts, who are entitled to give their opinions as to conclusions from facts within the range of their specialties, which are too recondite to be properly comprehended and weighed by ordinary reasoners.”) (citing 1 FRANCIS WHARTON, LAW OF EVIDENCE, § 440 (1877)).

⁵ 95 U.S. 297 (1877).

⁶ *Id.* at 298. See also *McGahey v. Virginia*, 135 U.S. 662, 694 (1890) (holding that Virginia’s statutory “prohibition of expert testimony in establishing the genuineness of [bond] coupons was . . . unconstitutional”).

⁷ *Hope*, 95 U.S. at 298-99 (citations omitted).

⁸ 99 U.S. 645 (1878).

⁹ *Id.* at 658. See also *Head v. Hargrave*, 105 U.S. 45, 48-49 (1881) (holding that the jury cannot be instructed to accept expert testimony).

¹⁰ It should be noted that “[c]ourts at that time did not employ a generally agreed upon test

fulness of the expert's testimony.¹¹

A. *Qualified Expert Witnesses*

The universal criterion for admissibility of expert testimony involved a determination of whether an expert was qualified to testify on an issue before the court.¹² To satisfy this factor, trial courts evaluated the expert's success within the marketplace of the occupation or profession with which the expert was associated. There was a general consensus among courts that if an individual could make a living in his or her occupation or profession, then he or she was qualified to testify before the court regarding issues falling within that occupation or profession.¹³ In *Chateaugay Ore & Iron Co. v. Blake*,¹⁴ the court stated that "[h]ow much knowledge a witness must possess before a party is entitled to his opinion as an expert is a matter which, in the nature of things, must be left largely to the discretion of the trial court."¹⁵

for admissibility, causing inconsistency and unpredictability in the admission of expert witness testimony." Lewis & Kitrick, *supra* note 3, at 80.

¹¹ For a general historical overview of the use of expert testimony see Learned Hand, *Historical and Practical Considerations Regarding Expert Testimony*, 15 HARV. L. REV. 40 (1901); Stephan Landsman, *Of Witches, Madmen, and Products Liability: An Historical Survey of the Use of Expert Testimony*, 13 BEHAV. SCI. & L. 131 (1995).

¹² The Supreme Court ruled early in *The Schooner Catharine v. Dickinson*, 58 U.S. 170, 175 (1854), that testimony by experts may be admitted when their "occupations and experience enabled them to express opinions . . . upon which the court might rely with some confidence in making up its judgment." See, e.g., *Grayson v. Lynch*, 163 U.S. 468, 480-81 (1896) (witness qualified to testify as expert); *Chateaugay Ore & Iron Co. v. Blake*, 144 U.S. 476, 484 (1892) (witness not qualified as expert); *Stillwell & Bierce Mfg. Co. v. Phelps*, 130 U.S. 520, 527 (1889) (witness not qualified to testify as expert); *Union Ins. Co. v. Smith*, 124 U.S. 405, 422-23 (1888) (witnesses qualified to testify as experts); *McGowan v. Am. Tan Bark Co.*, 121 U.S. 575, 609 (1887) (witness qualified to testify as expert); *S. Pac. Co. v. Arnett*, 111 F. 849, 856 (8th Cir. 1901) (witnesses qualified to testify as experts).

¹³ See David L. Faigman, Elise Porter & Michael J. Saks, *Check Your Crystal Ball at the Courthouse Door, Please: Exploring the Past, Understanding the Present, and Worrying About the Future of Scientific Evidence*, 15 CARDOZO L. REV. 1799, 1804 (1994) ("Expertise was implied from the expert's success in an occupation or profession which embraced that knowledge. If a person could make a living selling his knowledge in the marketplace, then presumably expertise existed. . . . In effect, the marketplace determined whether valid knowledge existed by endowing it with commercial value.").

¹⁴ 144 U.S. 476 (1892).

¹⁵ *Id.* at 484. *Accord* *Inland & Seaboard Coasting Co. v. Tolson*, 139 U.S. 551, 559 (1891); *Montana Ry. Co. v. Warren*, 137 U.S. 348, 353 (1890); *Phelps*, 130 U.S. at 527. See also *Green v. Terwilliger*, 56 F. 384, 394 (9th Cir. 1892) ("The value of expert testimony depends, to a certain extent, upon the general knowledge and experience of the witnesses; their competency, character, and reputation.").

B. Relevancy and Helpfulness

None of the pre-*Frye* federal cases addressing admissibility of expert testimony provides much discussion concerning the need to establish the relevancy and helpfulness of such testimony before its admission.¹⁶ However, it is clear from the decisions that relevancy and helpfulness went into the admissibility equation.¹⁷ As one court stated, “[t]he opinions of those who are learned or experienced in questions of science, skill, or trade, which are not within the understanding of men in general, are admissible in evidence, when helpful to the decision of the ultimate fact.”¹⁸ In the case of *Inland & Seaboard Coasting Co. v. Tolson*,¹⁹ the United States Supreme Court concluded that expert testimony was inadmissible because it was not helpful to the jury. The Court reasoned as follows:

[T]he question whether the place where the plaintiff stood on the wharf was reasonably safe was one of the questions to be determined by the jury, depending on common knowledge and observation, and requiring no special training or experience to decide, and upon which, therefore, no opinions of [expert] witnesses were admissible.²⁰

C. Criticism of Pre-Frye Approach to Admissibility of Expert Testimony

In a lucid article written in 1901, Judge Learned Hand was critical of the

¹⁶ The “relevancy” and “helpfulness” factors are still part of the admission of expert testimony today. See FED. R. EVID. 402, 701-02.

¹⁷ It was observed in *Golden Reward Mining Co. v. Buxton Mining Co.*, 97 F. 413, 416 (8th Cir. 1899), that “[i]f testimony is relevant to an issue, it is generally admissible.” See also *Bowers Hydraulic Dredging Co. v. United States*, 211 U.S. 176, 185-86 (1908) (expert testimony not relevant); *Tolson*, 139 U.S. at 560 (expert witness opinion was not relevant or helpful to the jury); *Milwaukee & Saint Paul Ry. Co. v. Kellogg*, 94 U.S. 469, 472-73 (1876) (expert testimony not helpful); *Kohn v. Eimer*, 265 F. 900, 903 (2d Cir. 1920) (expert testimony not necessary); *Hardinge Conical Mill Co. v. Abbe Eng’g Co.*, 195 F. 936, 939 (2d Cir. 1912) (expert testimony not necessary); *Shields v. Norton*, 143 F. 802, 804 (2d Cir. 1906) (expert testimony relevant); *National Cash-Register Co. v. Leland*, 94 F. 502, 506 (1st Cir. 1899) (finding error in exclusion of expert testimony that would have been helpful to jury); *Sugar Apparatus Mfg. Co. v. Yaryan Mfg. Co.*, 43 F. 140, 148 (3d Cir. 1890) (expert testimony not helpful).

¹⁸ *Gillespie v. Collier*, 224 F. 298, 301 (8th Cir. 1915). *Accord S. Pac. Co. v. Arnett*, 111 F. 849, 856 (8th Cir. 1901) (expert testimony relevant and helpful); *Mun. Signal Co. v. Nat’l Elec. Mfg. Co.*, 97 F. 810, 813 (2d Cir. 1899) (expert testimony helpful); *Waterman v. Shipman*, 55 F. 982, 987 (2d Cir. 1893) (expert testimony helpful). See also *Beale v. Spate*, 74 F. 869, 872 (2d Cir. 1896) (“In causes involving complicated [technical issues] the presence of an expert is always helpful and is often absolutely necessary.”).

¹⁹ 139 U.S. 551 (1891).

²⁰ *Id.* at 560.

use of expert testimony in federal courts and in courts in general.²¹ He noted in his article that there were two “serious objections” to the admittance of expert testimony.²² Judge Hand wrote that “first . . . the expert becomes a hired champion of one side,” and “second . . . [the expert] is the subject of examination and cross-examination and contradiction by other experts.”²³ The problem presented by an expert becoming “a champion of one side” is the loss of objectivity in his or her opinion. Additionally, permitting an expert’s opinion to be contradicted by other experts results in confusion for the jury in its search for the truth.²⁴ Judge Hand’s proposed solution to these vexing problems was to require courts, rather than parties, to appoint an expert, “who shall advise the jury of the general propositions applicable to the case which lie within his province.”²⁵

Judge Hand’s distaste for having the parties choose experts involved the issue of expert credibility. That is, Judge Hand focused his attack on the jury’s inability to determine whether to believe the testimony of the plaintiff’s expert or the defendant’s expert.²⁶ From Judge Hand’s perspective, allowing parties to

²¹ Hand, *supra* note 11, at 40.

²² *Id.* at 53.

²³ *Id.*

²⁴ See *Ogden v. Parsons*, 64 U.S. 167, 169-70 (1859) (“Where experts are introduced to testify as to opinions on matters peculiar to their art or trade, there is usually some conflict in their testimony.”); *Winans v. N.Y. & Erie R.R. Co.*, 62 U.S. 88, 101 (1858) (“Experience has shown that opposite opinions of persons professing to be experts may be obtained to any amount; and it often occurs that not only many days, but even weeks, are consumed in cross-examinations, to test the skill or knowledge of such witnesses and the correctness of their opinions, wasting the time and wearying the patience of both court and jury, and perplexing, instead of elucidating, the questions involved in the issue.”); *McCormick v. Talcott*, 61 U.S. 402, 409 (1857) (Daniel, J., dissenting) (“To guide them in this, the only legitimate inquiry, this court has had before them a species of evidence of all others best calculated to conduct them to the truth—evidence superior to, and unaffected by, the interests or prejudices of partisans, or by the opinions . . . of a class of men styled experts; men as often skillful and effective in producing obscurity and error, as in the elucidation of truth.”); *Green v. Terwilliger*, 56 F. 384, 394 (9th Cir. 1892) (“The objection to professional expert testimony consists, to a great extent, in the fact that in many cases the witness becomes an active partisan in favor of the party by whom he is employed, and conducts his investigation in the character of an attorney, upon lines most favorable to his side of the case, and when this position is taken the testimony is sometimes given in such a manner as is calculated to deceive and mislead, instead of to enlighten or aid, the court or jury; and this occurs so frequently that courts have often condemned this character of testimony, and declared it to be entitled to but little weight, and that it should be received with caution.”).

²⁵ Hand, *supra* note 11, at 56. See also Jack B. Weinstein, *Improving Expert Testimony*, 20 U. RICH. L. REV. 473, 489 (1986) (“Learned Hand wrote about [court appointed experts] in 1901, when he proposed a solution strikingly similar to modern Rule 706 which allows the court to appoint its own expert witnesses.”).

²⁶ Judge Hand posed the issue as follows: “The whole object of the expert is to tell the jury, not facts . . . but general truths derived from his specialized experience. But how can the jury judge between two statements each founded upon an experience confessedly foreign in kind to their own?” Hand, *supra* note 11, at 54.

choose experts transformed the judicial process into a contest for determining which party could solicit the most believable “hired gun.” While Judge Hand’s condemnation of the use of pre-*Frye* expert testimony may have had merits, the more fundamental criticism, which Judge Hand did not address, involved determining the admissibility of expert testimony.

Understanding the admissibility problems posed by the pre-*Frye* standard requires an appreciation for what was occurring in America (and the world) by the time of the 1923 *Frye* decision. The early 1900’s bore witness to dramatic developments in science and technology spawned by the industrial revolution. Naturally, as a byproduct of such development, courtrooms began to fill with litigation involving tremendously obscure and novel products and ideas. The relative simplicity of everyday life prior to the 1900’s was swiftly replaced with scientific and technological advances. These advances placed a great strain on the judicial system for fairly resolving disputes involving this new world order.²⁷ The principal reason for the strain on the judicial system involved the “qualification” test for admitting expert testimony.

As previously explained, an expert’s qualification to give an opinion at trial depended largely upon the expert’s success in the marketplace. This test, however, was incompatible with the legal problems presented by the industrial revolution. This incompatibility was succinctly observed by several commentators as follows:

But though it might be practical and easily administered, the test of commercial value is a poor one. Its major weaknesses are perhaps more obvious today than they were a century or two ago. The market not only selects for validity, it selects also for entertainment, desire, wishful thinking, hope, sometimes even desperation. These are not without their value, but they are not good proxies for what courts are looking for in expert testimony. If the marketplace approves, as it does, of astrologers, sellers of phony cancer cures, and guides to new age vortexes, are those therefore good enough to provide guidance in a courtroom? The marketplace test is incapable of distinguishing astrophysics from astrology.

A second problem is that some fields have little or no life in any commercial marketplace. Indeed, in the past century, some fields have come into being that have no function outside of their possible courtroom utility. The courtroom is their marketplace.

Finally, the marketplace test entirely conflates the expert

²⁷ See Lewis & Kitrick, *supra* note 3, at 80. (“Throughout the early 1990s, the courts faced an enormous influx of expert witness evidence, leading judges and commentators to believe a more rigorous, systematic admissibility standard should be established.”).

and the expertise. Before the twentieth century, courts apparently never considered the question of whether a body of asserted knowledge existed, and could be validated, separate from the “qualified expert” who “possessed” it. The expert and the knowledge were treated as one. If an expert were “qualified,” then an expertise existed. But being a “qualified expert” presupposes that an expertise exists in which one may have become expert.²⁸

III. *FRYE*'S GENERAL ACCEPTANCE TEST

The 1923 decision by the Court of Appeals for the District of Columbia in *Frye v. United States*²⁹ supplanted the “marketplace” qualification test for admitting expert testimony. The decision in *Frye* involved a criminal defendant who was convicted of second degree murder. The sole issue presented on appeal by the defendant was whether the trial court committed error in excluding expert witness testimony regarding a deception or lie detector test performed on the defendant.³⁰ The appellate court acknowledged that the issue of admitting testimony regarding an opinion obtained from a lie detector test was one of first im-

²⁸ Faigman, Porter, & Saks, *supra* note 13, at 1805 (footnotes omitted).

²⁹ 293 F. 1013 (D.C. Cir. 1923).

³⁰ The opinion described the test as follows:

The test is described as the systolic blood pressure deception test. It is asserted that blood pressure is influenced by change in the emotions of the witness, and that the systolic blood pressure rises are brought about by nervous impulses sent to the sympathetic branch of the autonomic nervous system. Scientific experiments, it is claimed, have demonstrated that fear, rage, and pain always produce a rise of systolic blood pressure, and that conscious deception or falsehood, concealment of facts, or guilt of crime, accompanied by fear of detection when the person is under examination, raises the systolic blood pressure in a curve, which corresponds exactly to the struggle going on in the subject's mind, between fear and attempted control of that fear, as the examination touches the vital points in respect of which he is attempting to deceive the examiner.

In other words, the theory seems to be that truth is spontaneous, and comes without conscious effort, while the utterance of a falsehood requires a conscious effort, which is reflected in the blood pressure. The rise thus produced is easily detected and distinguished from the rise produced by mere fear of the examination itself. In the former instance, the pressure rises higher than in the latter, and is more pronounced as the examination proceeds, while in the latter case, if the subject is telling the truth, the pressure registers highest at the beginning of the examination, and gradually diminishes as the examination proceeds.

Id. at 1013-14. See also William M. Marston, *Systolic Blood Pressure Symptoms of Deception*, 2 J. EXPERIMENTAL PSYCHOL. 117 (1917).

pression. The court further recognized the novelty of the lie detector test itself. The dispositive question for the court involved the reliability of this new scientific technique. In rendering its decision that the new scientific technique was not proven to be sufficiently reliable on which to base an expert opinion, the court created the general acceptance test in the following brief passage:

Just when a scientific principle or discovery crosses the line between the experimental and demonstrable stages is difficult to define. Somewhere in this twilight zone the evidential force of the principle must be recognized, and while courts will go a long way in admitting expert testimony deduced from a well-recognized scientific principle or discovery, the thing from which the deduction is made must be sufficiently established to have gained *general acceptance* in the particular field in which it belongs.³¹

The *Frye* concept of “general acceptance” ultimately became the principal test for the admissibility of expert testimony by federal courts.³²

The general acceptance test was dissimilar to the marketplace test in one significant respect. Under the general acceptance test, expert testimony could come from areas that did not have a commercial market as a litmus test for reliability. In other words, *Frye* allowed “more knowledge to be assessed, even if the knowledge [was] too new to be marketed commercially or if there [was] no hope of ever marketing it commercially.”³³ While the general acceptance test opened up the potential to admit new types of expert testimony, it also served as a tool to keep out “junk science” or novel scientific theories that had no proven record of acceptance in the field it embraced.³⁴

³¹ *Frye*, 293 F. at 1014 (emphasis added).

³² See *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.”). Although *Frye* became the dominant standard to admitting expert testimony, it took a considerable amount of time for this to occur. “After World War II, the case was only cited 6 times before 1950, 20 times during the 1950s, [and] 21 times during the 1960s” Bert Black, Francisco J. Ayala & Carol Saffran-Brinks, *Science and the Law in the Wake of Daubert: A New Search for Scientific Knowledge*, 72 TEX. L. REV. 715, 722 n.30 (1994). The *Frye* general acceptance test gained a firm foothold after the 1960s. The decision was cited “100 times during the 1970s, 470 times during the 1980s, and 350 times in the early 1990s.” *Id.*

³³ Faigman, Porter, & Saks, *supra* note 13, at 1807.

³⁴ The application of *Frye* was summarized by one federal appellate court as follows:

Under *Frye*, therefore, courts confronted with a proffer of novel scientific evidence must make a preliminary determination through the introduction of other evidence, including expert testimony, regarding (1) the status, in the appropriate scientific community, of the scientific principle underlying the proffered novel evidence; (2) the technique applying the scientific principle; and (3) the application of the technique on the particular occasion or occa-

Although the general acceptance test was praised by courts and commentators,³⁵ it also had its critics. The critics argued that the test was vague, tended to exclude potentially useful evidence, did not guarantee reliability, and was too general in its focus.³⁶ The *Frye* standard also received criticism for causing undue delay in the admissibility of potentially reliable evidence and for diverting attention from the issue of whether the expert applied the proper testing procedure upon which his/her opinion was based.³⁷

sions relevant to the proffered testimony.

Downing, 753 F.2d at 1234.

³⁵ It should be noted that the *Frye* test is still used today by many state courts as the basis for admitting expert testimony. See *S. Energy Homes, Inc. v. Washington*, 774 So. 2d 505, 517 n.5 (Ala. 2000); *Logerquist v. McVey*, 1 P.3d 113, 125 (Ariz. 2000); *People v. Leahy*, 882 P.2d 321, 324 (Cal. 1994); *Nixon v. United States*, 728 A.2d 582, 588 (D.C. 1999); *Flanagan v. State*, 625 So. 2d 827, 828 (Fla. 1993); *People v. Miller*, 670 N.E.2d 721, 731 (Ill. 1996); *State v. Heath*, 957 P.2d 449, 464 (Kan. 1998); *Anton v. State Farm Mut. Auto Ins. Co.*, 607 N.W.2d 123, 127 (Mich. Ct. App. 1999); *Syl. Pt. 1, Goeb v. Tharaldson*, 615 N.W.2d 800 (Minn. 2000); *Gleeton v. State*, 716 So. 2d 1083, 1086-87 (Miss. 1998); *Hutton v. State*, 663 A.2d 1289, 1295 n.10 (Md. 1995); *State v. Harvey*, 699 A.2d 596, 621 (N.J. 1997); *People v. Wesley*, 633 N.E.2d 451, 453-54 (N.Y. 1994); *Commonwealth v. Blasioli*, 713 A.2d 1117, 1119 (Pa. 1998); *State v. Copeland*, 922 P.2d 1304, 1310 (Wash. 1996).

³⁶ See generally Paul C. Giannelli, *The Admissibility of Novel Scientific Evidence: Frye v. United States, a Half-Century Later*, 80 COLUM. L. REV. 1197, 1208-28 (1980).

³⁷ The difficulties with the *Frye* test were summarized in *Downing*, 753 F.2d at 1236 (citations omitted), as follows:

First, the vague terms included in the standard have allowed courts to manipulate the parameters of the relevant "scientific community" and the level of agreement needed for "general acceptance." Thus, some courts, when they wish to admit evidence, are able to limit the impact of *Frye* by narrowing the relevant scientific community to those experts who customarily employ the technique at issue. . . . [O]ther problems that arise in applying the *Frye* test [include]: the selectivity among courts in determining whether evidence derives from "novel" principles; the inadequacy of expert testimony on many scientific issues; an uncritical acceptance of prior *judicial*, rather than scientific, opinion as a basis for finding "general acceptance"; and the narrow scope of review by which some appellate courts review trial court rulings. All of these problems contribute to the "essential vagueness" of the *Frye* test.

See also Alma Kelley McLeod, *Is Frye Dying or Is Daubert Doomed? Determining the Standard of Admissibility of Scientific Evidence in Alabama Courts*, 51 ALA. L. REV. 883, 886 (2000) ("Some of the criticism surrounding the *Frye* standard stems from the difficulties in identifying the appropriate field that constitutes the relevant scientific community. Criticism of the *Frye* standard, however, goes beyond the mere difficulties in the application of a general acceptance test. In fact, some commentators have criticized the general acceptance standard as 'not enlightening' and 'remarkably vague.' Furthermore, the general acceptance standard has been attacked for both its exclusion of reliable evidence and its admission of unreliable evidence.").

IV. EXPERT TESTIMONY UNDER THE FEDERAL RULES OF EVIDENCE

A challenge to the *Frye* test surfaced in 1975 with the creation of the Federal Rules of Evidence.³⁸ Specifically, the challenge came from Rule 702, which, at that time, read as follows:

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, training, or education, may testify thereto in the form of an opinion or otherwise.³⁹

As literally formulated, Rule 702 did not reject or accept *Frye's* general acceptance test.⁴⁰ In fact, the framers of Rule 702 did not even consider *Frye* when the rule was adopted.⁴¹

³⁸ Act of Jan. 2, 1975, Pub. L. No. 93-595, 88 Stat. 1926 (1975).

³⁹ FED R. EVID. 702 (1999) (amended 2000). See *infra* note 82.

⁴⁰ Commentators have noted the following distinctions between Rule 702 and the *Frye* test:

The conventional view that *Frye* sets a higher threshold for admissibility is an erroneous one. Whether *Frye* or the Federal Rules constitute the more rigorous test of admissibility depends on certain features of the proffered knowledge. For example, *Frye* likely would be a trustworthy filter when the asserted knowledge is relatively new and the field or fields that provide the knowledge have traditions of vigorous research, testing, and debate. Scientific issues that might be in this category would include the toxicity of substances, the psychology of memory, and the identification of chemicals. This is not to say that the Federal Rules test would necessarily be less rigorous, but the responsibility would be on the court to evaluate the validity of the knowledge, and a considerable burden that is. It is no surprise that many judges would prefer to rely on the expert's field to do it for them.

On the other hand, the *Frye* test is much weaker than the Federal Rules test when the knowledge is provided by fields that lack traditions of vigorous research, testing, and debate. Scientific issues that might be in this category would include most psychological syndromes and most of the forensic identification sciences.

Faigman, Porter, & Saks, *supra* note 13, at 1810. See also Joseph Sanders, *Scientifically Complex Cases, Trial by Jury, and the Erosion of Adversarial Processes*, 48 DEPAUL L. REV. 355, 368-69 (1998) ("Many commentators and indeed many courts have assumed that *Daubert* set a lower threshold of admissibility than *Frye*. In one respect this is true. A theory or technique may not have reached general acceptance and yet would be admissible under *Daubert*. However, it is also true that general acceptance does not insure admissibility if a theory is untested, and courts are less willing to allow experts to draw unsupportable inferences from existing evidence. Rhetoric aside, courts, especially federal courts, are less willing to admit marginal expert testimony than they were pre-*Daubert*. Within the area of toxic torts, where many cases involve complex scientific evidence questions, the courts are much more likely to look behind the assertions of an expert to the data and theories supporting those assertions.").

⁴¹ See Lewis & Kitrick, *supra* note 3, at 82 ("The text of Rule 702 did not address its

As a result of the silence of Rule 702 on the continued viability of the *Frye* test, a split of authority prevailed in the federal courts. A majority of federal courts incorporated *Frye* into Rule 702,⁴² while a minority of courts rejected *Frye*.⁴³

A. *Daubert Resolves the Conflict Between Frye and Rule 702*

The United States Supreme Court found an opportunity to clarify the role of *Frye* in relation to Rule 702 in *Daubert v. Merrell Dow Pharmaceuticals, Inc.*⁴⁴ *Daubert* involved a federal lawsuit brought by the plaintiffs, two minors, Jason Daubert and Eric Schuller, and their respective parents, against the defendant Merrell Dow Pharmaceuticals, Inc.⁴⁵ The plaintiffs alleged that Jason and Eric were born with serious birth defects as a result of their mothers' ingestion of Bendectin, a prescription anti-nausea drug marketed by the defendant.⁴⁶ The defendant filed a motion for summary judgment that was supported primarily by scientific evidence showing that Bendectin did not cause birth defects in humans.⁴⁷ In reply, the plaintiffs filed affidavits of eight experts whose opinions were based on animal and chemical studies that showed Bendectin did cause birth defects in humans.⁴⁸ The district court granted the defendant's summary judgment motion on the basis that the plaintiffs' expert evidence was inadmissible because it did not satisfy *Frye's* general acceptance standard.⁴⁹ The United States Court of Appeals for the Ninth Circuit affirmed.⁵⁰ The Supreme Court granted certiorari to re-evaluate the standard of admissibility for scientific expert witness testimony.⁵¹

predecessor *Frye*, nor did the rule make reference to the 'general acceptance' standard.").

⁴² See *Christophersen v. Allied-Signal Corp.*, 939 F.2d 1106, 1115-16 (5th Cir. 1991); *United States v. Two Bulls*, 918 F.2d 56, 60 n.7 (8th Cir. 1990) *reh'g granted*, 925 F.2d 1127 (8th Cir. 1991); *United States v. Smith*, 869 F.2d 348, 351 (7th Cir. 1989); *Kropinski v. World Plan Executive Council-US*, 853 F.2d 948, 956 (D.C. Cir. 1988); *United States v. Gillespie*, 852 F.2d 475, 481-82 (9th Cir. 1988); *United States v. Metzger*, 778 F.2d 1195, 1203 (6th Cir. 1985); *Ellis v. Int'l Playtex, Inc.*, 745 F.2d 292, 304 n.15 (4th Cir. 1984).

⁴³ See *United States v. Jakobetz*, 955 F.2d 786, 794-97 (2d Cir. 1992); *United States v. Downing*, 753 F.2d 1224, 1232-37 (3d Cir. 1985).

⁴⁴ 509 U.S. 579 (1993).

⁴⁵ *Id.* at 582. The case was initially filed in a California State court, but was subsequently removed to a federal district court on diversity grounds. *Id.*

⁴⁶ *Id.*

⁴⁷ *Id.*

⁴⁸ *Id.* at 583.

⁴⁹ *Id.*

⁵⁰ *Id.* at 584.

⁵¹ *Id.* at 585.

Justice Blackmun, writing for the majority,⁵² held that Rule 702 superseded *Frye*.⁵³ In rejecting *Frye*, the Court stated:

Nothing in the text of this Rule establishes “general acceptance” as an absolute prerequisite to admissibility. Nor does respondent present any clear indication that Rule 702 or the Rules as a whole were intended to incorporate a “general acceptance” standard. The drafting history makes no mention of *Frye*, and a rigid “general acceptance” requirement would be at odds with the “liberal thrust” of the Federal Rules and their general approach of relaxing the traditional barriers to opinion testimony. Given the Rules’ permissive backdrop and their inclusion of a specific rule on expert testimony that does not mention “general acceptance,” the assertion that the Rules somehow assimilated *Frye* is unconvincing. *Frye* made “general acceptance” the exclusive test for admitting expert scientific testimony. That austere standard, absent from, and incompatible with, the Federal Rules of Evidence, should not be applied in federal trials.⁵⁴

In addition to rejecting *Frye*, Justice Blackmun, in *Daubert*, also set forth guidelines on how to apply Rule 702. In so doing, Justice Blackmun initially stated the general rule for applying Rule 702 as follows:

Faced with a proffer of expert scientific testimony, then, the trial judge must determine at the outset . . . 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. This entails a preliminary assessment of whether the reasoning or methodology underlying the testimony is scientifically valid and of whether that reasoning or methodology properly can be applied to the facts in issue.⁵⁵

Justice Blackmun then proposed four general considerations to assist judges in gauging the reliability of expert witness testimony: (1) testing,⁵⁶ (2) peer re-

⁵² Chief Justice Rehnquist filed an opinion concurring in part and dissenting in part, in which Justice Stevens joined. The Chief Justice agreed with the majority that Rule 702 replaced the *Frye* test. However, he dissented from the majority discussion on how to apply Rule 702. *See id.* at 598-601 (Rehnquist, C.J., dissenting).

⁵³ The opinion noted that “[a]lthough the *Frye* decision itself focused exclusively on ‘novel’ scientific techniques, we do not read the requirements of Rule 702 to apply specially or exclusively to unconventional evidence.” *Daubert*, 509 U.S. at 592 n.11.

⁵⁴ *Id.* at 588-89 (citations omitted).

⁵⁵ *Id.* at 592-93 (footnotes omitted).

⁵⁶ Ordinarily, a key question to be answered in determining whether a theory or

view,⁵⁷ (3) error rate/standards,⁵⁸ and (4) general acceptance.⁵⁹

Daubert became a problem for federal courts because Justice Blackmun chose to address the issue of how Rule 702 was to be applied only in the context of scientific evidence.⁶⁰ In his dissenting opinion, Chief Justice Rehnquist stated

technique is scientific knowledge that will assist the trier of fact will be whether it can be (and has been) tested. "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."

Id. at 593 (citations omitted).

⁵⁷ Another pertinent consideration is whether the theory or technique has been subjected to peer review and publication. Publication (which is but one element of peer review) is not a *sine qua non* of admissibility; it does not necessarily correlate with reliability, and in some instances well-grounded but innovative theories will not have been published. Some propositions, moreover, are too particular, too new, or of too limited interest to be published. But submission to the scrutiny of the scientific community is a component of 'good science,' in part because it increases the likelihood that substantive flaws in methodology will be detected. The fact of publication (or lack thereof) in a peer reviewed journal thus will be a relevant, though not dispositive, consideration in assessing the scientific validity of a particular technique or methodology on which an opinion is premised."

Id. at 593-94 (citations omitted).

⁵⁸ "Additionally, in the case of a particular scientific technique, the court ordinarily should consider the known or potential rate of error, and the existence and maintenance of standards controlling the technique's operation." *Id.* at 594 (citations omitted).

⁵⁹ Finally, "general acceptance" can yet have a bearing on the inquiry. A "reliability assessment does not require, although it does permit, explicit identification of a relevant scientific community and an express determination of a particular degree of acceptance within that community." Widespread acceptance can be an important factor in ruling particular evidence admissible, and "a known technique which has been able to attract only minimal support within the community."

Id. (quoting *United States v. Downing*, 753 F.2d 1224, 1238 (3d Cir. 1985)) (citations omitted). It deserves noting that while *Daubert* rejected the *Frye* test as the exclusive basis for admitting expert testimony, *Daubert* ultimately placed the "general acceptance" test back into the admissibility equation—but only as a factor that courts "may" consider.

⁶⁰ Federal courts have applied *Daubert* to a broad range of expert testimony. *See, e.g.*, *United States v. Lee*, 25 F.3d 997 (11th Cir. 1994) (machine detecting trace amounts of cocaine); *Pioneer Hi-Bred Int'l v. Holden Found. Seeds, Inc.*, 35 F.3d 1226 (8th Cir. 1994) (electrophoresis, liquid chromatography, and growout testing); *United States v. Johnson*, 28 F.3d 1487 (8th Cir. 1994) (drug trafficking); *Carroll v. Morgan*, 17 F.3d 787 (5th Cir. 1994) (standard of medical care); *United States v. Muldrow*, 19 F.3d 1332 (10th Cir. 1994) (identity and amount of cocaine); *United States v. Quinn*, 18 F.3d 1461 (9th Cir. 1994) (photogrammetry to identify individual's height); *O'Conner v. Commonwealth Edison Co.*, 13 F.3d 1090 (7th Cir. 1994) (opinion of radiation-induced cataracts); *United States v. Jones*, 24 F.3d 1177 (9th Cir. 1994) (voice identification technique); *United States v. Sepulveda*, 15 F.3d 1161 (1st Cir. 1993) (economics of cocaine trade); *United States v. Bonds*, 12 F.3d 540 (6th Cir. 1993) (DNA); *United States v. Amador-Galvan*, 9 F.3d 1414 (9th Cir. 1993) (unreliability of eyewitness tes-

that the majority opinion was wrong in providing “dicta” on the practical application of Rule 702, because that issue was not before the Court.⁶¹ The Chief Justice’s warning found a basis in reality.⁶²

After *Daubert*, federal courts immediately encountered problems on how to apply Rule 702.⁶³ Some federal courts applied the *Daubert* framework to

timony); *Porter v. Whitehall Lab., Inc.*, 9 F.3d 607 (7th Cir. 1993) (ibuprofen-induced kidney failure); *Elkins v. Richardson-Merrell, Inc.*, 8 F.3d 1068 (6th Cir. 1993) (Bendectin-induced birth defects); *United States v. Locascio*, 6 F.3d 924 (2d Cir. 1993) (organized crime); *Wilson v. City of Chicago*, 6 F.3d 1233 (7th Cir. 1993) (effects of electroshock treatments); *United States v. Daccarett*, 6 F.3d 37 (2d Cir. 1993) (money laundering scheme and techniques); *United States v. Markum*, 4 F.3d 891 (10th Cir. 1993) (cause of fire); *United States v. Bynum*, 3 F.3d 769 (4th Cir. 1993) (chromatographic analysis of cocaine samples); *Frymire-Brinati v. KPMG Peat Marwick*, 2 F.3d 183 (7th Cir. 1993) (valuation of corporations’ partnership interest); *Joy v. Bell Helicopter Textron, Inc.*, 999 F.2d 549 (D.C. Cir. 1993) (future earning capacity); *Cantrell v. GAF Corp.*, 999 F.2d 1007 (6th Cir. 1993) (cause of asbestosis); *Cella v. United States*, 998 F.2d 418 (7th Cir. 1993) (cause of polymyositis); *Petruzzi’s IGA Supermarkets, Inc. v. Darling-Delaware Co.*, 998 F.2d 1224 (3d Cir. 1993) (economic testimony).

⁶¹ In his dissenting opinion, the Chief Justice argued that the majority opinion was creating problems by going beyond the narrow issue of whether *Frye* was still applicable in federal courts. The potential problems identified in the dissenting opinion eventually came to pass, as federal courts were split on how to apply the principles set down by Justice Blackmun. See *Daubert*, 509 U.S. at 600-01 (Rehnquist, C.J., dissenting) (“Does all of this *dicta* apply to an expert seeking to testify on the basis of ‘technical or other specialized knowledge’ – the other types of expert knowledge to which Rule 702 applies – or are the ‘general observations’ limited only to ‘scientific knowledge’? What is the difference between scientific knowledge and technical knowledge; does Rule 702 actually contemplate that 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 covering the sort of expert testimony which courts have customarily received? . . . I think the Court would be far better advised in this case to decide only the questions presented, and to leave the further development of this important area of the law to future cases.”).

⁶² See Rochelle Cooper Dreyfuss, *Is Science a Special Case? The Admissibility of Scientific Evidence after Daubert v. Merrell Dow*, 73 TEX. L. REV. 1779, 1782 (1995) (“The question of [the] scope [of *Daubert*] was apparent even before the majority’s ink was dry. Courts are asked to consider the admissibility of testimony from such diverse professionals as laboratory technicians, economists, nutritionists, mechanics, human factors analysts, pollsters, psychologists, linguists, statisticians, and anthropologists. All of these proof offers are clearly subject to Rule 702, but as Chief Justice Rehnquist pointed out, [in *Daubert* they failed to state whether they should also be subject to the new reliability checklist.”).

⁶³ It has been noted in one commentary, “Canvassing federal court opinions citing *Daubert* yields a hodgepodge of responses.” M. Neil Browne, Terri J. Keeley & Wesley J. Hiers, *The Epistemological Role of Expert Witnesses and Toxic Torts*, 36 AM. BUS. L.J. 1, 43 (1998). For a general discussion see Shubha Ghosh, *Federal and State Resolutions of the Problem of Daubert and “Technical or Other Specialized Knowledge,”* 22 AM. J. TRIAL ADVOC. 237 (1998); John V. Jansonius & Andrew M. Gould, *Expert Witnesses in Employment Litigation: The Role of Reliability in Assessing Admissibility,* 50 BAYLOR L. REV. 267 (1998); Kristina L. Needham, *Questioning the Admissibility of Nonscientific Testimony After Daubert: The Need for Increased Judicial Gatekeeping to Ensure the Reliability of All Expert Testimony*, 25 FORDHAM URB. L.J. 541 (1998); Edson McClellan, Note, *Sharpening the Focus on Daubert’s Distinction Between Scientific and Nonscientific Expert Testimony*, 34 SAN DIEGO L. REV. 1719 (1997).

all expert testimony,⁶⁴ while others applied the standard solely to scientific expert testimony.⁶⁵ In addition, courts were confused as to whether to apply all of the four factors set out in the opinion, or whether additional considerations might be entertained.

B. *Kumho Clarifies Daubert*

The confusion encountered by federal courts in trying to determine whether *Daubert* applied to all expert testimony, or simply to expert scientific evidence, may be traced to a footnote in the opinion. In that footnote, Justice Blackmun stated the following: “Rule 702 also applies to ‘technical, or other specialized knowledge.’ Our discussion is limited to the scientific context because that is the nature of the expertise offered here.”⁶⁶ This footnote was later clarified by the Supreme Court in *Kumho Tire Co., Ltd. v. Carmichael*.⁶⁷

In *Kumho*, several plaintiffs sustained injuries when a tire blew out on their vehicle.⁶⁸ The plaintiffs filed a lawsuit in a federal district court in Alabama against the tire maker and its distributor.⁶⁹ The complaint alleged that the tire was defective.⁷⁰ The plaintiffs retained an expert who was prepared to testify that a defect in the tire’s manufacture or design caused the blowout.⁷¹ The defendants filed a motion to exclude the testimony of the plaintiffs’ expert and a motion for summary judgment.⁷² The district court first held that plaintiffs’ expert would be excluded because the expert did not satisfy the *Daubert* criteria.⁷³

⁶⁴ See *Watkins v. Telsmith, Inc.*, 121 F.3d 984, 990 (5th Cir. 1997) (*Daubert* applies to all expert testimony); *Surace v. Caterpillar, Inc.*, 111 F.3d 1039, 1055-56 (3d Cir. 1997) (same); *Smelser v. Norfolk S. Ry. Co.*, 105 F.3d 299, 303-04 (6th Cir. 1997) (same); *Peitzmeier v. Hennessy Indus., Inc.*, 97 F.3d 293, 297 (8th Cir. 1996) (same); *Cummins v. Lyle Indus.*, 93 F.3d 362, 367 n.2 (7th Cir. 1996) (same).

⁶⁵ See *Carmichael v. Samyang Tire, Inc.*, 131 F.3d 1433, 1435 (11th Cir. 1997) (*Daubert* applies only to scientific testimony), *cert. granted sub nom. Kumho Tire Co., Ltd. v. Carmichael*, 524 U.S. 936 (1998); *United States v. Cordoba*, 104 F.3d 225, 230 (9th Cir. 1997) (same); *Freeman v. Case Corp.*, 118 F.3d 1011, 1016 n.6 (4th Cir. 1997) (same); *Compton v. Subaru of Am., Inc.*, 82 F.3d 1513, 1518 (10th Cir. 1996) (same); *Iacobelli Constr., Inc. v. County of Monroe*, 32 F.3d 19, 25 (2d Cir. 1994) (same).

⁶⁶ *Daubert*, 509 U.S. at 590 n.8.

⁶⁷ 526 U.S. 137 (1999). See also *Gen. Elec. Co. v. Joiner*, 522 U.S. 136 (1997) (holding that an abuse of discretion standard applied to district court’s decision to exclude scientific evidence).

⁶⁸ One person was killed in the accident. *Id.* at 142.

⁶⁹ *Id.*

⁷⁰ *Id.*

⁷¹ *Id.* at 142-43.

⁷² *Id.* at 145.

⁷³ *Id.*

The court then granted summary judgment.⁷⁴ The Court of Appeals for the Eleventh Circuit reversed.⁷⁵ The appellate court held that the trial court committed error in applying *Daubert* because the expert testimony was based on engineering technical knowledge, not scientific knowledge.⁷⁶ The Supreme Court granted certiorari to clarify the scope of *Daubert*.⁷⁷

Justice Breyer, writing for the majority,⁷⁸ noted that Rule 702 made “no relevant distinction between ‘scientific’ knowledge and ‘technical’ or ‘other specialized’ knowledge. . . . Hence, as a matter of language, the Rule applies its reliability standard to all ‘scientific,’ ‘technical,’ or ‘other specialized’ matters within its scope.”⁷⁹ In ultimately holding that *Daubert* applied to all expert testimony, not just scientific expert testimony, the Court reasoned as follows:⁸⁰

[I]t would prove difficult, if not impossible, for judges to administer evidentiary rules under which a gatekeeping obligation depended upon a distinction between “scientific” knowledge and “technical” or “other specialized” knowledge. There is no clear line that divides the one from the others. Disciplines such as engineering rest upon scientific knowledge. Pure scientific theory itself may depend for its development upon observation and properly engineered machinery. And conceptual efforts to distinguish the two are unlikely to produce clear legal lines capable of application in particular cases.⁸¹

After resolving the scope of *Daubert*'s application, Justice Breyer addressed the issue of whether the factors enumerated in *Daubert* could be expanded or selectively used.⁸² The Court held that the *Daubert* factors could be

⁷⁴ *Id.* The plaintiffs filed a motion for reconsideration. The district court entertained the motion, but affirmed its earlier ruling. *Id.* at 145-46.

⁷⁵ *Id.* at 146.

⁷⁶ *Id.*

⁷⁷ *Id.* at 146-47.

⁷⁸ Justice Scalia filed a concurring opinion in which Justice O'Connor and Justice Thomas joined. Justice Stevens filed an opinion concurring in part and dissenting in part.

⁷⁹ *Id.* at 147.

⁸⁰ Justice Breyer acknowledged the source of confusion regarding *Daubert*. He wrote: “We concede that the Court in *Daubert* referred only to ‘scientific’ knowledge. But as the Court there said, it referred to ‘scientific’ testimony ‘because that was the nature of the expertise’ at issue.” *Kumho Tire Co., Ltd. v. Carmichael*, 526 U.S. 137, 147-48 (1999).

⁸¹ *Id.* at 148.

⁸² Rule 702 was amended on April 17, 2000 to reflect the rulings in *Daubert* and *Kumho*. The current version of Rule 702 provides as follows:

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

expanded and that not all of the factors had to be used if they had no application to the expert's field.⁸³

C. *Federal Courts Now Have a Level Playing Field for Admitting Expert Testimony*

It is important to understand and appreciate the significance of the *Daubert/Kumho* decisions. As a result of *Daubert/Kumho*, the "gatekeepers" in federal courts are not permitted to set up arbitrary and discriminating barriers for expert witnesses.⁸⁴ The decisions in *Daubert/Kumho* reflect the view that "[a]n

qualified as an expert by knowledge, skill, experience, training, or education, may testify thereto in the form of an opinion or otherwise, if (1) the testimony is based upon sufficient facts or data, (2) the testimony is the product of reliable principles and methods, and (3) the witness has applied the principles and methods reliably to the facts of the case.

FED. R. EVID. 702. Rule 702 does not codify the *Daubert* factors, but references them in the Committee Note. The Committee Note states that "[t]he standards set forth in the amendment are broad enough to require consideration of any or all of the specific *Daubert* factors where appropriate." The Committee Note also cites five additional factors that courts may consider in rendering admissibility judgments on proffered expert testimony. The additional factors are the following: (1) whether the research that forms the basis of the testimony was generated outside of or within the litigation context; (2) whether the analytical gap between the methodology and the conclusion is too great; (3) whether alternative theories have been appropriately ruled out; (4) whether the expert shows appropriate professional care in testifying; and (5) the general reliability of the field of research. FED. R. EVID. 702 advisory committee's note.

⁸³ Justice Breyer addressed the issue using these words:

Daubert makes clear that the factors it mentions do *not* constitute a "definitive checklist or test." And *Daubert* adds that the gatekeeping inquiry must be "tied to the facts" of a particular "case." We agree with the Solicitor General that "the factors identified in *Daubert* may or may not be pertinent in assessing reliability, depending on the nature of the issue, the expert's particular expertise, and the subject of his testimony." The conclusion, in our view, is that we can neither rule out, nor rule in, for all cases and for all time the applicability of the factors mentioned in *Daubert*, nor can we now do so for subsets of cases categorized by category of expert or by kind of evidence. Too much depends upon the particular circumstances of the particular case at issue.

Kumho, 526 U.S. at 150 (citations omitted).

⁸⁴ It must be noted that a majority of the states that have addressed the issue have adopted the *Kumho/Daubert* test. See *People v. Shreck*, 22 P.3d 68 (Colo. 2001); *M.G. Bancorporation, Inc. v. Le Beau*, 737 A.2d 513 (Del. 1999); *State v. Vliet*, 19 P.3d 42 (Haw. 2001); *Goodyear Tire and Rubber Co. v. Thompson*, 11 S.W.3d 575 (Ky. 2000); *Indep. Fire Ins. Co. v. Sunbeam Corp.*, 755 So. 2d 226 (La. 2000); *Theresa Canavan's Case*, 733 N.E.2d 1042 (Mass. 2000); *State v. Southern*, 980 P.2d 3 (Mont. 1999); *Schafersman v. Agland Coop*, 631 N.W.2d 862 (Neb. 2001); *State v. Davis*, 542 S.E.2d 236 (N.C. 2001); *Gilson v. State*, 8 P.3d 883 (Okla. Crim. App. 2000); *DiPetrillo v. Dow Chem. Co.*, 729 A.2d 677 (R.I. 1999); *First W. Bank Wall v. Olsen*, 621 N.W.2d 611 (S.D. 2001); *Kroger Co. v. Betancourt*, 996 S.W.2d 353 (Tex. App. 1999); *State v. Kinney*, 762 A.2d 833 (Vt. 2000); *Bunting v. Jamieson*, 984 P.2d 467 (Wyo. 1999). A minority of state courts have expressly rejected both *Daubert* and *Kumho*. See *Loger-*

opinion from an expert who is not a scientist should receive the same degree of scrutiny for reliability as an opinion from an expert who purports to be a scientist.”⁸⁵ Under the simplicity and fairness of *Daubert/Kumho*, “the trial judge must find that the expert has a sufficient basis for the opinion, that the expert is using a reliable method, and that the method has been applied reliably to the facts of the case.”⁸⁶

In rendering a decision on any type of expert testimony, the *Daubert/Kumho* analysis does not impose any stringent criteria outside of Rule 702. *Daubert/Kumho* have appropriately provided trial judges with a list of a few commonly relevant factors. It is most important to note that these factors are not monolithic. The *Daubert/Kumho* considerations are factors that trial judges have *discretion to use* when they are relevant to expert testimony. These factors can be added to or simply not used when they have no relevancy in helping a trial court determine the reliability of expert testimony. If *Daubert/Kumho* are understood and applied with this understanding, one must conclude that *Daubert/Kumho* did not drastically alter Rule 702. Those decisions merely provided potential working tools for the rule’s application.

V. ADMITTING EXPERT TESTIMONY IN WEST VIRGINIA PRIOR TO 1980

Prior to 1980, the admissibility of expert testimony in West Virginia⁸⁷ was based upon whether the witness possessed skill, experience, or special knowledge⁸⁸ regarding the subject of his/her opinion.⁸⁹ These factors were out-

quist v. McVey, 1 P.3d 113 (Ariz. 2000); Bahura v. S.E.W. Investors, 754 A.2d 928 (D.C. 2000); Goeb v. Tharaldson, 615 N.W.2d 800 (Minn. 2000); Long v. Missouri Delta Med. Ctr., 33 S.W.3d 629 (Mo. Ct. App. 2001).

⁸⁵ Xavier Pena, *The Effective Evaluation of Expert Reliability*, 20 REV. LITIG. 743, 753 (2001).

⁸⁶ Stephen A. Saltzburg, Edward J. Imwinkelried & Daniel J. Capra, *Keeping the Reformist Spirit Alive in Evidence Law*, 149 U. PA. L. REV. 1277, 1289 (2001).

⁸⁷ Trial judges had the authority to determine the admissibility of expert testimony. Syl. Pt. 5, *Overton v. Fields*, 117 S.E.2d 598 (W. Va. 1960) (“Whether a witness is qualified to state an opinion is a matter which rests within the discretion of the trial court and its ruling on that point will not ordinarily be disturbed unless it clearly appears that its discretion has been abused.”). *Accord* Syl. Pt. 5, *Jordan v. Bero*, 210 S.E.2d 618 (W. Va. 1974); Syl. Pt. 8, *Moore, Kelly & Reddish, Inc. v. Shannondale, Inc.*, 165 S.E.2d 113 (W. Va. 1968).

⁸⁸ See *Welch v. Ins. Co.*, 23 W. Va. 288, 305-06 (1883) (“Of facts, which require proof by means of indirect evidence . . . there are some of so peculiar a nature, that juries cannot without other aid come to a direct conclusion on the subject. In such instances, where the inference requires the judgment of persons of peculiar skill and knowledge on the particular subject, the testimony of such as to their opinion and judgment upon the facts, is admissible evidence to enable the jury to come to a correct conclusion. Thus the relation between a particular injury inflicted on a man’s body and the death of this man is an inference to be made by medical skill and experience, and may be proved by one who possesses those qualifications.”). See generally *State v. M. M.*, 256 S.E.2d 549 (W. Va. 1979); *Sisler v. Hawkins*, 217 S.E.2d 60 (W. Va. 1975); *Frazier v. Grace Hosp.*, 185 S.E. 415 (W. Va. 1936); *Chapman v. J.W. Beltz & Sons Co.*, 35 S.E. 1013 (W. Va. 1900); *McMechen v. McMechen*, 17 W. Va. 683 (1881); *Beach v.*

lined in *State v. Musgrave*⁹⁰ as follows:

The rule is that the opinions of experts or skilled witnesses are admissible in evidence in those cases in which the matter of inquiry is such that inexperienced persons are unlikely to prove capable of forming a correct judgment upon it, for the reason that the subject-matter so far partakes of the nature of a science, art, or trade as to require a previous habit of experience or study in it in order to acquire a knowledge of it. When the question involved does not lie within the range of common experience or common knowledge, but requires special experience or special knowledge, then the opinions of witnesses skilled in the particular science, art, or trade to which the question relates are admissible in evidence.⁹¹

O'Riley, 14 W. Va. 55 (1878); *Bryan v. Peabody Ins. Co.*, 8 W. Va. 605 (1875); *Clay v. Robinson*, 7 W. Va. 348 (1874).

⁸⁹ See Syl. Pt. 5, *Redman v. Cmty. Hotel Corp.*, 76 S.E.2d 759, 760 (W. Va. 1953) ("The object of all questions to experts should be to obtain their opinion as to matters of skill or science which are in controversy, and at the same time to exclude their opinions as to the effect of the evidence in establishing controverted facts."); Syl. Pt. 6, *State v. Brady*, 140 S.E. 546, 547 (W. Va. 1927) ("A witness may testify as an expert, where he is qualified by practical experience in a field of activity conferring on him special knowledge, not shared by mankind in general; the rule in this respect being that one who has been engaged for a reasonable time in a particular profession will be assumed to have the ordinary knowledge common to persons so engaged."); Syl. Pt. 5, *State v. Musgrave*, 28 S.E. 813, 814 (W. Va. 1897) (same); Syl. Pt. 1, *State v. Perry*, 24 S.E. 634, 634-35 (W. Va. 1896) ("Whether criminal charges preferred by a female patient against a physician are the result of hallucination, while under the influence of chloroform and either, is a question that must be determined by expert medical evidence, as it is not a matter of ordinary human experience or knowledge.").

⁹⁰ 28 S.E. 813 (W. Va. 1897). See also Syl. Pt. 5, *Norfolk & W. Ry. Co. v. Christian*, 99 S.E. 13, 13 (W. Va. 1919) ("Opinion evidence of competent experts may be properly called for when the questions presented are of such a nature that persons generally would not be as competent to pass judgment thereon as such experts."); *McKelvey v. Chesapeake & Ohio Ry. Co.*, 14 S.E. 261, 262 (W. Va. 1891) ("The non-expert gives results of a process of reasoning familiar to every-day life; the expert gives the results of a process of reasoning which can be mastered only by special scientists.").

⁹¹ *Musgrave*, 28 S.E. at 819. See also Syl. Pt. 18, *Lester v. Rose*, 130 S.E.2d 80, 84 (W. Va. 1963) ("A witness who has certain knowledge and experience not possessed by the general public in a particular field or subject is classified as an expert witness, and should be permitted to give his opinion with regard to matters in question within his field upon the propounding of proper hypothetical questions."); *Sebrell v. Barrows*, 14 S.E. 996, 998 (W. Va. 1892) ("For the purpose of determining the competency of the witness, a preliminary examination takes place, in which the witness may be asked to state his acquaintance with the subject-matter in reference to which his opinion is desired, and what he has done to qualify himself as an expert in that particular department of inquiry. . . . [I]t should always be required of an expert that he should at least be sufficiently acquainted with the subject-matter of his testimony to know what its laws are, and not merely to conjecture or to have an idea about it.").

Under this standard, the trial record was required to clearly show that an expert possessed the qualifications necessary to render an opinion.⁹² Additionally, expert testimony without a basis of reliability had to be excluded.⁹³ There was also a requirement that expert testimony be relevant.⁹⁴ Finally, expert testimony was not to be given any greater weight by juries than non-expert testimony.⁹⁵

The West Virginia Supreme Court also followed the rule that expert testimony was not admissible on issues that did not require any special knowledge.⁹⁶ This point was stressed in syllabus point 5 of *Overby v. Chesapeake & Ohio Railway Co.*,⁹⁷ where the Court stated that “[i]f the facts in a case can be placed before a jury, and they are of such a nature that jurors generally are just as competent to form opinions in reference to them and draw inferences from them as witnesses, then the opinion of experts cannot be received in evidence as to such facts.”⁹⁸

⁹² See Syl. Pt. 2, *Byrd v. Virginian Ry. Co.*, 13 S.E.2d 273, 273 (W. Va. 1941) (“The qualification of an expert witness must affirmatively appear, but the ruling of the trial court thereon will not be disturbed in the absence of an abuse of discretion.”).

⁹³ See Syl. Pt. 2, *Armstead v. Holbert*, 122 S.E.2d 43, 44 (W. Va. 1961) (“Testimony of an expert medical witness as to possible future difficulty in bearing children which is speculative or conjectural is inadmissible and prejudicial.”).

⁹⁴ See Syl., *Hazelrigs v. City of Huntington*, 182 S.E. 877, 878 (W. Va. 1935) (“A hypothetical question calling for an expression of opinion from an expert witness that is irrelevant to the issues of fact being tried should not be permitted.”).

⁹⁵ See Syl. Pt. 2, *Webb v. Chesapeake & Ohio Ry. Co.*, 144 S.E. 100, 100 (W. Va. 1928) (“The testimony of expert witnesses on an issue is not exclusive, and does not necessarily destroy the force or credibility of other testimony. The jury has a right to weigh the testimony of all witnesses, experts and otherwise; and the same rule applies as to the weight and credibility of such testimony.”).

⁹⁶ See Syl. Pt. 2, *Adkins v. Downing Gas Co.*, 198 S.E. 131, 131 (W. Va. 1938) (“In an action or suit involving a title to lands, it is error to admit the opinion of a surveyor to the effect that the boundary lines are either correct or incorrect. The location of boundary lines is not a subject for expert testimony.”); Syl. Pt. 2, *Liberty Coal Co. v. Bassett*, 150 S.E. 745, 745 (W. Va. 1929) (“The judgment of expert witnesses on a subject which requires no special training, in order to understand the evidence thereon, may be disregarded.”).

⁹⁷ 16 S.E. 813 (W. Va. 1893).

⁹⁸ *Id.* at 813. See Syl. Pt. 2, *State v. Noe*, 230 S.E.2d 826, 827 (W. Va. 1976) (“Although the opinion of an expert is admissible if given within the field of his expertise, his opinion regarding matters outside his field of expertise and within the knowledge of persons of common experience and observation is not admissible.”); Syl. Pt. 4, *Overton v. Fields*, 117 S.E.2d 598, 601 (W. Va. 1960) (“When the opinion of a witness, not an expert, is offered in evidence, and he is no better qualified than the jurors to form an opinion with reference to the facts in evidence and the deductions to be properly drawn from such facts, his opinion evidence is not admissible.”); Syl. Pt. 2, *Thrasher v. Amere Gas Utils. Co.*, 75 S.E.2d 376, 379 (W. Va. 1953) (“Expert opinion evidence concerning a matter as to which the jury are as competent to form an accurate opinion as the witness is inadmissible.”); Syl. Pt. 7, *Lawrence’s Adm’r v. Hyde*, 88 S.E. 45, 46 (W. Va. 1916) (same); *Reall v. Deiriggi*, 34 S.E.2d 253, 256 (W. Va. 1945) (“It is only in situations where the jury cannot be fully informed regarding the facts upon which it is

From a review of decisions by the West Virginia Supreme Court regarding admissibility of expert testimony prior to 1980, it becomes abundantly clear that ad hoc principles governed.⁹⁹ Trial judges and the West Virginia Supreme Court approached expert testimony largely on a case-by-case basis, with no true definitive principles for guidance.¹⁰⁰ This situation existed because the courts

based that an opinion or conclusion becomes admissible.”); *State v. Hull*, 32 S.E. 240, 243 (W. Va. 1899) (“[W]hen the inquiry relates to a subject which does not require peculiar habits of study in order to enable a man to understand it, the opinion of skilled witnesses is not admissible.”); *Welch v. Ins. Co.*, 23 W. Va. 288 (1883) (same); *Hood v. Maxwell*, 1 W. Va. 219 (1866) (“It was not a matter of professional or scientific skill and judgment as to which the opinion or deduction of an expert is in some cases admitted as testimony, because of his supposed peculiar or better means of judging, but simply a matter of fact which might have been proven as well by any one who knew it. And if it had been a matter of skill and judgment, the witness was not proven to have been an expert.”).

⁹⁹ See *Byrd v. Virginian Ry. Co.*, 13 S.E.2d 273, 274 (W. Va. 1941) (A witness having seven years experience as a fireman for railroad and occasionally operating trains thereon was qualified as an expert to testify as to distance within which passenger train could be stopped.); *Syllabus, Foose v. Hawley Corp.*, 198 S.E. 138, 138 (W. Va. 1938) (“Respecting a physical injury of which a person is suffering, a physician, grounding his testimony on direct information or a proper hypothetical question, may give in evidence his opinion of the cause of which the injury is the resultant.”); *Syl. Pt. 1, Sebrell v. Barrows*, 14 S.E. 996, 996 (W. Va. 1892) (“Where a witness is called and examined as an expert as to whether a steamboat was properly landed for the purpose of discharging a passenger, and as to what officers were required to properly man such boat, it must not only appear that the witness has sufficient knowledge and experience in reference to the subject-matter under consideration, but that he is acquainted with the class and dimensions of the boat, and the character and condition of the river and shore where the landing was made, or has heard the same described by witnesses in the case, before he can be allowed to express his opinion as an expert.”); *Syl. Pt. 1, McKelvey v. Chesapeake & Ohio Ry. Co.*, 14 S.E. 261, 261 (W. Va. 1891) (“A locomotive engineer, without any experience or skill in the construction or repair of boilers, is not an expert as to the effect of broken stay-bolts in the boiler, or of mud packed therein. His opinion is not admissible.”); *Syl. Pt. 4, Bowen v. City of Huntington*, 14 S.E. 217, 217 (W. Va. 1891) (“Where the conclusions called for by a hypothetical question from a medical man, who is being examined as an expert, depend upon facts, the evidential weight of which can only be determined by those familiar with that specialty, then those conclusions may be given by an expert in such specialty.”).

¹⁰⁰ See *Syl. Pt. 1, State v. M. M.*, 256 S.E.2d 549, 550 (W. Va. 1979) (“Before a witness is qualified as an expert on the subject of juvenile rehabilitation that witness must, through training, education or practical experience, possess significant skill and knowledge regarding the rehabilitation of juveniles.”); *Syl. Pt. 2, W. Va. Dep’t of Highways v. Sickles*, 242 S.E.2d 567, 569 (W. Va. 1978) (“In the cross-examination of an expert appraiser in a condemnation proceeding it is proper to inquire of the expert for the purpose of determining his methodology, whether he evaluated particular sales in the vicinity of the subject property, and where he testifies that he did not consider certain sales considered by the opposing party to be comparable, or that he considered them but did not find them comparable, it is proper to inquire of him whether knowledge of these sales would alter his opinion, or alternatively why he does not consider a particular sale comparable.”); *Syl. Pt. 1, State v. Pendry*, 227 S.E.2d 210, 213 (W. Va. 1976) (“In presenting testimony in a criminal trial, an expert medical witness should be permitted to state the facts or data upon which he bases his opinion, and this includes information available to him in the form of records or documents whose reliability has been reasonably established and which have been kept in the regular course of professional care or treatment of the defendant and are of a type reasonably relied upon by experts in the witness’ particular field of expertise.”).

seemed to give greater attention to the identity of the expert than to the details of the foundation of an expert's testimony.¹⁰¹ This is to say that, prior to 1980, West Virginia jurisprudence had no cutting-edge principle of law for focusing on the reliability of an expert's evidence.

VI. WEST VIRGINIA'S ADOPTION OF *FRYE* IN 1980

Justice Thomas B. Miller altered the landscape for admitting expert testimony in West Virginia with the Supreme Court's 1980 decision in *State v. Clawson*.¹⁰² *Clawson* involved a defendant who was convicted of two first degree murder charges. One of the issues the defendant assigned as error involved the admission of expert testimony concerning hair samples allegedly belonging to the victims.¹⁰³ Justice Miller observed that "[p]art of the problem lies in the fact that the record does not adequately disclose the scientific basis for determining how comparison is made with regard to hair samples."¹⁰⁴ It was further noted in *Clawson* that "the trial court confronted with this problem should require some *in camera* disclosure of the test results and methodology in order to make an initial determination of whether the expert's testimony should be admitted."¹⁰⁵

Clawson turned to the *Frye* standard for the admissibility of expert testimony. Justice Miller reasoned that *Frye* allowed for closer scrutiny of the reliability of "scientific" expert testimony. Accordingly, *Clawson* adopted the *Frye* test in syllabus point 7 of the opinion as follows: "In order for a scientific test to be initially admissible, there must be general acceptance of the scientific princi-

¹⁰¹ See Syl. Pt. 4, *Leftwich v. Wesco Corp.*, 119 S.E.2d 401, 403 (W. Va. 1961) ("A wide latitude as to expert medical testimony is allowed, and although it should be confined to the injuries in question, such witnesses can give their opinion with regard to the nature of the injury, whether it is permanent or temporary, and the probable result based on medical knowledge and experience with regard to the injury or injuries."); Syl. Pt. 3, *Nicholas v. Granite State Fire Ins. Co.*, 24 S.E.2d 280, 282 (W. Va. 1943) ("Where an insured, in an action on a fire insurance policy, seeks recovery under Code, 33-4-9, it is not prejudicial error for expert witnesses, called for the purpose of establishing total loss, to testify as to what they would do with the property if it belonged to them personally, where they testified further as to what a prudent owner of property, having no insurance, would do with the property."); Syl. Pt. 5, *State v. Johnson*, 164 S.E. 31, 32 (W. Va. 1932) ("The question of the qualification of such [fingerprint] witness as an expert rests largely in the discretion of the court, there being no arbitrary and fixed test of such qualification. The weight of such testimony is a question for the jury."); Syl. Pt. 4, *State v. Friend*, 130 S.E. 102, 102 (W. Va. 1925) ("A physician who has qualified as an expert, and who has formed an opinion from a physical examination of the genital organs of a male, then afflicted with orchitis, regarding his ability or inability to copulate, may express that opinion in his evidence to the jury.")

¹⁰² 270 S.E.2d 659 (W. Va. 1980).

¹⁰³ *Id.* at 675. The case was ultimately reversed for a new trial on other grounds.

¹⁰⁴ *Id.*

¹⁰⁵ *Id.* at 678.

ple which underlies the test.”¹⁰⁶ In addition to adopting the *Frye* test, *Clawson* set out the following criteria in syllabus point 9 for determining the admissibility of scientific test results:

The necessary foundation before the admission of the results of any test are: (1) That the testing device or equipment was in proper working order; (2) that the person giving and interpreting the test was properly qualified; (3) that the test was properly conducted; and (4) that there was compliance with any statutory requirements.¹⁰⁷

The Supreme Court did not issue any other opinions regarding the *Clawson/Frye* test prior to the adoption of the West Virginia Rules of Evidence.

VII. EXPERT TESTIMONY UNDER THE WEST VIRGINIA RULES OF EVIDENCE

On December 18, 1984, the West Virginia Supreme Court adopted the West Virginia Rules of Evidence.¹⁰⁸ Specifically, the Court adopted Rule 702 verbatim from its federal counterpart. West Virginia’s Rule 702 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, training, or education may testify thereto in the form of an opinion or otherwise.¹⁰⁹

Although the admission of expert testimony was guided by Rule 702 after its adoption, the Court did not abandon its *Clawson/Frye* “general acceptance” test. That is, the West Virginia Supreme Court followed the line of federal cases that incorporated the general acceptance test into Rule 702.¹¹⁰

For example, in *State v. Woodall*,¹¹¹ Justice Richard Neeley set forth the guidelines for using Rule 702 and *Clawson/Frye*.¹¹² In syllabus point 1 of

¹⁰⁶ *Id.* at 662. In syllabus point 8 of *Clawson*, Justice Miller set out a qualification for using *Frye*: “There are certain scientific tests that have been widely used over a long period of time, such that their general acceptance in the scientific community can be judicially noticed.” *Id.*

¹⁰⁷ *Id.* at 663. *See State v. Hood*, 184 S.E.2d 334, 337 (W. Va. 1971) (setting out the same criteria recognized in *Clawson*).

¹⁰⁸ The rules were patterned after their federal counterpart.

¹⁰⁹ W. Va. R. Evid. 702.

¹¹⁰ *See infra* note 112 and accompanying text.

¹¹¹ 385 S.E.2d 253 (W. Va. 1989).

¹¹² Prior to *Woodall*, the Supreme Court issued several opinions citing or discussing Rule 702 without referring to *Clawson/Frye*. *See Morris v. Boppana*, 387 S.E.2d 302 (W. Va. 1989); *Checker Leasing, Inc. v. Sorbello*, 382 S.E.2d 36 (W. Va. 1989); *Riggle v. Allied Chem. Corp.*,

Woodall the Court stated:

Under W. Va. R. Evid., Rule 702, expert testimony concerning generally recognized tests is presumptively admissible and the burden of excluding such testimony is upon the side seeking exclusion. However, when a test is novel or not generally accepted, that circumstance alone meets the threshold requirement of rebutting any presumption of admissibility under Rule 702 and, therefore, with regard to tests that are not generally accepted the burden of proof that the test is reliable remains on the proponent.¹¹³

For any number of reasons, the *Woodall* formulation for admitting expert testimony was not relied upon in subsequent cases decided by the West Virginia Supreme Court.¹¹⁴

A. Wilt Adopts Daubert

Woodall created a standard for the admissibility of expert testimony that *Daubert* determined was inconsistent with Federal Rule 702. In 1993, Justice Miller, writing for the Court in *Wilt v. Buracker*,¹¹⁵ agreed with *Daubert's* con-

378 S.E.2d 282 (W. Va. 1989); *W. Va. Dep't of Highways v. Thompson*, 375 S.E.2d 585 (W. Va. 1988) (per curiam); *State v. McCoy*, 366 S.E.2d 731 (W. Va. 1988); *State v. Haller*, 363 S.E.2d 719 (W. Va. 1987); *Ventura v. Winegardner*, 357 S.E.2d 764 (W. Va. 1987); *Rozas v. Rozas*, 342 S.E.2d 201 (W. Va. 1986).

For opinions recognizing *Clawson/Frye* after the adoption of Rule 702, but before the *Woodall* decision, see *Reager v. Anderson*, 371 S.E.2d 619 (W. Va. 1988); *State v. Armstrong*, 369 S.E.2d 870 (W. Va. 1988); *State v. Barker*, 366 S.E.2d 642 (W. Va. 1988); *State v. Wallace*, 337 S.E.2d 316 (W. Va. 1985) (per curiam); *State v. Wyant*, 328 S.E.2d 174 (W. Va. 1985) (per curiam).

¹¹³ *Woodall*, 385 S.E.2d at 256.

¹¹⁴ There appears to have been only one case applying the *Woodall* formula. See *State v. Thomas*, 421 S.E.2d 227 (W. Va. 1992). See also *State v. Armstrong*, 369 S.E.2d 870, 874-75 n.4 (W. Va. 1988).

For opinions discussing expert testimony under Rule 702 after *Woodall*, but not mentioning *Woodall/Clawson/Frye*, see *Liston v. Univ. of W. Va. Bd. of Trs. ex rel. W. Va. Univ.*, 438 S.E.2d 590 (W. Va. 1993); *State v. Koon*, 440 S.E.2d 442 (W. Va. 1993) (per curiam); *State v. Triplett*, 421 S.E.2d 511 (W. Va. 1992); *Dobson v. E. Associated Coal Corp.*, 422 S.E.2d 494 (W. Va. 1992); *State v. Stewart*, 419 S.E.2d 683 (W. Va. 1992) (per curiam); *Arnoldt v. Ashland Oil, Inc.*, 412 S.E.2d 795 (W. Va. 1991); *Shaver v. Memel*, 412 S.E.2d 519 (W. Va. 1991) (per curiam); *Cargill v. Balloon Works, Inc.*, 405 S.E.2d 642 (W. Va. 1991) (per curiam); *Gilman v. Choi*, 406 S.E.2d 200 (W. Va. 1990); *Jones v. Garnes*, 395 S.E.2d 548 (W. Va. 1990) (per curiam); *State v. Dietz*, 390 S.E.2d 15 (W. Va. 1990); *Bd. of Educ. of McDowell County v. Zando, Martin & Milstead, Inc.*, 390 S.E.2d 796 (W. Va. 1990).

¹¹⁵ 443 S.E.2d 196 (W. Va. 1993).

clusion.

Wilt involved a lawsuit filed by two plaintiffs after they sustained permanent injuries in an automobile accident.¹¹⁶ The defendant in the case was the estate of the decedent who caused the accident.¹¹⁷ A jury returned a verdict for the plaintiffs, and the defendant appealed.¹¹⁸ At the outset of the opinion Justice Miller noted that “[t]he primary reason [the Court] accepted this appeal was to determine whether the testimony of an economist calculating a monetary amount of damages for the loss of enjoyment of life, often called hedonic damages, is admissible evidence.”¹¹⁹

Wilt reviewed some of the West Virginia Supreme Court’s prior decisions and noted that the Court had engrafted the *Frye* standard into Rule 702.¹²⁰ *Wilt* then provided some discussion of *Daubert* and *Daubert’s* rejection of incorporating the *Frye* standard into Federal Rule 702.¹²¹ After reviewing *Daubert*, Justice Miller stated “that *Daubert’s* analysis of Federal Rule 702 should be followed in analyzing the admissibility of expert testimony under Rule 702 of the West Virginia Rules of Evidence.”¹²² *Wilt* then created the following principle of law in syllabus point 2 of the opinion:

In analyzing the admissibility of expert testimony under Rule 702 of the West Virginia Rules of Evidence, the trial court’s initial inquiry must consider whether the testimony is based on an assertion or inference derived from the scientific methodology. Moreover, the testimony must be relevant to a fact at issue. Further assessment should then be made in regard to the expert testimony’s reliability by considering its underlying scientific methodology and reasoning. This includes an assessment of (a) whether the scientific theory and its conclusion can be and have been tested; (b) whether the scientific theory has been subjected to peer review and publication; (c) whether the scientific theory’s actual or potential rate of error is known; and (d) whether the scientific theory is generally accepted within the scientific community.¹²³

Justice Miller was careful to point out in *Wilt* that the new standard of

¹¹⁶ *Id.* at 199.

¹¹⁷ *Id.*

¹¹⁸ *Id.*

¹¹⁹ *Id.* at 200.

¹²⁰ *Id.* at 200-01.

¹²¹ *Id.* at 201-03.

¹²² *Id.* at 203.

¹²³ *Id.* at 198.

admissibility of expert testimony sought to ensure the “reliability” of expert *scientific* evidence.¹²⁴ This restriction was imposed because, at that time, *Daubert* was being interpreted in such a manner.

B. Gentry Expands Wilt

Wilt provided a basic foundation for addressing the admissibility of scientific expert testimony. However, in *Gentry v. Mangum*,¹²⁵ Justice Cleckley provided practical guidance for using *Wilt*.¹²⁶

Gentry clearly stated that “*Daubert/Wilt* mandates that when scientific evidence is proffered, the circuit court make a preliminary assessment ‘at the outset pursuant to Rule 104(a) of whether the reasoning or methodology underlying the testimony is scientifically valid.’”¹²⁷ Justice Cleckley then set out the

¹²⁴ In syllabus point 1 of *Wilt*, Justice Miller provided an exception to applying the test formulated in the opinion:

Under Rule 702 of the West Virginia Rules of Evidence, there is a category of expert testimony based on scientific methodology that is so longstanding and generally recognized that it may be judicially noticed and, a trial court need not ascertain the basis for its reliability.

Id. at 198.

¹²⁵ 466 S.E.2d 171 (W. Va. 1995). *Gentry* was brought as an appeal by the plaintiffs from a summary judgment ruling in favor of the defendants. One of the issues presented on appeal involved the trial court’s exclusion of evidence by plaintiffs’ expert. The Supreme Court ultimately reversed the trial court’s decision. *Id.* at 175.

¹²⁶ Justice Cleckley did not apply the *Wilt/Daubert* standard for scientific testimony to the facts in *Gentry* because the expert testimony did not involve scientific evidence.

¹²⁷ *Id.* at 180. Justice Cleckley also pointed out that “Rule 103(c) of the Rules of Evidence permits and encourages pretrial motions in limine as the appropriate procedure for determining the admissibility of time consuming and difficult evidentiary issues.” *Id.* This means that trial courts do not have to hold time-consuming evidentiary hearings when challenged scientific expert testimony is sought to be introduced. As a practical matter, in most instances, parties can simply provide the court with in limine motions and responses that reflect deposition testimony and relevant exhibits. This allows trial courts to decide the admissibility issue quickly and without lengthy evidentiary testimony. Obviously, there are exceptions that require evidentiary hearings, but such hearings should be the exception and not the rule. One of the motivations behind the adoption of Rule 702 was to avoid the cumbersome and lengthy *Frye* admissibility hearings. The *Wilt/Gentry* analysis does not reinstate the *Frye* type hearings.

The fact that a *Daubert/Kumho* hearing may not be required in many instances has been recognized by commentators and courts. One commentator has said the following:

[T]he recently published second edition of the Federal Judicial Center’s Reference Manual on Scientific Evidence notes the wide latitude given to the courts in determining the necessity of holding a hearing, with the manual explaining that hearings are not always appropriate and instead are reserved for complex mass tort cases.

Certainly, a trial court need not hold a full pretrial hearing in every case, and, indeed, the trial judge in *Kumho* did not. However, in complex civil

following guidelines:

Under *Daubert/Wilt*, the circuit court conducts an inquiry into the validity of the underlying science, looking at the soundness of the principles or theories and the reliability of the process or method as applied in the case. The problem is not to decide whether the proffered evidence is right, but whether the science is valid enough to be reliable. When scientific evidence is proffered, the circuit court in its “gatekeeper” role must engage in a two-part analysis in regard to the expert testimony. First, the

litigation that has the potential to affect numerous persons, the trial court may conclude that extensive evidentiary hearings are the most efficacious way for the court to inform itself about the factors it will have to take into account in ruling on admissibility.

Ellen Relkin, *To Hear or Not to Hear: When Are Daubert Hearings Appropriate?*, SF78 ALI-ABA 371, 376 (2001) (quoting MARGARET BERGER, THE SUPREME COURT’S TRILOGY ON THE ADMISSIBILITY OF EXPERT TESTIMONY, IN REFERENCE MANUAL ON SCIENTIFIC EVIDENCE 29 (Federal Judicial Center, 2d ed., 2000)).

Another commentator has observed, “[b]ut *Daubert* and *Kumho Tire* do not call for pretrial ‘testimonial hearings’ in ‘any case involving disputed expert testimony.’ Under these cases . . . a trial court need not conduct a pretrial hearing just because a party demands one.” D.H. Kaye, *Choice and Boundary Problems in Logerquist, Hummert, and Kumho Tire*, 33 ARIZ. ST. L.J. 41, 59-60 n.95 (2001).

The Ninth Circuit Court of Appeals addressed the issue squarely and concluded,

The Supreme Court’s . . . cases *Daubert* . . . and *Kumho Tire* provide[] the backdrop for analysis of the issue presented here: whether a separate, pretrial hearing, outside the presence of the jury, is required before expert testimony may be admitted at trial. In light of the Supreme Court’s emphasis on the broad discretion granted to trial courts in assessing the relevance and reliability of expert testimony, and in the absence of any authority mandating such a hearing, we conclude that trial courts are not compelled to conduct pretrial hearings in order to discharge the gatekeeping function.

United States v. Alatorre, 222 F.3d 1098, 1100 (9th Cir. 2000).

The Seventh Circuit Court of Appeals has similarly commented on the issue in the context of admitting fingerprint evidence:

The issue of the reliability of fingerprint evidence after *Daubert* appears to be one of first impression in this circuit, and few other courts have addressed this question. Those discussing the issue have not excluded fingerprint evidence; instead, they have declined to conduct a pretrial *Daubert* hearing on the admissibility of fingerprint evidence, *see* [sic] United States v. Martinez-Cintron, 136 F. Supp.2d 17 (D.P.R. 2001) (relying on the district court’s order in this case); United States v. Cooper, 91 F. Supp.2d 79, 82-83 (D.D.C. 2000), or have issued brief opinions asserting that the reliability of fingerprint comparisons cannot be questioned, *see* [sic] United States v. Sherwood, 98 F.3d 402, 408 (9th Cir. 1996); United States v. Joseph, 2001 WL 515213 (E.D. La. May 14, 2001).

United States v. Havvard, 260 F.3d 597, 600 (7th Cir. 2001).

circuit court must determine whether the expert's testimony reflects "scientific knowledge," whether the findings are derived by "scientific method," and whether the work product amounts to "good science." Second, the circuit court must ensure that the scientific testimony is "relevant to the task at hand."¹²⁸

C. *The Current Status of Admitting Expert Testimony in West Virginia*

Justice Miller correctly followed *Daubert* in the *Wilt* opinion, insofar as the decision abandoned *Frye* as part of Rule 702. Under *Wilt*, trial courts are required to assess scientific expert testimony for relevancy and reliability.¹²⁹ *Wilt* and *Gentry* have provided excellent tools to help trial judges make an informed decision on reliability and relevancy when confronted with scientific expert testimony. However, because West Virginia has thus far declined to adopt *Kumho*, no such guidance exists for trial courts when they confront non-scientific expert testimony. Unless and until the *Wilt/Gentry* analysis is extended to follow *Kumho*, the admission of non-scientific expert testimony in West Virginia will be based upon Rule 702, without application of *Wilt/Gentry*. In other words, determinations as to the admissibility of non-scientific expert testimony will focus primarily on the relevancy of the evidence, without the requirement of a reliability analysis.¹³⁰ This point was demonstrated by the Supreme Court in *Watson v. Inco Alloys International, Inc.*¹³¹ Thus, the *Watson* opinion necessitates some discussion.

¹²⁸ *Gentry*, 466 S.E.2d at 182.

¹²⁹ Justice Cleckley stated in syllabus point 3 of *Gentry* that "[t]he first and universal requirement for the admissibility of scientific evidence is that the evidence must be both 'reliable' and 'relevant.'" *Id.* at 174. For an in depth discussion on the issue of reliability under *Wilt/Gentry* see *Jones v. Patterson Contracting, Inc.*, 524 S.E.2d 915, 923 (W. Va. 1999) (Davis, J., concurring and dissenting).

¹³⁰ *Wilt v. Buracker*, 443 S.E.2d 196, 203 n.12 (W. Va. 1993) (recognizing that a pure Rule 702 analysis "is concerned primarily with the relevancy of expert testimony" (quoting *Gilman v. Choi*, 406 S.E.2d 200, 202 (W. Va. 1990))).

¹³¹ 545 S.E.2d 294 (W. Va. 2001). The *Watson* decision, which was written by the author of this article, acknowledged the following:

To date, this Court has declined to adopt the current federal practice, as expressed in *Kumho*, of applying the *Daubert/Wilt* gatekeeper function to expert testimony based upon technical or other specialized knowledge. At this time, the majority declines to expressly address whether we will adopt the new federal procedure regarding expert testimony. However, the author of this opinion, separate from the majority, does not believe that *Kumho* would be a death knell to the admission of non-scientific expert testimony. Indeed, *Kumho* has been approved by a majority of state courts who have taken it under consideration.

Id. at 301-02 n.11. *Accord Jones v. Patterson Contracting, Inc.*, 524 S.E.2d 915, 923 (1999) (Davis, J., concurring and dissenting).

In *Watson*, which was on appeal from an order granting summary judgment to the defendant, the plaintiff's decedent had been crushed to death in an accident involving a stand-up lifttruck that backed off the side of a tractor trailer.¹³² The plaintiff sought to admit the expert testimony of a licensed professional engineer who opined that the lifttruck had been defectively designed in that it was not equipped with side doors and did not provide appropriate warnings of what an operator should do in case of a fall.¹³³ The defendant filed a motion in limine to have the engineer's testimony excluded.¹³⁴ The circuit court concluded that the proposed expert testimony was scientific.¹³⁵ It then applied *Wilt/Gentry* and determined, based upon a restrictive application of those cases, that the evidence would be excluded.¹³⁶ In this regard, the circuit court explained that it

[did] not find any basis to show that any test was performed to show that the plaintiff exited the fork in the manner claimed by witness Severt. Furthermore, the court [did] not find any testimony to show that any tests whatsoever were performed to allow this court to determine whether witness Severt's opinions reflect the use of the scientific method at all. Therefore, any opinion on side doors and causative effect would have no scientific basis and would constitute witness Severt's mere personal opinion. Therefore, this court must exclude witness Severt's testimony regarding design defects.¹³⁷

The West Virginia Supreme Court disagreed with the circuit court's application of *Wilt/Gentry* to the testimony by the engineer. Instead, the Court applied a pure Rule 702 analysis, focusing primarily on the relevance of the testimony, to conclude that the testimony should have been admitted. In so doing, the opinion set out the following principle of law in syllabus point 3:

Unless an engineer's opinion is derived from the methods and procedures of science, his or her testimony is generally considered technical in nature, and not scientific. Therefore, a court considering the admissibility of such evidence should not apply the gatekeeper analysis set forth by this Court in *Wilt/Gentry*.¹³⁸

¹³² *Watson*, 545 S.E.2d at 297.

¹³³ *Id.*

¹³⁴ *Id.*

¹³⁵ *Id.*

¹³⁶ *Id.*

¹³⁷ *Id.*

¹³⁸ *Id.* at 296 (citations omitted).

The decision in *Watson* conveys a reluctance by the Court to unify the law of admissibility of expert testimony in West Virginia.¹³⁹ That is to say, by specifically rejecting the *Wilt/Gentry* analysis in *Watson*, the West Virginia Supreme Court has effectively refused to adopt the *Kumho* analysis, notwithstanding its hesitance to do so expressly.¹⁴⁰ Such unity in the law, however, would not realistically present any new barrier to the admissibility of expert testimony that is based on technical or other specialized knowledge.

For example, assuming arguendo that the West Virginia Supreme Court had applied and adopted the *Kumho* standard in *Watson*, the outcome of that case would likely have been the same. As *Daubert*, *Wilt*, *Gentry*, and *Kumho* all convey, the proper analysis for determining the admissibility of expert testimony is flexible.¹⁴¹ There is no established set of factors that will apply in every instance.¹⁴² The circuit court in *Watson* applied a restrictive interpretation of *Daubert* and excluded the testimony due to the absence of scientific testing and the expert's failure to utilize the "scientific method." A proper application of *Wilt/Gentry*, in accordance with the *Kumho* decision, would have resulted in a customized set of factors, tailored in accordance with standards applicable to the expert's area of expertise, to test the reliability of the proposed testimony. Had the circuit court properly utilized this flexible application of *Wilt/Gentry*, the expert's testimony may very likely have been found reliable and admissible.

It is a *restrictive* interpretation of *Kumho* that seems to be causing confusion.¹⁴³ However, more courts are acknowledging the flexible and liberal

¹³⁹ See *W. Va. Div. of Highways v. Butler*, 516 S.E.2d 769, 774-75 n.4 (W. Va. 1999) ("We decline to adopt the *Kumho* analysis in this case.").

¹⁴⁰ See *supra* note 130.

¹⁴¹ Moreover, the relevance and reliability analysis applies only to expert testimony that is not subject to judicial notice. See *Daubert v. Merrell Dow Pharm., Inc.*, 509 U.S. 579, 592 n.11 (1993) ("Of course, well-established propositions are less likely to be challenged than those that are novel, and they are more handily defended. Indeed, theories that are so firmly established as to have attained the status of scientific law, such as the laws of thermodynamics, properly are subject to judicial notice under Federal Rule of Evidence 201."); *Watson*, 545 S.E.2d at 301-02 n.11 ("*Kumho*, as an extension of *Daubert*, applies only to expert testimony that is not subject to judicial notice." (citations omitted)); *Gentry v. Mangum*, 466 S.E.2d 171, 181 (W. Va. 1995) ("Actually, most scientific validity issues will be resolved under judicial notice pursuant to Rule 201. Indeed, most of the cases in which expert testimony is offered involve only qualified experts disagreeing about the interpretation of data that was obtained through standard methodologies. *Daubert/Wilt* is unlikely to impact upon those cases. Therefore, circuit courts are right to admit or exclude evidence without 'reinventing the wheel' every time by requiring parties to put on full proof of the validity or invalidity of scientific principles. Where judicial notice is appropriate, the circuit court should use it." (footnote omitted)); *Syl. Pt. 1, Wilt v. Buracker*, 443 S.E.2d 196, 198 (W. Va. 1993) ("Under Rule 702 of the West Virginia Rules of Evidence, there is a category of expert testimony based on scientific methodology that is so longstanding and generally recognized that it may be judicially noticed and, a trial court need not ascertain the basis for its reliability.").

¹⁴² See *supra* note 83 and accompanying text.

¹⁴³ See, e.g., *Rudd v. Gen. Motors Corp.*, 127 F. Supp. 2d 1330 (M.D. Ala. 2001).

thrust of *Kumho*. In the case of *Rudd v. General Motors*,¹⁴⁴ the United States district court, after acknowledging that engineering is not scientific, stated that, while “*Kumho* affirmed the potential applicability of the *Daubert* factors to testimony that is technical-, engineering-, or experienced-based, the *Kumho* Court also made it clear that . . . the *Daubert*-type analysis should not be used to disfavor expert testimony grounded in experience or engineering practice rather than in pure scientific theory.”¹⁴⁵

VIII. CONCLUSION

In the final analysis, it is hoped that this article will go a long way in dispelling the fears surrounding *Daubert/Kumho* and their application to non-scientific expert testimony. At this juncture, the expert testimony jurisprudence of West Virginia is at a cross-road. A majority of states addressing the issue have embraced *Daubert/Kumho*, while a minority of states have rejected *Daubert/Kumho* and retained *Frye*.¹⁴⁶ West Virginia has specifically rejected *Frye*, accepted *Daubert*, and thus far refused to adopt and/or expressly reject *Kumho*. To adopt *Kumho* would not significantly alter the landscape of admissible non-scientific expert testimony in West Virginia. Rather, it would simply provide trial courts with a consistent framework from which to make their admissibility determinations. Further consideration as to the weight of an expert’s testimony would remain with the jury. As Justice Cleckley so eloquently stated in *Gentry*, “[c]onventional devices, like vigorous cross-examination, careful instructions on the burden of proof, and rebuttal evidence, may be more appropriate instead of the ‘wholesale exclusion’ of expert testimony under Rule 702.”¹⁴⁷

¹⁴⁴ *Id.*

¹⁴⁵ *Id.* at 1336.

¹⁴⁶ See *supra* notes 35, 84.

¹⁴⁷ *Gentry*, 466 S.E.2d at 184-85 (citing *Daubert*, 509 U.S. at 596).