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**DAUBERT AND THE STATES:
A CRITICAL ANALYSIS OF EMERGING TRENDS**

I. INTRODUCTION

Justice Blackmun delivered the opinion for the Supreme Court of the United States in *Daubert v. Merrell Dow Pharmaceuticals, Inc.* in 1993.¹ This case attempted to settle the controversy surrounding the qualification of scientific evidence in federal courts.² Prior to the Court's decision in *Daubert*, many state courts had adopted the "general acceptance" test promulgated by the Court of Appeals of the District of Columbia.³ The application of this standard became questionable after the adoption of Federal Rule of Evidence 702 (hereinafter "Rule 702")—the Rule governing the admissibility of expert testimony—which did not contain any reference to *Frye* or to the "general acceptance" test.⁴ The debate concerning the continued efficacy of the "general acceptance" test—or *Frye* test, as it is also called—was decisively

1. 509 U.S. 579 (1993).

2. *Id.* at 585. This decision was prompted, at least in part, by some enormous verdicts that were arguably predicated on shoddy science. Another catalyst leading to this decision was the rise of products liability litigation in the 1960s and 1970s. David G. Owen, *A Decade of Daubert*, 80 DENV. U. L. REV. 345, 351 (2002).

3. *Daubert*, 509 U.S. at 585. Before *Daubert*, the Supreme Court and many other jurisdictions applied the formulation set out in *Frye v. United States*, 54 App. D.C. 46 (D.C. Cir. 1923) when faced with the proffer of novel scientific evidence. In this citation-free opinion from the D.C. Circuit, the court made the following observation:

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.

Id. at 47 (emphasis added). Before the Court adopted *Daubert*, the alternative test to *Frye* was the so-called "relevancy test." For a brief discussion of this test see Andrew E. Taslitz, *Daubert's Guide to the Federal Rules of Evidence: A Not-So-Plain-Meaning Jurisprudence*, 32 HARV. J. ON LEGIS. 3, 36–37 (1995).

4. The question of whether Rule 702 supplanted *Frye* was fueled, in part, by the fact that the concept of "general acceptance" was not mentioned in the text of the rule or in the advisory committee's notes. FED. R. EVID. 702 advisory committee's note. This absence was quite remarkable considering the widespread use of the "general acceptance" test.

settled in *Daubert*. In *Daubert*, the Court expressly found that *Frye* was superceded by Rule 702.⁵

This decision, at least on its face, has had a marked effect on the qualification of scientific evidence in federal courts.⁶ It has also had a significant effect on the qualification of scientific evidence in the state courts. Though not binding on the states, the test set out in *Daubert* has been adopted by more than twenty states.⁷ The Court's rationale in *Daubert* has not attained universal acceptance among the states, which is evidenced by the fact that as many as half the states still apply *Frye* or some other test when determining the admissibility of expert testimony.⁸ Regardless, this issue remains hotly contested by litigants in state courts and has produced significant confusion at trial, resulting in numerous decisions in state courts of last resort.⁹

Daubert and its progeny have left some state courts in an awkward position. This situation resulted because many states have adopted the provisions set forth in the Federal Rules of Evidence. Because many states have adopted a rule similar to, if not identical to, Rule 702, it would seem that the Supreme Court's interpretation of that Rule would be fairly persuasive. However, some states, whose evidence codes or relevant evidentiary statutes

5. *Daubert*, 509 U.S. at 589 (noting the "permissive backdrop" of the rules and the "inclusion of a specific rule on expert testimony" the Court found "general acceptance" to be incompatible with Rule 702).

6. There is much debate over whether the Court's ruling in *Daubert* actually changed the way in which expert testimony is qualified. This doubt as to whether *Daubert* has actually effected any substantive change in this process has led one scholar to refer to *Daubert* as merely "*Frye* in drag." Paul R. Rice, *Peer Dialogue: The Quagmire of Scientific Testimony: Crumpling the Supreme Court's Style*, 68 MO. L. REV. 53, 62 (2003). *But see* Michael J. Saks, *The Aftermath of Daubert: An Evolving Jurisprudence of Expert Evidence*, 40 JURIMETRICS J. 229, 230-31 (2000) (arguing that *Frye* "allowed judges to piggy-back their decisions onto someone else's judgment," while *Daubert* "increases judges' gatekeeping duty by requiring them to evaluate claims of scientific expertise much as scientists would").

7. *See generally* Alice B. Lustre, Annotation, *Post-Daubert Standards for Admissibility of Scientific and Other Expert Evidence in State Courts*, 90 A.L.R. 5th 453 (2001). Those states that have chosen to adopt *Daubert* or some similar test include Alaska, Arkansas, Colorado, Connecticut, Delaware, Idaho, Indiana, Iowa, Kentucky, Louisiana, Maine, Montana, Nebraska, New Mexico, North Carolina, Ohio, Oklahoma, Oregon, Rhode Island, South Carolina, South Dakota, Tennessee, Texas, Vermont, West Virginia, and Wyoming. *Id.* Those that continue to apply *Frye* include Arizona, California, District of Columbia, Florida, Illinois, Kansas, Maryland, Michigan, Minnesota, Mississippi, Missouri, Nebraska, New York, North Dakota, Pennsylvania, and Washington. *Id.* Alabama, Hawaii, Massachusetts, Nevada, New Hampshire, and New Jersey apply the *Daubert* factors but have not explicitly rejected *Frye*. *Id.* Georgia, Utah, Virginia, and Wisconsin have developed their own tests. *Id.*

8. *Id.*

9. *See, e.g.*, State Bd. of Registration for the Healing Arts v. McDonagh, 123 S.W.3d 146 (Mo. 2003) (en banc).

are almost identical to Rule 702, have rejected the Court's interpretation of Rule 702.¹⁰

The debate over which standard should apply to proffered scientific evidence is not merely a matter of statutory interpretation; *Daubert* and *Frye* reflect two fundamentally different conceptions of science and the ways in which science should be used in the courtroom. Furthermore, the differences between these two tests go beyond the mechanics of admissibility; specifically, they represent differing views as to the role of judges and their capacity to evaluate complex information.

A few important questions necessarily arise. The first is whether there is any "practical" difference between the application of *Daubert* and the application of *Frye*. If there is no practical difference, as some have argued, then the choice of which procedure to use in determining the admissibility of scientific evidence is of negligible importance. If, however, the test for determining the admissibility of expert testimony is truly outcome-determinative, then it is critical that courts adopt the test that best assures that relevant and reliable information is not excluded from the purview of the trier of fact. In order to assess the relative merits of *Daubert* and *Frye*, it is important to possess a clear understanding of the ruling in *Daubert* and two of its most well-known progeny. Additionally, criticism of the Supreme Court's decision in *Daubert*, which has been abundant, is also relevant to the states, in that it may be helpful in guiding them toward a more consistent and workable approach to the qualification of expert testimony. This Comment will set forth a synopsis of the debate surrounding *Daubert* and *Frye*, which will provide the foundation for an analysis of several different approaches taken by the states.

II. HISTORICAL BACKGROUND

A. *Daubert v. Merrell Dow Pharmaceuticals, Inc.: An Evolution in Scientific Jurisprudence?*

In *Daubert*, petitioners attempted to introduce expert testimony concerning the anti-nausea drug Bendectin, which was marketed by Merrell Dow Pharmaceuticals.¹¹ Plaintiffs' experts were to give testimony, based upon animal studies, that tended to show Bendectin caused cancer.¹² The district court found that the science underlying the proposed testimony did not meet

10. See *infra* Parts III.A.1, B.1–2.

11. *Daubert v. Merrell Dow Pharms., Inc.*, 509 U.S. 579, 583 (1993). Petitioners Jason Daubert and Eric Schuller (both minor children) were born with serious birth defects. *Id.* at 582. They argued that their birth defects were caused by their mothers' ingestion of Bendectin, a drug manufactured by defendant Merrell Dow Pharmaceuticals. *Id.*

12. *Id.* at 583.

the “general acceptance” test and held the testimony inadmissible.¹³ The United States Court of Appeals for the Ninth Circuit affirmed.¹⁴ Because the Ninth Circuit’s ruling evidenced a discrepancy among the circuits, the Supreme Court granted certiorari.

The Supreme Court began its analysis of the issue presented with a discussion of Rule 702.¹⁵ In holding that a rigid “general acceptance” test, i.e., *Frye*, was superceded by Rule 702, the Court found that a continued adherence to *Frye* “would be at odds with the ‘liberal thrust’ of the Federal Rules and their ‘general approach of relaxing the traditional barriers to ‘opinion’ testimony.’”¹⁶ Because *Frye* was no longer the standard to be applied in the federal courts, the Supreme Court formulated a new test based on Rule 702.¹⁷

Under Rule 702, the Supreme Court found that a trial judge should play the role of gatekeeper with respect to scientific evidence.¹⁸ In this role, a trial judge must determine that scientific evidence/testimony is both relevant and reliable if it is to be admitted into evidence.¹⁹ To be admissible under the new test, the subject of an expert’s testimony must be *scientific knowledge* that is grounded “in the methods and procedures of science” and must consist of more than “subjective belief or unsupported speculation.”²⁰ In other words, the proffered testimony must be supported by “appropriate validation.”²¹ Another requirement—stated expressly in Rule 702—is that proposed evidence must “assist the trier of fact.”²² This consideration is primarily one of relevance, such that the proffered evidence must be tied to the facts of the particular case;

13. *Daubert v. Merrell Dow Pharms., Inc.*, 727 F. Supp 570, 573 (S.D. Cal 1989).

14. *Daubert v. Merrell Dow Pharms., Inc.*, 951 F.2d 1128 (9th Cir. 1991).

15. In the first sentence of the opinion Justice Blackmun stated that the question presented was “to determine the standard for admitting expert scientific testimony in a federal trial.” *Daubert*, 509 U.S. at 582. It is important to realize that *Daubert* was a decision which, by its own terms, was restricted to the admissibility of scientific testimony. This point merits consideration because of the Court’s subsequent decisions, effectively subjecting all expert testimony to a *Daubert* analysis. See *infra* notes 43–52 and accompanying text.

16. *Daubert*, 509 U.S. at 588. In holding that *Frye* was superceded by Rule 702, the Court recognized that “general acceptance” was not an explicit requirement of the rule, that respondent failed to present evidence that Rule 702 was intended to incorporate “general acceptance,” and that *Frye* was not mentioned in the drafting history of the rule. *Id.*

17. For an interesting evaluation of the interpretative method of the Supreme Court with particular emphasis on the Supreme Court’s decision in *Daubert*, see Taslitz, *supra* note 3. In his article, the author argues that the Court “purported to find plain meaning where none exists.” *Id.* at 35.

18. *Daubert*, 509 U.S. at 589.

19. *Id.*

20. *Id.* at 589–90 (emphasis added). The Court’s discussion of “scientific knowledge” mainly related to the reliability prong of the Court’s decision. *Id.*

21. *Id.* at 590.

22. *Id.* at 591 (quoting FED. R. EVID. 702). The second part of the Court’s analysis relates to the relevance prong. *Id.*

it is sometimes stated that the evidence must “fit” the facts of the case.²³ In order to resolve these two questions—whether an expert is testifying to scientific knowledge, and whether that knowledge will assist the trier of fact—the trial judge should determine, as a preliminary matter, whether the methodology and principles animating the offered testimony are scientifically valid.²⁴

Facially, *Daubert* expands the trial judge’s role at trial by making it the judge’s responsibility to determine whether an expert’s methodology and principles are scientifically valid. Under the *Frye* test, this determination is not for the judge. Additionally, *Frye* does not require a trial judge to determine whether the methodology and principles underlying an expert’s testimony are reliable.²⁵ Nevertheless, the *Daubert* majority explicitly assigned this “new” role to trial judges. In an effort to provide some guidance to the lower courts, the Court offered “some general observations.”²⁶ These observations amounted to a set of non-exclusive factors that a judge should assess when determining whether a theory or methodology is both valid and applicable to the facts of a given case.²⁷ A judge should consider whether a theory or technique is capable of being or has been tested, whether it has been subjected to peer review and publication, its known or potential rate of error when applied, and whether it has gained general acceptance.²⁸

23. *Daubert*, 509 U.S. at 591.

24. *Id.* at 592–93 (expressing confidence that “federal judges possess the capacity to undertake this review”). The issue of capacity is extremely important to the determination of the appropriate standard for admissibility. It is often argued that judges, with no specific scientific background, should not be invested with the duty of evaluating contradicting testimony given by two or more qualified experts. The problems attending the dilemma of the “battle of the experts” are central to the proper resolution of the qualification/admissibility debate. Surely, if federal judges are qualified and able to “undertake this review,” state court judges should be entrusted with this responsibility as well. An intriguing take on this issue is the approach of the courts in Wisconsin where such determinations are to be made by the jury with the aid of cross-examination and impeachment. *See infra* Part III.A.3.

25. Under *Frye*, the judge hears the testimony of an expert who would testify to whether a particular mode of reasoning or methodology was “generally accepted.” To put it simply, the judge would defer to the judgment of one who was qualified to make such determinations. *See Saks, supra* note 6, at 230–31 (2000). This is one of the most criticized aspects of the holding in *Daubert*. The relegation of this duty to the trial judge is controversial because many claim that the judge is, for all intents and purposes, a layperson. As such, it is argued that a trial judge is not qualified to make this determination. *See id.*

26. *Daubert*, 509 U.S. at 593.

27. *Id.* at 593. Importantly, the Court noted that “[m]any factors will bear on the inquiry” such that one should not presume that the four factors presented by the Court were meant to be “a definitive checklist or test.” *Id.* at 593. This language is important because some jurists and others have interpreted *Daubert* as establishing a rigid framework for admissibility. *See* Judge Harvey Brown, *Eight Gates for Expert Witnesses*, 36 HOUS. L. REV. 743 (1999).

28. *Daubert*, 509 U.S. at 593–94. The Court observed that “[t]he inquiry envisioned by Rule 702 is . . . a flexible one” and the “focus . . . must be solely on principles and methodology, not

B. *Joiner and Kumho Tire: A Step in the Right Direction, or Another Step Back?*

In *General Electric Co. v. Joiner*, the Supreme Court decided that a trial court's decision to admit or exclude evidence under *Daubert* should be reviewed under the abuse of discretion standard.²⁹ This standard is equally applicable without regard to the "outcome determinative" role that decisions made pursuant to *Daubert* sometimes play.³⁰ At first blush, there is nothing especially remarkable about *Joiner*. However, when properly read, *Joiner* stands for the principle that "the law grants a district court the same broad latitude when it decides *how* to determine reliability as it enjoys in respect to its ultimate reliability determination."³¹ Allowing a trial court to decide the proper method for determining reliability gives that court broad discretion when it conducts Federal Rule of Evidence 104(a) hearings pursuant to *Daubert* (sometimes referred to as *Daubert* hearings).³² The broad discretion afforded trial judges in these matters is the cause of a fair amount of the controversy on this issue. Presumably, a trial judge could choose to give more weight to the general acceptance criterion than to the other factors established by the Court, resulting in a system hardly distinguishable from *Frye*. However, by the same token, a trial judge may play a more expansive role after *Joiner* and *Daubert* and choose to evaluate any number of indicators that she deems relevant to the case, resulting in increased activism on the bench.

In *Kumho Tire Co. v. Carmichael*, the Supreme Court held that the trial court's "gatekeeping obligation," as set forth in *Daubert*, also applied to

on the conclusions that they generate." *Id.* at 594–95. Though the Court established the *Daubert* factors as part of a flexible inquiry, some courts have applied these factors in a rigid manner. For a critical analysis of *Daubert's* misapplication in the 5th Circuit, see Thomas M. Reavley & Daniel A. Petalas, Commentary, *A Plea for Return to Evidence Rule 702*, 77 TEX. L. REV. 493 (1998) (providing examples of strict applications of *Daubert* with the resulting effect of the exclusion of expert testimony).

29. 522 U.S. 136, 139 (1997). Interestingly, Chief Justice Rehnquist suggests that the Federal Rules allow more scientific testimony than would have been allowed under *Frye*. *Id.* at 142. This assertion flies in the face of those scholars who suggest that *Daubert* really did not change *Frye* in any significant way. See Rice, *supra* note 6, at 62.

30. *Joiner*, 522 U.S. at 143. It is clear the Court recognized that rulings on the admissibility of expert testimony are outcome-determinative. The more interesting question is whether the difference in the procedures for determining the admissibility of scientific evidence under *Daubert* and *Frye* are outcome-determinative as well.

31. *Kumho Tire Co. v. Carmichael*, 526 U.S. 137, 142 (1999) (citing *Joiner*, 522 U.S. at 139). For a succinct criticism of the Court's holding in *Joiner* see Saks, *supra* note 6, at 240–41 (arguing that the Court "needlessly abandoned *Daubert's* useful distinction between methodology and conclusions").

32. For an illustrative analysis of what is actually involved in a *Daubert* hearing, see G. Michael Fenner, *The Daubert Handbook: The Case, Its Essential Dilemma, and Its Progeny*, 29 CREIGHTON L. REV. 939, 963–66 (1996).

testimony based on technical and other types of specialized knowledge.³³ In *Kumho*, a case which resulted from an auto accident allegedly caused by a defective tire, plaintiffs offered an expert in tire failure analysis who was to give testimony based on his technical experience with tire blowouts.³⁴ The district court examined the expert's methodology in light of the *Daubert* factors, even though the expert's testimony was most likely technical rather than scientific.³⁵ The district court found the expert's testimony unreliable based upon an application of the factors set forth in *Daubert*; as such, the district court excluded the evidence and granted defendant's summary judgment motion.³⁶ The Supreme Court found that the manner in which the district court analyzed the expert testimony was not an abuse of discretion.³⁷ In finding that *Daubert's* "basic gatekeeping obligation" applies to all expert testimony, the Court was mindful of the fact that the language of Rule 702 makes no relevant distinction between the various categories of expert testimony.³⁸

The Supreme Court went on to hold that a trial judge "may" consider the specific factors set out in *Daubert* when determining the reliability of non-scientific expert testimony.³⁹ Cognizant of *Daubert's* instruction that the inquiry under Rule 702—in keeping with the liberal thrust of the Rules—should be flexible, the Court refused to determine if this inquiry should apply in all cases, instead stressing that such an inquiry would be dependent on the facts in a given case.⁴⁰ The Court was clear in its assertion that some of the *Daubert* factors could be helpful in evaluating the reliability of experience-based expert testimony.⁴¹ The problem with the Court's assertion of helpfulness is that a substantial part of so-called "experienced-based

33. *Kumho Tire*, 526 U.S. at 141.

34. *Id.* at 142. Plaintiff's expert, Dennis Carlson, Jr., concluded that the blowout was the result of a defect in manufacture or design of the tire. The Court was dubious of this conclusion, considering that the tire at issue was admittedly old and showed signs of two punctures that were inadequately repaired. *See id.* at 143.

35. *Carmichael v. Samyang Tires, Inc.*, 923 F. Supp 1514, 1521–22 (S.D. Ala. 1996).

36. *Id.* at 1522–23.

37. *Kumho Tire*, 526 U.S. at 142.

38. *Id.* at 147 (noting that it is "the Rule's word 'knowledge,' not the words (like 'scientific') that modify that word, that 'establishes a standard of evidentiary reliability'"(quoting *Daubert v. Merrell Dow Pharms., Inc.*, 509 U.S. 579, 589–90 (1993))). The Court was concerned that it would be difficult for a district court to "administer evidentiary rules under which a gatekeeping obligation depended upon a distinction between 'scientific' knowledge and 'technical' or 'other specialized' knowledge." *Kumho Tire*, 526 U.S. at 148.

39. *Id.* at 150.

40. *Id.*

41. *Id.* at 151.

methodology” is not, by its very nature, subject to the kinds of analysis set forth in *Daubert*.⁴²

C. *The 2000 Amendment to Rule 702*

Rule 702 was amended in 2000 in response to *Daubert*, *Kumho Tire*, and to a lesser extent *Joiner*.⁴³ The 2000 amendment mandates that expert testimony shall be admitted only “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.”⁴⁴ The advisory committee’s note makes clear that the amendment “provides some general standards that the trial court *must use* to assess the reliability and helpfulness of proffered expert testimony.”⁴⁵ Thus, the amendments statutorily incorporate *Kumho Tire*’s application of *Daubert* to

42. See generally David Crump, *The Trouble with Daubert-Kumho: Reconsidering the Supreme Court’s Philosophy of Science*, 68 MO. L. REV. 1 (2003). But see Edward J. Imwinkelried, *Peer Dialogue: The How and What of “Appropriate Validation” Under Daubert: Reconsidering the Treatment of Einstein and Freud*, 68 MO. L. REV. 43 (2003) (critiquing Professor Crump’s treatment of *Daubert-Kumho*). In the first instance, Crump is critical of *Daubert* because the majority’s attempt to define science was inappropriate within the confines of *Daubert* and caused a dysfunctional result. Crump, *supra*, at 7. In this same vein, Crump is critical of the Court’s decisions in both *Daubert* and *Kumho* because of the extent to which the Court determined issues which were not before it. *Id.* at 11. However, regardless of Crump’s argument, the Court makes clear that the trial judge has considerable leeway in determining which of the factors, if any, to use in coming to a reliability determination. *Kumho Tire*, 526 U.S. at 152.

43. FED. R. EVID. 702 (2000) advisory committee notes. The amendment became effective December 1, 2000. *Id.* It seems rather ironic that Rule 702 was amended to reflect the Court’s decisions in *Daubert* and *Kumho Tire* because these decisions were interpretations of the pre-amended rule.

44. FED. R. EVID. 702 (2000).

45. FED. R. EVID. 702 advisory committee notes (emphasis added). The committee’s notes also provide other factors that might be relevant—not exclusive or exhaustive—in determining whether expert testimony is reliable including:

- (1) Whether experts are “proposing to testify about matters growing naturally and directly out of research they have conducted independent of the litigation, or whether they have developed their opinions expressly for purposes of testifying.”
- (2) Whether the expert has unjustifiably extrapolated from an accepted premise to an unfounded conclusion.
- (3) Whether the expert has adequately accounted for obvious alternative explanations.
- (4) Whether the expert “is being as careful as he would in his regular professional work,” [not including other work as a paid expert].
- (5) Whether the field of expertise claimed by the expert is known to reach reliable results for the type of opinion the expert would give.

Id. (citations omitted).

all forms of expert testimony; however, it is important to note that “[n]o attempt has been made to ‘codify’ [the] specific factors.”⁴⁶

Some have claimed that the incorporation of *Daubert-Kumho* into the Federal Rules of Evidence effectively crystallizes an already dysfunctional rule. Scholars have argued that the *Daubert* framework is problematic when confined to the analysis of scientific evidence.⁴⁷ Without regard to *Daubert*'s narrow conception of science, Crump argues that the guidelines set forth in *Daubert* are not appropriate for the consideration of experience-based testimony.⁴⁸ If it is admitted that *Daubert* does indeed reflect a narrow conception of science, the effect of such a formulation would vary greatly with the particular stance a judge took as to her role in determining the admissibility of expert testimony. If the *Daubert* factors are truly meant to be illustrative, then a court need not evaluate evidence in light of those factors that do not apply to a specific field or methodology. If, however, a judge interprets *Daubert* in a stricter sense, or if other criteria for determining reliability are not available, these fears could be realized.

D. *Daubert and Frye: A Critical Analysis*

The problem with *Daubert* is that it has been subject to varied interpretations. One scholar observed that the dilemma of *Daubert* is that it “is at the same time both more restrictive of expert evidence and less restrictive of expert evidence.”⁴⁹ Perhaps this confusion can be attributed to the different ways that *Frye* has been applied. For example, before *Daubert*, some federal judges took an activist stance in regard to the qualification of scientific evidence and continued with this approach after the case as well.⁵⁰ In contrast, other judges operating under the “general acceptance” test merely determined admissibility based upon the testimony of an expert who established the state of a theory or methodology.⁵¹ However, some scholars have argued that *Daubert* did little to change the standard for admissibility in federal courts and

46. *Id.*

47. *See, e.g.*, Crump, *supra* note 42.

48. *See id.*

49. Fenner, *supra* note 32, at 953. The author argues that *Daubert* is less restrictive in the sense that it allows evidence that definitely would not have been allowable under *Frye*. *Id.* Specifically *Daubert* allows evidence based upon a novel methodology or technique—evidence that by definition is not generally accepted—if it proves to be both relevant and reliable. *Id.* It is more restrictive in that evidence based on a theory or method that is “generally accepted” will still be subject to close scrutiny, and upon careful analysis may yet prove to be unreliable (characterized as something other than good science). *Id.*

50. *Id.* at 955 (noting that somebody had to get the radar detector in the courtroom in the first place).

51. *See* Craig Lee Montz, *Trial Judges as Scientific Gatekeepers After Daubert, Joiner, Kumho Tire, and Amended Rule 702: Is Anyone Still Seriously Buying This?*, 33 UWLA L. REV. 87, 104 (2001).

only managed to leave the law governing admissibility of expert testimony unclear.⁵²

1. The *Frye* Test

Under *Frye*, a particular scientific technique does not receive judicial recognition until it has passed an experimental phase, during which it has been subject to scrutiny from the relevant scientific community.⁵³ Once a particular technique is no longer characterized as “novel,” an expert can provide testimony based on that theory without the Court making an in-depth inquiry regarding that theory’s acceptance by the relevant scientific community.⁵⁴ *Frye* is sometimes lauded by commentators because “general acceptance” acts as “an independent safeguard for the trustworthiness of scientific testimony.”⁵⁵ In relation to the “relevancy test” as espoused by some courts, *Frye* has been praised because its application is much more practical than a balancing test.⁵⁶ Furthermore, *Frye* has been extolled because it affords protection for both parties in that it restricts the use of questionable experts presenting junk science.⁵⁷

Frye is often commended because it is considered a conservative test. It has been praised because it was “deliberately intended to interpose a substantial obstacle to the unrestrained admission of evidence based upon new scientific principles.”⁵⁸ In the abstract, this is a desirable proposition because completely unsupported science has no place in the courtroom, especially in light of the fact that juries often give great weight to expert testimony.⁵⁹

Though *Frye* is lauded for its conservative nature, this same conservatism is a major source of its criticism as well. *Frye*’s most damning criticism is that the strictures of its application result in the exclusion of reliable evidence simply because the evidence has failed to gain the elusive “general acceptance”

52. See Rice, *supra* note 6, at 61–63. To others, *Daubert* really is important. These scholars argue that *Daubert* has effected a change in the qualification of scientific evidence. See Fenner, *supra* note 32.

53. Paul C. Giannelli, *The Admissibility of Novel Scientific Evidence: Frye v. United States, a Half-Century Later*, 80 COLUM. L. REV. 1197, 1205 (1980) (describing the analysis under *Frye* as an “evolutionary process leading to the admissibility of scientific evidence”).

54. *Id.* at 1205. However, such a result may also be reached under *Daubert*, whereby a theory has passed the *Daubert* test in many courts, and as such another court “may be able to take judicial notice of the reliability of the general theory and of the particular methodology.” Fenner, *supra* note 32, at 1013.

55. Taslitz, *supra* note 3, at 36. This argument, however, is not very persuasive because “general acceptance” remains a factor that courts may, and still do, consider.

56. Hadden v. State, 690 So. 2d 573, 577 (Fla. 1997).

57. People v. Kelly, 549 P.2d 1240, 1244 (Cal. 1976).

58. *Id.* at 1245.

59. *Id.*

of the scientific community.⁶⁰ Though a concrete example is lacking, if it were shown that a novel scientific methodology or principle was unflinchingly reliable, yet still excluded based on “general acceptance,” this would be strong evidence militating against the continued use of this test. In this same vein, *Frye* has been criticized for its paradoxical effect on different fields of expertise. One critic has argued that less rigorous fields necessarily reach a level of “general acceptance” before their more rigorous brethren; accordingly, the offerings of these less dependable fields will be received more readily than the offerings of more dependable fields.⁶¹ Put another way, this is a criticism of the ambiguity of the term “general acceptance.” If this criticism is appropriate, then it seems problematic that the disciplines that subject their members to the most rigorous scrutiny produce admissible methodologies much later than those with less scrutiny. If reliability is indeed the goal to be accomplished by subjecting novel scientific techniques to the “general acceptance” test, it is illogical that the techniques with lesser assurances of reliability are “rewarded” with earlier admissibility.⁶²

The *Frye* test is also criticized for its ambiguity. One such ambiguity is the undefined period of testing or review that must occur before a method or technique becomes generally accepted.⁶³ Because there is no precise definition of “general acceptance,” a technique may produce consistent and reliable results, yet still not have become “generally accepted” under a particular judge’s definition. Thus, under this standard, relevant evidence produced as a result of a reliable novel scientific technique may be excluded for an indefinite amount of time, thereby denying the trier of fact evidence that may help to decide a fact at issue.⁶⁴ Another criticism is that the application of *Frye* requires the trial judge to defer admissibility questions to a “nose counting” of scientists rather than allowing the judge or jury to directly confront the issue of the reliability of the evidence.⁶⁵ This “nose count” problem is another reflection of the ambiguous nature of *Frye*, because it again reflects the ambiguity that accompanies the determination of whether a methodology is generally accepted.

Another problem with *Frye* is that courts have had a difficult time in defining what exactly constitutes testimony based upon a novel scientific technique.⁶⁶ This difficulty is similar to the difficulty some courts experience when determining which community is the relevant community for purposes of

60. Taslitz, *supra* note 3, at 36.

61. Saks, *supra* note 6, at 231.

62. Characterizing admissibility as a “reward” is probably incorrect because many, if not most, scientists work without considering the effects of their methods on the judicial system.

63. *People v. Leahy*, 882 P.2d 321, 330 (Cal. 1994).

64. *Id.*

65. *Id.* at 329.

66. Taslitz, *supra* note 3, at 36.

determining “general acceptance.”⁶⁷ The choice of the relevant community can very well be outcome-determinative because a technique that is questionable to mainstream practitioners may be the gold standard for a subset of practitioners who argue the merits of their methodology.⁶⁸

Frye is also criticized for its lack of clarity as to whether the “generally accepted” language applies to principles only, or to techniques applying those principles as well.⁶⁹ One court has criticized *Frye* because its “requirement of ‘general acceptance’ is tantamount to a requirement that the validity of the test be susceptible of such demonstration as to enable the trial court to take judicial notice of the fact.”⁷⁰ This court was skeptical as to whether a responsible test for the admissibility of scientific evidence would “require the instant and unquestionable demonstration required for the judicial notice of scientific facts.”⁷¹ Though *Frye* has many detractors, it still carries significant weight in many states, and there is little indication that *Daubert* is any less problematic than *Frye*.

2. The *Daubert* Test

Daubert is probably most criticized for assigning the trial judge the responsibility for determining the reliability of scientific methodologies and principles. This criticism stems from the oft-recited fact that *Daubert* and *Kumho* arguably “assign[ed] the responsibility for screening” offered expert testimony to those who “have no particular expertise for conducting those evaluations.”⁷² This criticism is not reserved to a trial judge’s lack of scientific knowledge but also her lack of exposure to other technical knowledge as well.⁷³ *Daubert* is also criticized because its framework can, and oftentimes is, applied too rigidly, resulting in the exclusion of otherwise meritorious claims, unsupportable without the excluded scientific evidence.⁷⁴

Daubert’s criticisms are more sweeping as well. It is sometimes argued that this case failed in its essential purpose of encouraging a more liberal

67. *Id.*

68. *See e.g.*, State Bd. of Registration for the Healing Arts v. McDonagh, 123 S.W.3d 146 (Mo. 2003) (en banc).

69. Taslitz, *supra* note 3, at 36.

70. State v. Catanese, 368 So. 2d 975, 979 (La. 1979).

71. *Id.*

72. Saks, *supra* note 6, at 230.

73. It is unclear whether the reliability determination is more difficult in regard to expert scientific testimony than it is for technical or other experience-based testimony. However, given the flexible nature of the inquiry it would seem that the judge would be able to conduct inquiries into such testimony the same way that they do in cases involving scientific evidence. Further, it would seem that all things being equal, a judge’s lack of exposure would render him equally capable of judging the reliability of a method or principle derived from a technical or experience-based perspective.

74. *See* Owen, *supra* note 2, at 372.

approach toward the admissibility of evidence; that it in fact accomplished the opposite—effectively restricting the admissibility of evidence further than *Frye*.⁷⁵ Though it is certainly the case that some courts have applied *Daubert* with more rigidity than was intended, the Supreme Court clearly held that the inquiry should be a flexible one. The source of rigidity in the application of the Court's decision can only be attributed to a finite number of causes. Either the judge has misinterpreted the Court's opinion, is unable to formulate her own gauges for reliability, is not willing to undertake an inquiry outside the explicit dictates of the case, or simply that indicators of reliability are unavailable concerning certain kinds of information.

Daubert is also criticized for its ill-founded and narrow conception of science. For example, Professor Crump argues that the *Daubert* framework for reliability fails to give adequate consideration to the relationship between “communicational tractability and empirical validity.”⁷⁶ Essentially, Crump argues that a small sacrifice in “empirical validity,” that is, simplifying some concept or notion into a model or map, can greatly benefit a jury's understanding of a particular issue, with only a small and irrelevant sacrifice in the validity of what is being communicated.⁷⁷ Fundamentally, Crump argues that the Court should have used the standard of “appropriate validation,” as espoused by Professor Imwinkelried,⁷⁸ and never ventured into the dicta of the four-factor test.⁷⁹

Some have argued that *Daubert's* conception of reliability is too amorphous and that its definition is not clear.⁸⁰ As such, they argue the lower courts are left without meaningful guidance in the application of the law.⁸¹ One federal judge complained that “[t]he very characterization of scientific knowledge as the ultimate question of admissibility” is problematic in that it leads judges to undertake “‘independent validation of the expert's methodology,’ pretending to scientific expertise and objectivity.”⁸² This argument concludes with the observation that the current standard leads some judges to decide cases in contravention of the Seventh Amendment and the Federal Rules of Evidence.⁸³ At the heart of these arguments is the belief that

75. Michael H. Graham, *The Daubert Dilemma: At Last a Viable Solution?*, 179 F.R.D. 1, 3 (1998).

76. Crump, *supra* note 42, at 35.

77. *Id.*

78. See Imwinkelried, *supra* note 42.

79. Crump, *supra* note 42 (providing a more in-depth analysis of *Daubert* and its treatment of modern science).

80. Reavley & Petalas, *supra* note 28, at 510–11.

81. *Id.* at 510.

82. *Id.* at 511 (footnote omitted).

83. *Id.* at 512 (claiming that the current analysis causes some judges to “undertake to determine complex scientific issues by caprice”).

lay judges are not qualified to resolve the issues brought before them in *Daubert* cases—or at least those dealing with evidence produced by a novel scientific technique.

III. *DAUBERT* AND *FRYE*—A BATTLE FOR THE STATES

Most of the states have been confronted with the same problem the Supreme Court faced when it decided *Daubert*. This problem arises because of the apparent contradiction between the statute or code provision governing the admissibility of expert testimony and the “general acceptance” standard of *Frye*. At one time, most of the states had adopted a provision similar to Rule 702 and yet continued to apply *Frye*. Some of these states discontinued their adherence to *Frye* and adopted *Daubert*. However, some that chose to overrule *Frye* did not feel compelled to adopt the Supreme Court’s formulation. Instead, these states constructed admissibility standards independent from both *Frye* and *Daubert*.

A third option emerged as well. A significant number of states reconciled the general acceptance test enunciated in *Frye* with their respective rules governing expert testimony. The most interesting group of states is composed of those that chose to formulate their own standards for admissibility. Missouri, Wisconsin, and Delaware are three states that have developed alternative tests.

A. *Independent Formulations for Determining Admissibility*

1. Missouri: “Forget *Frye*. Forget *Daubert*. Read the statute.”⁸⁴

Until recently, the applicable standard for the qualification of expert testimony in Missouri was unclear. The Supreme Court of Missouri adopted the *Frye* test for civil suits in *Alsbach v. Bader*.⁸⁵ This decision, eight years before *Daubert*, was unremarkable when it came down. However, the continued efficacy of this standard became questionable when Missouri adopted a statutory provision similar to Rule 702.⁸⁶ Surprisingly, or perhaps

84. State Bd. of Registration for the Healing Arts v. McDonagh, 123 S.W.3d 146, 160 (Mo. 2003) (Wolff, J., concurring in part and dissenting in part).

85. 700 S.W.2d 823 (Mo. 1985) (en banc).

86. MO. REV. STAT. § 490.065 (1989). This statutory provision was adopted in 1989; it provides:

1. In any civil action, 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.
2. Testimony by such an expert witness in the form of an opinion or inference otherwise admissible is not objectionable because it embraces an ultimate issue to be decided by the trier of fact.

not, *Frye* remained the standard in Missouri despite the absence of any mention of *Frye* or “general acceptance” in the statute.

The first arguments in support of a *Daubert*-like interpretation of section 490.065 of the Missouri Revised Statutes (Missouri’s statutory provision governing the admissibility of expert testimony) came to the Missouri Supreme Court in *Callahan v. Cardinal Glennon Hospital*.⁸⁷ However, as what eventually became a recurring trend, the Court skirted the issue and held that “it would be inappropriate . . . to decide in [*Callahan*] whether section 490.065, RSMo Supp.1992, supersedes the *Frye* doctrine in the same manner that *Daubert* held that Federal Rule 702 changes the requirements for the admissibility of expert testimony in federal court.”⁸⁸ In 1997, the Court decided *Lasky v. Union Electric Company*, and attempted to clarify the issue by holding that section 490.065 should govern the admissibility of expert evidence.⁸⁹ Though the Court directed the lower court to apply section 490.065 on remand, it did not provide any analysis or guidelines for the application of the statute.⁹⁰ If the Court truly intended to settle the debate between *Daubert* and *Frye* in *Lasky*, it failed to do so. Neither *Daubert* nor *Frye* was mentioned in the Court’s opinion, despite the fact that *Frye* had been the avowed standard in Missouri for at least twelve years.⁹¹

In *State Board of Registration for the Healing Arts v. McDonagh*, the Supreme Court of Missouri confirmed that section 490.065 should govern the determination of the admissibility of expert testimony in civil cases.⁹² This case involved a disciplinary complaint filed by the State Board of Registration for the Healing Arts (“the Board”) against Edward McDonagh, D.O., for his use of chelation therapy in the treatment of vascular disease.⁹³ The Administrative Hearing Commission (“AHC”) found no cause to discipline Dr. McDonagh, and the circuit court affirmed.⁹⁴ On appeal, the Board claimed that

3. The facts or data in a particular case upon which an expert bases an opinion or inference may be those perceived by or made known to him at or before the hearing and must be of a type reasonably relied upon by experts in the field in forming opinions or inferences upon the subject and must be otherwise reasonably reliable.

4. If a reasonable foundation is laid, an expert may testify in terms of opinion or inference and give the reasons therefor without the use of hypothetical questions, unless the court believes the use of a hypothetical question will make the expert’s opinion more understandable or of greater assistance to the jury due to the particular facts of the case.

Id.

87. 863 S.W.2d 852 (Mo. 1993) (en banc).

88. *Id.* at 860.

89. 936 S.W.2d 797, 801 (Mo. 1997) (en banc).

90. *Id.*

91. *See id.*

92. 123 S.W.3d 146, 149 (Mo. 2003) (en banc) [hereinafter *McDonagh*].

93. *Id.* at 148–49.

94. *Id.* at 149.

the AHC erroneously failed to apply *Frye* in evaluating the testimony of Dr. McDonagh's experts.⁹⁵ The Supreme Court of Missouri reversed and remanded with a direction to apply section 490.065 on reconsideration.⁹⁶

According to the Court in *McDonagh*, *Lasky* should have been interpreted as a directive mandating that section 490.065 superseded *Frye*, and the statute, not *Frye*, was to control.⁹⁷ To resolve any ambiguities, the Court held that any cases applying *Frye* or any other standard (i.e. *Daubert*) were no longer to be followed.⁹⁸ Under the *new* standard promulgated by the Court in *McDonagh*, for expert testimony to be admissible, the facts or data relied on by an expert "must be those reasonably relied on by experts in the relevant field."⁹⁹ Cognizant of the fact that few cases had interpreted section 490.065, the Court held that those cases (including *Daubert*) which interpret Rule 702 "provide relevant and useful guidance in interpreting and applying section 490.065."¹⁰⁰ However, the Court held that when the provisions of section 490.065 differ with those in Rule 702, the Missouri statute governs.¹⁰¹

As the Court pointed out, a key difference between section 490.065 and Rule 702 is section (3) of 490.065. This section provides that facts and data that serve as the basis of an expert's opinion "must be of a type reasonably relied upon by experts in the field in forming opinions or inferences upon the subject."¹⁰² As such, there is an explicit reliability requirement in the statute that must be evaluated by the court. As the Court explained, this is the key difference between section 490.065 and Rule 702 as interpreted in *Daubert* because "in the federal courts an expert need not necessarily identify the relevant scientific community, or field, in which the data and facts are accepted."¹⁰³ This difference was important to the Court's analysis because this determination was dispositive in the case.¹⁰⁴

The difference between section 490.065 and Rules 702 and 703 is significant. In *McDonagh*, the Court explained that the provision in 703, which is identical to section 490.065(3), is only relevant as an independent requirement of admissibility and not as a prerequisite to the admissibility of expert evidence.¹⁰⁵ In contrast, an expert in Missouri must identify the

95. *Id.*

96. *Id.*

97. *McDonagh*, 123 S.W.3d at 153.

98. *Id.* at 149.

99. *Id.*

100. *Id.* at 155 (citation omitted).

101. *Id.*

102. *McDonagh*, 123 S.W.3d at 156 (quoting MO. REV. STAT. § 490.065(3) (1989)).

103. *Id.*

104. *Id.*

105. *Id.*

community of experts that have accepted the facts at issue.¹⁰⁶ This difference may not seem extremely important, but the Missouri Supreme Court's interpretation of this language is different from the standard interpretation of Rule 703. The provision in Rule 703 that provides, "of a type reasonably relied upon by experts in the particular field in forming opinions or inferences upon the subject" is meant to overcome a hearsay objection if an expert testifies to facts that are not in the record.¹⁰⁷ In Rule 703, this provision is not seen as a factor going to the reliability of an expert's opinion; however, in Missouri, this is the interpretation given by the Court. In *McDonagh*, the Court explained that section 490.063(3) "expressly requires a showing that the facts and data are of a type reasonably relied on by experts in the field in forming opinions or inferences upon the subject of the expert's testimony."¹⁰⁸

In determining the relevant community, Dr. McDonagh argued that it should be those practitioners who utilize chelation therapy.¹⁰⁹ However, as the Court points out, this would be a foolhardy inquiry because this community would consist only of those who chose to practice this therapy in the first place; thus, they would necessarily testify that this methodology is of a type reasonably relied on by experts in the field (i.e., them).¹¹⁰ Instead, the Court determined that the relevant community should be those who treat patients with vascular disease, so the facts upon which Dr. McDonagh's experts relied "must be those perceived by them at trial or must be of a type reasonably relied on by doctors treating vascular disease."¹¹¹ The Court was adamant that it was not simply adopting *Frye* under another name, and it asserted that, as under *Daubert*, general acceptance is only one factor to be considered in determining the reliability of a method or technique.¹¹²

The practical effect of the Court's ruling is unclear. Although the Court professes that *Frye* is not the standard in Missouri, it is difficult to see the distinction. At first, it seems that the Court created a test that combines *Daubert* and *Frye*. However, when analyzed more carefully, any interpretation by the Supreme Court of the United States falls out of the equation. Under the Missouri formulation, the testimony of an expert must be based on facts and data of a type reasonably relied upon by experts in the field. This decision, in effect, makes general acceptance by the relevant scientific community a threshold consideration for the admissibility of expert testimony. If an expert's methods are not accepted by the relevant community, then no further inquiry is

106. *Id.*

107. See generally 29A AM. JUR. 2D *Evidence* § 1051 (2004); see also 31A AM. JUR. 2D *Expert and Opinion Evidence* § 171 (2004).

108. *McDonagh*, 123 S.W.3d at 156.

109. *Id.*

110. *Id.*

111. *Id.* at 157.

112. *McDonagh*, 123 S.W.3d at 156.

necessary, and the testimony is inadmissible. However, if the facts and data are generally accepted, the testimony must still be found to be both relevant and reliable under the *Daubert* analysis. This formulation is inherently contradictory. If general acceptance is now a threshold requirement for expert testimony, analyzing the testimony any further would be superfluous.¹¹³ Although it seems that *Daubert*'s factors would provide additional aid in a court's reliability determination, it is the rare case indeed where an expert's theory is generally accepted yet unreliable.

2. Virginia

Virginia has adopted its own standard for determining the admissibility of scientific evidence.¹¹⁴ This test was set out in *Spencer v. Commonwealth*. In *Spencer*, the court was faced with the proffer of DNA evidence derived from a process known as PCR DNA amplification.¹¹⁵ Defendant/Appellant claimed that this process was neither reliable nor generally accepted by the scientific community.¹¹⁶ The Commonwealth called two expert witnesses who testified that PCR DNA amplification was scientifically reliable.¹¹⁷ In finding this evidence admissible, the court provided a detailed analysis of the test that Virginia courts have adopted.¹¹⁸

In Virginia, when expert scientific testimony is proffered, it is the responsibility of the court to make a threshold finding of fact regarding the reliability of the underlying method or technique.¹¹⁹ This finding must be made unless the technique is "so familiar and accepted as to require no foundation" to establish the reliability of the technique, e.g., fingerprint analysis; or "unless it is so unreliable that the considerations requiring its exclusion have ripened into rules of law," e.g., lie detector tests; or unless the admission of the evidence is governed by statute, e.g., blood alcohol test results.¹²⁰ The court stressed that the determination regarding the reliability of an offered scientific method is discretionary.¹²¹ Within its discretion, a court usually relies on the testimony of an expert, and its decision on reliability, though contested, will not be overturned if its finding is supported by credible

113. *See id.* at 156–57.

114. *Spencer v. Commonwealth*, 393 S.E.2d 609, 621 (Va. 1990).

115. *Id.* at 620. In this case, the more recognized process of DNA printing was not available to the state because the seminal fluid samples were too degraded for that technique. *Id.*

116. *Id.*

117. *Id.* The Court noted that PCR DNA amplification had been widely used in molecular biology since 1985 but that its application in forensic science was relatively new. *Id.*

118. *Id. passim.*

119. *Spencer*, 393 S.E.2d at 621.

120. *Id.* (citations omitted).

121. *Id.*

evidence.¹²² Further, when the reliability of a technique or method is disputed, the court may submit the evidence to a jury—along with instructions to the jury to take into account the disputed reliability when determining the weight and credibility of the witness—provided “there is a sufficient foundation to warrant [its] admission.”¹²³

Under Virginia’s system, responsibility falls on the court to filter out evidence that is inherently unreliable. Other than those methodologies that are plainly faulty or so established as to be beyond reproach, Virginia courts have decided that it should be the jury’s job to resolve contested issues of reliability. This delegation of responsibility to the jury is quite different from what is done in the federal courts and in most other states. As did those states that have adopted *Daubert*, the *Spencer* court recognized the importance of leaving admissibility questions to the discretion of the trial court.¹²⁴ In light of the wide discretion afforded trial courts in their determinations of reliability, and the fact that the PCR DNA amplification was not a method so inherently unreliable as requiring that it be shielded from the jury, the court did not disturb the trial court’s decision to admit the evidence.¹²⁵

3. Wisconsin

Wisconsin, like Missouri and Virginia, has chosen not to follow *Frye* or *Daubert*. Wisconsin rejected *Frye* earlier than most states, which may be a contributing factor to its decision to adopt neither *Frye* nor *Daubert*. In *Watson v. State*, the Supreme Court of Wisconsin was critical of *Frye* and adopted a passage from McCormick finding general acceptance “a proper condition for taking judicial notice of scientific facts, but not a criterion for the admissibility of scientific evidence.”¹²⁶ The court held that the proper challenge to such evidence should be through cross-examination or impeachment evidence.¹²⁷ So long as an expert is qualified, her testimony can be submitted to the jury, and questions relating to the reliability of the proposed expert’s methodology are left for the jury to decide on the grounds of weight and credibility.¹²⁸

The Supreme Court of Wisconsin clarified its decision in *Watson* with its explanation of the admissibility requirements of scientific evidence in *State v. Walstad*.¹²⁹ In *Walstad*, the court explicitly held that *Frye* was rejected in

122. *Id.*

123. *Id.*

124. *Spencer*, 393 S.E.2d at 621.

125. *Id.*

126. *Watson v. State*, 219 N.W.2d 398, 403 (Wis. 1974) (quoting MCCORMICK ON EVIDENCE § 203, at 491 (Edward W. Cleary ed., 2d ed. 1972)).

127. *Id.*

128. *Id.*

129. 351 N.W.2d 469 (Wis. 1984).

Wisconsin. The court's repetition of this proposition of law was necessary because the lower courts in the state continued to apply *Frye*.¹³⁰ At the outset, the court held that *Frye* was incompatible with the statutes governing admissibility in Wisconsin, and "is alien to the Wisconsin law of evidence."¹³¹ Reaffirming its holding in *Watson*, the court held that evidence given by a qualified expert is "admissible irrespective of the underlying theory on which the testimony was based."¹³² Thus in Wisconsin, the most critical determination relating to admissibility is the qualification of the expert; consequently, if the testimony is relevant, it can only be attacked through impeachment and credibility.¹³³ Essentially, the test for the admissibility of expert testimony in Wisconsin consists of three parts. First, the evidence must be relevant; second, the witness must be qualified as an expert; and third, the evidence must assist the trier of fact in determining a fact in issue.¹³⁴

Clearly, Wisconsin puts more faith in the jury than any other state. In federal courts, the trial judge is the gatekeeper; it is her responsibility to evaluate the evidence and determine if it is reliable. In those states that continue to follow *Frye*, the judge, in effect, defers to an expert in the field who testifies as to whether the theory is generally accepted by the relevant community of scientists. In Wisconsin, so long as an expert is qualified, it is the responsibility of the jurors to evaluate the testimony given by that expert. Then, after hearing the cross-examination of the expert, the jurors should compare the testimony on direct examination with that elicited on cross-examination (and the testimony of other witnesses) and determine the reliability of a particular methodology through their determination of the weight and credibility to be given the witness.

4. Independent Tests for Determining Admissibility: Misplaced Confidence or a Step in the Right Direction?

It is too soon to determine the effect of the Missouri Supreme Court's opinion in *McDonagh*. However, to the extent that that court relies on the plain meaning of its evidentiary statute to guide admissibility determinations on scientific evidence, litigants are left with painfully little to go on. Instead of providing some coherent mechanism to guide litigants in Missouri courts, the Supreme Court has left only a confused amalgam that begs for revision.

Virginia and Wisconsin have developed tests that are remarkably dissimilar to both *Frye* and *Daubert*. The tests in place in both of these States

130. *See id.* at 485; *see, e.g.*, *State v. Bohner*, 246 N.W. 314 (Wis. 1933); *State v. Stanislawski*, 216 N.W.2d 8 (Wis. 1974); *State v. Dean*, 307 N.W.2d 628 (Wis. 1981); *State v. Armstrong*, 329 N.W.2d 386 (Wis. 1983).

131. *Walstad*, 351 N.W.2d at 486.

132. *Id.* at 487.

133. *Id.*

134. *See id.* at 486.

reflect either an unparalleled respect for the abilities of juries or a pragmatic solution to a difficult problem. Virginia allows an expert to testify before the jury even if the reliability of a method or principle upon which he bases his testimony is disputed, so long as there is a sufficient foundation to warrant admission. In effect, the test in Virginia allows for evidence based on extremely reliable and extremely unreliable science to be handled in a summary fashion. However, at the margins, Virginia courts allow evidence to reach the jury, even if it is not based on “generally accepted” methodologies or lacks some hallmarks of reliability. This approach gives judges the discretion to allow an expert to testify based upon disputed science, where in other jurisdictions the judge may have been forced to, in effect, pick a side and exclude evidence that could be potentially reliable. In Virginia, this potential is assessed by the jury, who, after having heard the testimony and cross-examination, make the determination. Similarly, Wisconsin courts have put the ultimate reliability determination in the hands of the jury by allowing an expert to testify so long as she has been qualified by the court. Again, like Virginia, the reliability of testimony based on arguable science is a matter for the jury to decide after observing cross-examination.

In those states that continue to follow *Frye*, it is argued that a conservative test is absolutely necessary when dealing with scientific evidence. These courts adopt and embrace the notion that judges, and *a fortiori* jurors, do not have the education or experience to decide disputes concerning the reliability of scientific principles and methodology. Under *Daubert*, it is clear that as a gatekeeper, it is the responsibility of the judge, not the jury, to determine whether scientific evidence is reliable and relevant. By contrast, courts in Wisconsin and Virginia are confident that an adequate resolution to disputed reliability can be gained through a jury’s evaluation of the weight and credibility of expert witnesses. It is unclear whether the Virginia and Wisconsin tests rest on the assumption that lay jurors possess the faculties to come to meaningful determinations on scientific reliability. It may be that the courts in these states have determined it is unwise to restrict the jury from hearing testimony, the reliability of which the judge himself cannot determine, where they can hear the testimony and make the determination themselves.

B. States that Continue to Follow Frye

1. California

California continues to adhere to a modified version of the *Frye* test.¹³⁵ California's current test for the admissibility of novel scientific evidence is the *Kelly/Frye* test.¹³⁶ In *Kelly*, the Court set forth three general considerations that should guide the admissibility determination regarding evidence based on a novel scientific technique. First, "the *reliability of the method* must be established, usually by expert testimony," second, "the witness furnishing such testimony must be properly *qualified as an expert to give an opinion* on the subject," and third, "the proponent of the evidence must demonstrate that correct scientific procedures were used in the particular case."¹³⁷ In conjunction with the aforementioned general principles of admissibility, the Court adopted the "general acceptance" test as set out in *Frye*.¹³⁸ The Court's primary justification for the adoption of *Frye* was the fact that *Frye* is a conservative test.¹³⁹ The Court wanted to ensure that evidence based on new scientific techniques was subject to a strict test because of the possibility that jurors could be easily swayed by the "misleading aura of certainty which often envelops a new scientific process, obscuring its currently experimental nature."¹⁴⁰

As was the case in most other states, *Daubert* brought into question the continued merit of using a test based on *Frye*.¹⁴¹ One court in California, recognizing that "the *Frye* half of the *Kelly/Frye* rule may . . . no longer exist," persisted in applying the rule (and using the name) because *Kelly* was a

135. See *People v. Kelly*, 549 P.2d 1240, (Cal. 1976) (noting that California Courts have expressly adopted the *Frye* test) *overruled on other grounds by* *People v. Wilkinson*, 94 P.3d 551 (Cal. 2004). The Court in *Kelly* lauded *Frye* because it "assures that *those most qualified to assess the general validity of a scientific method will have the determinative voice*." *Kelly*, 549 P.2d at 1244 (quoting *United States v. Addison*, 498 F.2d 741, 743-44 (D.C. Cir. 1974)). Further praise of this standard was given because it applies equally to both prosecution and defense and it is likely to produce consistent and uniform decisions. *Id.*

136. See *People v. Reilly*, 242 Cal. Rptr. 496, 500 (Cal. Ct. App. 1987).

137. *Kelly*, 549 P.2d at 1244.

138. *Id.* The Court recognized the conservative nature of the *Frye* test but felt "judicial caution" was appropriate when dealing with evidence based on new scientific techniques. *Id.* The Court firmly rejected the argument that the admission of this evidence should be left to the discretion of the trial court, noting that this rejection was in accordance with the rationale that other states had adopted. *Id.*

139. *Id.* at 1245.

140. *Id.* (quoting *Huntingdon v. Crowley*, 414 P.2d 382, 390 (Cal. 1966)). The Court's dedication to a conservative approach may also be accounted for by an increased need for caution in criminal cases. See *id.*

141. See *People v. Wash*, 861 P.2d 1107, 1123 n.9 (Cal. 1993).

decision that construed the California Evidence Code.¹⁴² One year after the Supreme Court of the United States decided *Daubert*, the Supreme Court of California held in *People v. Leahy* that “*Daubert* affords no compelling reason for abandoning *Kelly*.”¹⁴³ In *Leahy*, the Court acknowledged that sections 720 and 801 of the California Evidence Code are the functional equivalent of Rule 702 of the Federal Rules of Evidence.¹⁴⁴ As in Rule 702, the statutory language in the California Evidence Code does not contain any specific reference to *Frye*’s “general acceptance” standard, nor does the drafting history of the California Evidence Code establish any intent to incorporate such a standard.¹⁴⁵ In *Leahy*, the court found the fact that *Kelly* was decided eleven years after the adoption of the California Evidence Code in 1965 persuasive.¹⁴⁶ Furthermore, because *Kelly* was rendered after the Code was adopted, the court found the rationale in *Daubert* unpersuasive.¹⁴⁷ After conducting a cost-benefit analysis of *Kelly/Frye*’s continued place in California law, the court was convinced that the standard was appropriate.¹⁴⁸

Implicit in the logic supporting the continued efficacy of the *Kelly/Frye* test is the notion that lay judges are not qualified to gauge whether a particular scientific technique is accorded general acceptance.¹⁴⁹ This view is in stark contrast to that expressed by the majority in *Daubert*, which argued that federal

142. *In re Aontae D.*, 30 Cal. Rptr. 2d 176, 179 n.4 (Cal. Ct. App. 1993).

143. *People v. Leahy*, 882 P.2d 321, 324 (Cal. 1994).

144. *Id.* at 327. As quoted in the Court’s opinion:

Section 720, subdivision (a) provides that “A person is qualified to testify as an expert if he has special knowledge, skill, experience, training, or education sufficient to qualify him as an expert on the subject to which the his testimony relates. . . .” Subdivision (b) of that section provides that “A witness’ special knowledge . . . may be shown by any otherwise admissible evidence, including his own testimony.”

Section 801 permits an expert to state an opinion that is “(a) Related to a subject that is sufficiently beyond common experience that the opinion of an expert would assist the trier of fact; and (b) Based on matter (including his special knowledge . . .) perceived by or personally known to the witness . . ., whether or not admissible, *that is of a type that reasonably may be relied upon by an expert* in forming an opinion upon the subject to which his testimony relates, unless an expert is precluded by law from using such matter as a basis for his opinion.”

Id.

145. Though there is no statutory language that directly incorporates a “general acceptance” standard, the court in *Leahy* notes that the language is “of a type that reasonably may be relied upon by an expert,” and may be broad enough to incorporate such a standard. *Id.* at 327–28.

146. *Id.* at 328 (noting that the court in *Kelly* was presumably aware of *Frye*’s absence from the Code and its history, and the fact that the “general acceptance” standard could well have been interpreted as contradictory with the liberal thrust of the California Evidence Code).

147. *Leahy*, 882 P.2d at 331. The court also found the fact that although many amendments had been made to the expert testimony provisions of the California Evidence Code, the lack of any change to 720 and 801 is evidence of legislated adoption of the standard. *Id.*

148. *Id.*

149. *See id.* at 325.

judges possess the capability to ascertain the validity of a particular scientific method or technique.¹⁵⁰ One is left to wonder whether this contradiction results from a supposed disparity between the respective abilities of members of the state and federal judiciaries, or whether it is merely the result of differing views on the judge's role in these proceedings.

In California, the *Kelly/Frye* test is limited in scope. This test only applies to the admission of scientific evidence; however, it is not limited to "machines' or techniques that involve the manipulation of physical evidence."¹⁵¹ One justification for drawing a distinction between evidence derived from a novel scientific technique and that derived from the experience, technical expertise, or education of a witness is a product of the relative weight a jury will give to a piece of evidence. It is argued that jurors tend to ascribe too much credence to evidence produced by a machine,¹⁵² whereas, a juror is more inclined to be skeptical of the opinion of one qualified as an expert, because though the opinion is from an expert it is from a fallible human just the same.¹⁵³

2. Florida

In Florida, questions of admissibility are governed by the Florida Evidence Code.¹⁵⁴ In spite of, or perhaps, because of this fact, Florida still adheres to a version of the *Frye* test. In *Hadden v. State*, the Florida Supreme Court reiterated its commitment to *Frye* by holding that novel scientific evidence is not admissible unless it meets the *Frye* test.¹⁵⁵ The Court then addressed the effect that the adoption of the Florida Evidence Code had on the continued efficacy of the *Frye* test.¹⁵⁶ The *Hadden* Court argued, *inter alia*, that "a courtroom is not a laboratory, and as such it is not the place to conduct scientific experiments. If the scientific community considers a procedure or

150. *See supra* note 24 and accompanying text.

151. *People v. Stoll*, 783 P.2d 698, 717 (Cal. 1989). The court noted that "[t]estimony based on a new scientific process 'operating on purely psychological evidence' would be subject to the *Kelly/Frye* test. *Id.*

152. *See Wilson v. Phillips*, 86 Cal. Rptr. 2d 204, 207 (Cal. Ct. App. 1999).

153. *See id.*

154. *See* FLA. STAT. ANN. § 90.702 (West 2004) (treating expert testimony substantially similar to Federal Rule of Evidence 702). Neither this provision, nor the notes accompanying it, make any reference to *Frye* or "general acceptance." *Hadden v. State*, 690 So. 2d 573, 577 (Fla. 1997).

155. *Hadden*, 690 So. 2d at 581.

156. *Id.* at 577. The court was mindful of the arguments made by litigators and the holdings of some district courts concerning the absence of mention to *Frye* in the newly adopted Code. *Id.* These lower district courts applied a simple relevancy standard to proffered scientific evidence. *Id.* *See also* *Kruse v. State*, 483 So. 2d 1383 (Fla. Dist. Ct. App. 1986).

process unreliable for its own purposes, then the procedure must be considered less reliable for courtroom use.”¹⁵⁷

The court found that its “prior allegiance” to *Frye* after the enactment of the Florida Evidence Code “manifest[ed its] intent to use the *Frye* test . . . even though the *Frye* test is not set forth in the evidence code.”¹⁵⁸ The court grounded its decision upon a notion of reliability and implied that using a standard other than *Frye* would allow an expert to qualify his own testimony by his own assertions.¹⁵⁹ This argument is a tacit condemnation of both the relevance standard¹⁶⁰ and the standard enunciated by the Supreme Court in *Daubert*. At least as far as Florida courts are concerned, *Frye* is currently the only method by which the reliability of expert testimony can be assured.¹⁶¹

3. Adherence to *Frye*: Is a Conservative Approach Appropriate for Scientific Evidence?

Florida and California have been steadfast in their support of *Frye*, though both states have evidence codes with rules similar to Rule 702. Where the Supreme Court found *Frye* and “general acceptance” to be incompatible with the federal rules, Florida and California found compatibility with their evidence codes. The reasons for these fundamentally dissimilar interpretations of relatively similar statutory provisions cannot be attributed to vagaries in statutory interpretation. The courts in Florida and California have decided to keep *Frye* as the standard for the admissibility of scientific evidence and have interpreted their code provisions accordingly. This is not to say, however, that *Daubert*, *Joiner*, and *Kumho Tire* reflect a natural or inevitable reading of Rule 702. It is safe to say that the majority in *Daubert*, at least to some extent, tailored their reading of Rule 702 to reach their desired ends as well.

The primary motivation for this continued adherence to *Frye* seems to be a belief in the absolute need for a conservative test. The Supreme Courts of both California and Florida have repeatedly lauded *Frye*'s conservative nature. It is this conservatism, this need to leave the determination of reliability solely in the hands of the scientists that is the hallmark of the qualification issue in these states. Implicit in this stance is the notion that judges and juries should not

157. *Hadden*, 690 So. 2d at 577–78 (quoting *State v. Stokes*, 548 So. 2d 188, 193–94 (Fla. 1989)).

158. *Id.* at 578.

159. *Id.* (arguing that to use anything other than *Frye* “would permit resolutions based upon evidence which has not been demonstrated to be sufficiently reliable and would thereby cast doubt on the reliability of the factual resolutions”).

160. For an explanation of this standard, see Giannelli, *supra* note 53, at 1205.

161. See *Flanagan v. State*, 625 So. 2d 827, 828 (Fla. 1993). Florida courts have consciously chosen to restrict *Frye*'s “rigid” qualification regimen to novel scientific evidence. *Id.* Accordingly, all other kinds of expert testimony are not subject to the strictures that often accompany application of *Frye*. *Id.*

undertake the reliability determination. It does not necessarily follow that the law in these states reflects the notion that judges and juries are incapable of coherently determining the reliability of a scientific methodology or principle, but rather, it is fairly implied. This implication produces the fundamental and determinative question: Are judges and juries capable of ascertaining the reliability of a scientific methodology or principle? If they are, then *Frye* and its “general acceptance” test are anachronistic and should be extricated from the books in every state that continues to apply *Frye*. If a judge is capable of coming to a determination that testimony based on novel science is both relevant and reliable and not unduly prejudicial, then this determination should be respected without regard to whether the science is generally accepted. Conversely, if a judge and jury are incapable of producing coherent determinations on the reliability of a scientific methodology or principle, then *Frye* and general acceptance are the pragmatic solution to a complicated problem. Although the “general acceptance” test is admittedly conservative and would exclude some reliable and relevant evidence, this would be an acceptable loss when compared to the alternative—inconsistent and contradictory admissibility determinations resulting in the admission of evidence based on shoddy science or the needless restriction of reliable and relevant evidence.

C. States That Have Adopted the Daubert Formulation

1. Iowa

Iowa has an evidence code modeled after the Federal Rules of Evidence, and as such, has adopted a rule equivalent to Rule 702.¹⁶² As early as 1981, the Supreme Court of Iowa held that *Frye* was not a prerequisite to the admission of scientific evidence and that *Frye* need not be applied if reliability could be ascertained in another manner.¹⁶³ In *Hall*, the court found *Frye* incompatible with evidence law as promulgated in the Federal Rules of Evidence and incompatible with the liberal trend in evidence law in Iowa.¹⁶⁴

In 1994, the court decided *Hutchison v. American Family Mutual Insurance Co.*¹⁶⁵ The court refused to apply restrictions on expert testimony that were not found in Iowa Rule of Evidence 702, or in *Daubert*.¹⁶⁶

162. See IOWA CODE ANN. § 5.702 (West 2004). Commenting on the nature of this rule, the Supreme Court of Iowa noted that the adoption of this rule was in accordance with the liberal stance that Iowa courts had taken regarding opinion testimony. *Hutchison v. Am. Family Mut. Ins. Co.*, 514 N.W.2d 882, 885 (Iowa 1994).

163. *State v. Hall*, 297 N.W.2d 80, 85 (Iowa 1980).

164. *Id.*

165. 514 N.W.2d at 882.

166. *Id.* at 887. Specifically, the court refused to interpret Rule 702 as requiring that a potential expert “belong[] to a particular profession or ha[ve] a particular degree.” *Id.* at 887–88.

Furthermore, the Iowa court found the Supreme Court's stance in *Daubert*—in favor of a discretionary role for the trial judge in determining admissibility—to be more effective than the more fixed and confined position of a judge operating under the framework of *Frye*.¹⁶⁷

Following the lead of the majority in *Daubert*, the Supreme Court of Iowa expressed its belief that judges in Iowa were capable of exercising their discretion in the adjudication of these matters.¹⁶⁸ The court's previous official displeasure with *Frye* and liberal construction of its own evidence law made Iowa a natural for the adoption of the *Daubert* standard; the state took less than a year to recognize the *Daubert* test as the appropriate standard to govern in Iowa.

2. Texas

Like Iowa, Texas has adopted a *Daubert*-like standard governing the admissibility of scientific evidence. In *E.I. du Pont de Nemours and Company, Inc. v. Robinson*, the Supreme Court of Texas found that in order for an expert's testimony to be admitted, it must be relevant to an issue in the case and it must be based on a reliable foundation.¹⁶⁹ The court referenced a problem thought to be pervasive in the realm of expert testimony; namely, that a party can usually find an expert to deliver an opinion in support of its theory of the case "regardless of its merit."¹⁷⁰

Relying on Rule 702 of the Texas Rules of Criminal Procedure and an opinion by the Court of Criminal Appeals,¹⁷¹ the *Robinson* court was persuaded that the *Daubert* test was the appropriate standard for Texas. In addition to the illustrative factors in *Daubert*, the court found that an analysis of the "extent to which the technique relies upon the subjective interpretation of the expert," is relevant to the trial court's initial determination of admissibility.¹⁷² Although this requirement may be implicit in a thoughtful

167. *Id.* at 888.

168. *Id.*

169. *E.I. du Pont de Nemours and Co., Inc. v. Robinson*, 923 S.W.2d 549, 550 (Tex. 1995).

170. *Id.* at 553. This proposition is troubling on many levels. If this is the reality of the situation, then both experts and attorneys may be shirking their ethical responsibilities in their respective professions.

171. *Kelly v. State*, 824 S.W.2d 568, 573 (Tex. Crim. App. 1992). In *Robinson*, the Texas Supreme Court adopted the nonexhaustive list of factors set forth in *Kelly* that should be considered in a determination of reliability. The list includes: "(1) general acceptance of the theory and technique by the relevant scientific community; (2) the experts qualifications; (3) the existence of literature supporting or rejecting the theory; (4) the technique's potential rate of error; (5) the availability of other experts to test and evaluate the technique; (6) the clarity with which the theory or technique can be explained to the trial court; and (7) the experience and skill of the person who applied the technique on the occasion in question." *Robinson*, 923 S.W.2d at 556 (citation omitted).

172. *Robinson*, 923 S.W.2d at 557.

analysis of other *Daubert* factors, this is a significant addition because it may alleviate some measure of a court's incredulity regarding a well-credentialed expert.

In *Robinson*, the court also disregarded the dissent's claim that adopting *Daubert* would force a judge to assume the role of an amateur scientist.¹⁷³ The court was convinced that one need not be a scientist to evaluate the reliability of a scientific technique and felt that judges were capable of undertaking the task.¹⁷⁴ Further, the court rejected the argument that *Daubert* was unconstitutional because the judge's function as gatekeeper usurped the jury's role in determining the weight and credibility of witnesses.¹⁷⁵ Dismissing this argument, the court cited the difference between the reliability of a theory and the credibility of a witness.¹⁷⁶

In *Robinson*, the court was cognizant of the problem of calling on the jury to be the arbiter of complex scientific questions that not even scientists can agree on.¹⁷⁷ It also took into account the difficulty juries have in evaluating expert evidence, noting that "it can be both powerful and misleading."¹⁷⁸ In light of the potential for the misuse or overly influential character of expert scientific testimony, Texas law mandates a higher responsibility for its judges to "ensure that expert testimony show some indicia of reliability."¹⁷⁹

3. Delaware

Delaware is another state that has rejected the *Frye* test in favor of a test akin to *Daubert*. In *Nelson v. State*, the Supreme Court of Delaware addressed the admissibility of DNA typing in criminal prosecutions.¹⁸⁰ At trial, the prosecution introduced the results of a DNA test of the defendant's blood, which showed that the defendant's DNA matched the DNA taken from semen found on the victim.¹⁸¹ On appeal, the defendant claimed the results of the DNA tests were inadmissible under *Frye* because the test was "still emerging" and because there were several deficiencies in the test.¹⁸² Since the adoption of the Delaware Rules of Evidence in 1980—modeled on the Federal Rules of Evidence—courts in Delaware have consistently held that *Frye's* "general

173. *Id.*

174. *Id.* at 557–58. The court went on to suggest that a judge may be more capable of assessing this kind of question than a jury—citing the judge's ability to review documents and briefs while juries must depend on oral testimony. *Id.* at 558.

175. *Id.*

176. *Id.*

177. *Robinson*, 923 S.W.2d at 553.

178. *Id.*

179. *Id.*

180. 628 A.2d 69, 70 (Del. 1993).

181. *Id.*

182. *Id.* at 72.

acceptance” test is not the only measure for determining the admissibility of scientific evidence.¹⁸³ The court found that the trial court’s failure to apply *Frye* was not error.¹⁸⁴ In making this determination, the court held that the admission of scientific evidence was to be governed by the relevant provisions of the Delaware Rules of Evidence, and as such, if evidence was to be admitted, the trial court must find the evidence relevant and reliable.¹⁸⁵ With this framework for determining admissibility, the *Nelson* court held that the DNA typing evidence was inadmissible because the evidence should have been presented in conjunction with a statistical interpretation of the match.¹⁸⁶

Because the Delaware Rules and Federal Rules are so similar, the Supreme Court of Delaware follows the interpretation of Rule 702 handed down by the Supreme Court of the United States.¹⁸⁷ Accordingly, Delaware’s highest court has adopted the Supreme Court’s interpretation in *Daubert* and *Carmichael* holding that the trial court’s gatekeeping obligation applies to all expert testimony, not just to testimony based on novel science.¹⁸⁸

IV. CONCLUSION

Although it has been the subject of much discussion, the question of whether a judge has the capacity to evaluate the reliability of a scientific principle or method has not been answered. The question, therefore, is: “What next?” The Supreme Court of the United States has chosen to invest trial court judges with the responsibility of determining the reliability of principles and methodologies underlying proposed scientific testimony. This is a discretionary function that the Supreme Court is confident trial judges have the capacity to undertake. Some states have chosen to continue to apply the *Frye* test. These states have determined that the best way to ensure that only reliable evidence reaches the jury is to mandate that the methodology or principle underlying an expert’s testimony is generally accepted by the relevant scientific community. These courts are confident that the scientists themselves

183. *Id.* at 73; see also *Santiago v. State*, 510 A.2d 488, 489 (Del. 1986); *Whalen v. State*, 434 A.2d 1346, 1354 (Del. 1981).

184. *Nelson*, 628 A.2d at 73.

185. *Id.* at 74. The court found that the relevancy and reliability requirements were the same as those set forth in *Daubert*. *Id.* In a footnote to the opinion, the court noted that, like the requirements of Rule 702, the analysis under the Delaware Rules of Evidence must be focused on the methodologies underlying the proffered evidence and not on the resultant conclusions. *Id.* at 74 n.6.

186. *Id.* at 75. At trial, the Superior Court excluded the State’s statistical evidence relating to the match of the DNA type. *Id.* The Supreme Court found this exclusion to be an error of law, and that for DNA matching evidence to be admissible it must be submitted in conjunction with this statistical interpretation. *Id.* However, because of the “overwhelming evidence” in support of the convictions, the court held the error to be harmless. *Id.* at 70.

187. *M.G. Bancorporation, Inc v. Le Beau*, 737 A.2d 513, 521 (Del. 1999).

188. *Id.* at 522.

are those best fit to pass judgment on questions of reliability. This begs the question, of course, of whether a relevant community of scientists is the *only* group capable of making this determination—or if they are capable of making this determination at all. Finally, there are those states that have chosen to leave questions of disputed reliability to juries. These courts are confident that impeachment and cross-examination can adequately resolve questions of disputed reliability.

Missouri, on the other hand, is a paragon of inconsistency. The situation in Missouri illustrates why these issues continue to be brought before the high courts in the states. The Supreme Court of Missouri has addressed this issue many times and has failed to produce a coherent framework to clarify how the determination of the admissibility of scientific evidence should be governed. Although one member of the court has advised that litigators should “Forget *Frye*. Forget *Daubert* [and] [r]ead the statute,”¹⁸⁹ it is clear that statutes based on Rule 702 are not self-executing and are inherently unclear. The Supreme Court of the United States has interpreted Rule 702 to require a trial judge to become a gatekeeper and evaluator of scientific methodology, with the responsibility of determining whether that methodology represents “scientific knowledge.” Conversely, various state courts have come to another conclusion altogether. They have determined that “general acceptance” and the provisions based on Rule 702 are not incompatible. To direct litigators to look to the face of the statute for clarification on this issue is laughable.

The debate over *Daubert* and *Frye* will continue so long as a judge’s ability to determine the reliability of scientific principles and methodology is questioned. As soon as enough courts decide that trial judges are capable of making this determination, *Frye* should be abandoned. The trend in the states is in this direction. No rationale can possibly support *Frye* if judges possess the capacity to evaluate the reliability of scientific evidence. At least insofar as judicial economy is concerned, “general acceptance” could still play a role as a mechanism for expedience. The reliability of a methodology or technique recognized as generally accepted would not be unquestionable. However, if a principle were considered generally accepted, perhaps a rebuttable presumption of reliability in favor of a generally accepted technique should be created. In effect, if judges can be trusted to determine a technique’s reliability, then a continued adherence to *Frye* creates too great a risk that relevant and reliable evidence will be excluded from the jury.

Although not as restrictive as *Frye*, *Daubert* still presents some problems. If well-credentialed experts genuinely disagree on the reliability of a methodology or principle, then maybe a judge should not be the one to make the ultimate determination on reliability. When such genuine disputes arise,

189. State Bd. of Registration for the Healing Arts v. McDonagh, 123 S.W.3d 146, 160 (Mo. 2003) (Wolff, J., concurring in part and dissenting in part).

the question may become more akin to a determination of weight and credibility and less similar to other determinations of admissibility. Perhaps Wisconsin and Virginia have developed a more workable and fair approach to determinations of fiercely contested reliability. These states allow the jury to decide which expert to believe; thus, they are not deprived of potentially reliable evidence. Of course, these formulations could allow unreliable testimony to reach the jury, but, as always, the jury can choose to disbelieve this testimony, as this is one of its primary functions in the first place. Along this same line, the potential for a jury to become overly influenced by the testimony of an expert can be mitigated in cases where each side presents testimony of qualified experts that is arguably reliable. Thus, any potential awe that a jury might experience would be spread across the experts of both parties.

In *Daubert*, Justice Blackmun observed that “there are important differences between the quest for truth in the courtroom and the quest for truth in the laboratory. Scientific conclusions are subject to perpetual revision. Law, on the other hand, must resolve disputes finally and quickly.”¹⁹⁰ The law, however, is also subject to revision. When the law ceases to achieve its purpose, a revision may be necessary. Those states that adopted *Daubert* decided that an application of *Frye* was no longer consistent with their rules governing admissibility of scientific evidence. Some states determined that *Frye* was appropriate, and others determined that neither *Daubert* nor *Frye* were appropriate. So long as judicial capacity to evaluate the reliability of science is in question, determining the appropriate standard will be difficult. However, there are other choices available, and with time, one of the choices may turn out to be the most pragmatic solution to this difficult problem.

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190. *Daubert v. Merrell Dow Pharms., Inc.*, 509 U.S. 579, 596–97 (1993).

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