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FINDING THE GOLDEN MEAN WITH *DAUBERT*:
AN ELUSIVE, PERHAPS IMPOSSIBLE, GOAL

ROBERT P. MOSTELLER*

I. INTRODUCTION

No Magic Wand: The Idealization of Science in Law, by David S. Caudill and Lewis H. LaRue,¹ has a message that is sophisticated, moderate and optimistic. I do not take issue with its sophisticated approach or its moderate brand of judicial supervision of scientific expertise under *Daubert* and its progeny.² The sophisticated approach demonstrates the authors' admirable understanding of difficult issues. The book's moderate approach is appropriate and the authors' vision in this regard is salutary, although I doubt that moderation in controlling the admission of scientific expertise, rather than strict gatekeeping, is the goal of the current *Daubert* regime.³ The element of the authors' approach that I do not embrace, although it too is admirable, is their optimism that sufficient sophistication can be reached by courts to properly screen scientific evidence under the *Daubert* regime, and that courts will actually demonstrate the moderation that the authors expect.⁴

* Chadwick Professor of Law at Duke University. I want to thank Paul Giannelli, Rick Lempert, Jeff Powell and all the participants at the Villanova Symposium for their extremely helpful comments on earlier drafts of this essay. I am particularly grateful to Lash LaRue for engaging me on this topic.

1. DAVID S. CAUDILL & LEWIS H. LARUE, *NO MAGIC WAND: THE IDEALIZATION OF SCIENCE IN LAW* (2006).

2. *Daubert v. Merrell Dow Pharm., Inc.*, 509 U.S. 579 (1993). The other two cases in the trilogy are *General Electric Co. v. Joiner*, 522 U.S. 136 (1997), and *Kumho Tire Co. v. Carmichael*, 526 U.S. 137 (1999).

3. See Paul Giannelli, *Opinions and Expert Testimony: The Daubert Trilogy and the Law of Expert Testimony*, in *EVIDENCE STORIES* 181, 194-98 (Richard Lempert ed., 2006) (suggesting transformation after decision in *Daubert* from uncertainty as to whether decision was more liberal than *Frye* to "exacting standards of reliability" noted in *Weisgram v. Marley Co.*, 528 U.S. 440, 455 (2000)).

4. I do not mean to be engaging in the rather stylized form of criticism of judicial understanding of science that the authors appropriately reject. See CAUDILL & LARUE, *supra* note 1, at 57-59 (critiquing study by six scholars regarding "what is done with science in the courtroom"). I share with the authors a belief that judges have a basic grasp of the major issues and that the key question is about application rather than science as an abstraction. See *id.* at 58 (criticizing scholars for failing "to observe how the judges apply [a] concept in court"). I also recognize that when making decisions, the judges are not acting alone, but rather are aided by the efforts of the advocates who are self-interested in edifying the strengths and weaknesses of science and of its application to the case. See *id.* at 59 ("[T]he expert's explanation would be tested by cross-examination and by the testimony of other experts, who might agree, qualify, or disagree."). My reaction, however, in reading such materials as a law professor is that in the end, there is such a gap between parties and so much left for judgment in what the various tests mean and how they should properly be applied that I can imagine reasonable-sounding results going in multiple directions. I find the final steps to a decision a matter that is often much like an act of faith, or, probably more frequently, the consequence of

The authors summarize the problem with judicial treatment of science as follows:

Too many trial judges, however, idealize science. The paradoxical consequence of idealizing science is that such trial judges are either too harsh or too generous toward scientific experts in the courtroom. By “too harsh,” we mean that such a trial judge sometimes expects too much from science, which after all is not a perfect enterprise. By “too generous,” we mean that such a trial judge sometimes idolizes scientific authority without critically evaluating its limitations. In either case, the best science for a particular lawsuit can be missed. Our response is to describe a pragmatic, realistic, and non-romantic view of science that recognizes its goals and limitations.⁵

By pragmatic features, they explain that they mean its “inevitable social, institutional, and rhetorical aspects.”⁶

My essay is largely comprised of a series of thought experiments. The first two thought experiments arose in cases I tried before “junk science” became a widely used label and before *Daubert* was decided. They represent an often unexamined subset of expert evidence cases involving simple expertise, one of which seems remarkably hard to resolve to achieve the admissibility result that I believe is intuitively appropriate. They also provide an opportunity to suggest how *Daubert* analysis might impact moderately innovative litigants with limited funds. The third, which is the most generally applicable, involves a critique of *Kumho Tire*,⁷ one of the decisions in the *Daubert* Trilogy, a decision that I believe may have been affected by the Supreme Court’s arguably misguided assumption about the implausibility of the merits of the expert’s conclusion. The final thought experiment is one that I keenly experienced while consulting on the admissibility of expert evidence in civil litigation. The case was initially governed by a standard different and less exacting than *Daubert*; it then shifted mid-process into full *Daubert* mode. Its message reflects the uncertainty of the standards that govern specific types of expertise and the resulting unpredictability about the trial court’s choice of standards to apply. It suggests that either the standards should be clarified or the rigor of enforcement of unclear and unpredictable standards should be moderated.

My thought experiments deal largely with technical, rather than scientific, expertise. The examples are thus somewhat outside the area of pure science and therefore slightly different than the principal focus of *No Magic Wand*. I believe, however, that my points are largely pertinent to the authors’ analysis, and like the Court, Caudill and LaRue recognize that often no clear distinction exists

inherent biases. I am confident only in saying that many of the opinions discussed sound reasonable in approach, but it does not follow that their result is correct or even that reasonableness correlates strongly with the accuracy of the result.

5. CAUDILL & LARUE, *supra* note 1, at 3-4.

6. *Id.* at 2.

7. See *Kumho Tire Co. v. Carmichael*, 526 U.S. 137 (1999).

between science and technical knowledge in judging admissibility.⁸

In setting out these thought experiments and my observations about them, I am not at all arguing against the basic approach Caudill and LaRue take. Indeed, their approach will improve practice and move it in a direction that seems sensible to me—toward what I term the “golden mean.” My major conflict, if there is one, concerns what I believe are the practical limitations of the legal treatment of science and expertise generally, which suggest that the authors’ goal of having judges putting science in a proper, rather than an idealized, perspective may be unattainable. The authors’ larger lesson of not idealizing science, however, even if not fully realized, can have the beneficial effect of moderating extreme results as to admissibility or exclusion.

I conclude this essay with what I think are valuable themes of the book and of the successful intersection of law, science and expertise: the importance of focusing on application rather than abstraction, and a willingness to embrace complication rather than insisting upon stark, abstract and neat solutions to problems in this area.

II. THOUGHT EXPERIMENTS 1 AND 2—“SIMPLE” EXPERTISE THAT WAS EASILY ADMISSIBLE AND NOW MAY BE SO EASY

Before entering law teaching, I practiced for seven years with the Washington, D.C. Public Defender Service (“PDS”). Although a public defender, PDS is something of a special case. Over the years, it has been fortunate to attract a remarkably talented group of young law graduates from all over the country, and it enjoys a relatively substantial budget, at least by public defender standards, including a separate line item for expert witnesses. Even though PDS has its own funds to hire expert witnesses, it nevertheless remains a public defender organization, not a major pharmaceutical company or even a member of the often well-heeled civil plaintiffs’ bar in terms of the litigation-related costs it can support.

PDS’s major encounters with experts were with the standard fare of forensic experts in areas such as handwriting, serology, ballistics, fingerprint, hair and fiber analysis, and tool marks (which given the weaknesses now recognized in their craft we did relatively little to challenge),⁹ physicians and medical ex-

8. *See id.* at 148 (noting that there is “no clear line” that divides scientific knowledge from technical or specialized knowledge and that disciplines such as engineering, which may be principally technical, rest upon scientific knowledge). Caudill and LaRue make the same point more broadly:

One could read *Kumho Tire* rather narrowly, saying that its language only has relevance to people like engineers, and that for ‘real science,’ the four factors remain the key. But this seems erroneous. Whenever science comes into the courtroom, it comes in not as pure theory, but as applied science, and thus looks much like engineering.

CAUDILL & LARUE, *supra* note 1, at 10.

9. I am uncertain whether the *Daubert* revolution has applied a dual standard and effectively has given forensic evidence a pass, or whether it has had a substantial effect, not on the exclusion of such evidence, but on the improvement in quality and standards, which had not

aminers providing various clinical decisions, and psychiatrists and psychologists rendering opinions on mental conditions in insanity cases. Lie detection and eyewitness experts, despite occasional efforts to relitigate the question, were not received.

As a general rule, psychiatrists and psychologists in insanity cases did not present problems to either prosecutors or defense counsel. The experts we valued most were those who gave sensible opinions regarding those defendants whose insanity was plausible based upon the nature of the crime and the past non-criminal conduct of the defendant. Absent evidence beyond the expert's opinion, we found there was little chance of convincing a jury that the defendant was insane.¹⁰ If such evidence did exist, most sensible experts would not be far apart in their ultimate conclusions.¹¹ That distance, however, could be critical.

As a defense attorney, I had a general bias against easy admission of evidence, as the defense generally (but not always, e.g., lie detectors, eyewitness identification experts) benefits from the absence of evidence. Both my personal and the general conclusion of PDS, however, was that presenting something of an affirmative case and, in many situations, evidence of at least possible innocence was preferable, if at all reasonably possible. Our intuitive sense was that as cases became more serious—particularly in homicide cases—jurors did not relish the idea of acquitting a person they thought guilty and dangerous because of a mere doubt about the evidence. It was better to provide some basis for innocence than to rely solely on the negative argument that the prosecution had failed to prove guilt beyond a reasonable doubt.

I did not see expert testimony as a way to hijack the trial, and I also did not find the rules governing expert admissibility to be terribly threatening in keeping me from doing what I thought was reasonable in presenting a case. I now understand that my attitude of “what’s the problem with expert testimony” simply makes me a member of the general litigation community of my era. The “junk science” controversy and backlash against liberal admissibility of experts came shortly after I left practice in 1983 and was not felt as much in criminal litigation even then,¹² other than in the Hinckley case.¹³ *Daubert* and the de-

developed earlier because *Frye* largely “grandfathered” admission of these non-novel types of expertise.

10. Extremely clear cases of insanity sometimes resulted in a finding of not guilty by reason of insanity at a bench trial without the opposition of the prosecution.

11. Neutrality was valuable in that the expert did not always conclude one result—sanity or insanity. One expert had a curious neutrality. He came out about equally on both sides; it just happened that he came out on the side, whether defense or the prosecution, that had hired him.

12. See Giannelli, *supra* note 3, at 186-89 (discussing criticism of “expanded role of experts”).

13. My positive picture could be questioned by those who would note that a federal jury during this period found John Hinckley not guilty by reason of insanity in his attempt to assassinate President Reagan, which led to a very quick revision of Rule 704 of the Federal Rules of Evidence. See Robert P. Mosteller, *Evidence History, The New Trace Evidence, and Rumblyings in the Future of Proof*, 3 OHIO ST. J. CRIM. L. 523, 527 n.19 (2006) (explaining legislative history). The decision was popularly attributed to the latitude the law gave to the

velopment of its rigorous testing of expert testimony admissibility came even later.

I will present two instances of somewhat novel use of experts in my pre-*Daubert* practice, where the evidence was admitted by a trial judge whom I thought was quite bright and demanding, but very fair. My guess is that the testimony of these two experts might be admitted today, particularly the second, if courts use the type of variegated analysis suggested by Professor Michael Risinger that he believes should be used for different types of expertise.¹⁴ I find Risinger's taxonomy very useful, although I might propose some modifications.¹⁵ Indeed, because of its value, I make repeated reference in this essay to it and to the general concept of taxonomy of the admissibility standards for expertise.

I am not at all confident, however, of a favorable decision on admissibility today of either of these somewhat novel experts, and I am most pressed to show clear admissibility of the first, although I believe both should be justifiable under properly applied *Daubert*-type standards. Also, admission of such expertise might require increased preparation to meet the *Daubert* challenge and lead to higher costs, which could reduce use of this type of relatively available and modestly-"priced" experts, effectively eliminating the option to introduce expertise for litigants with limited resources.

A. Expert in "Handedness"

The first somewhat innovative expert was asked to provide an opinion on whether my client was right- or left-handed.¹⁶ This is a relatively simple expertise that ordinarily is unneeded. When needed, the opinion might be expected to come from observers of the individual, rather than from an expert, and is rarely the subject of proof in a criminal trial, as explained below.

The case involved a charge that my client, Sam Byrd, assaulted a police officer by trying to shoot him. The officer, with his partner, was dressed in plain clothes and traveling in an unmarked car. The officers testified that as they approached a suspicious individual, my client, he fled. One officer left the car and

testimony of mental health experts who testified on the issue of insanity and to their asserted crass over-reaching. See, e.g., Diane White, *In the State of Psychiatry*, BOSTON GLOBE, Jan. 29, 1983, at 20 ("After the Hinckley trial . . . it seemed clear to many people that . . . a lawyer . . . could find a psychiatrist who would say just about anything."). My view then and now is that the experts were made the convenient whipping boy for an unpopular decision that was not easily accepted or explained.

14. See D. Michel Risinger, *Preliminary Thoughts on a Functional Taxonomy of Expertise for the Post-Kumho World*, 31 SETON HALL L. REV. 508 (2000) (arguing for different threshold standards for different kinds of expert evidence). A slightly modified version of the article appears in 1 DAVID L. FAIGMAN ET AL., MODERN SCIENTIFIC EVIDENCE: THE LAW AND SCIENCE OF EXPERT TESTIMONY §§ 2-2.0-2-4.0 (2002). My later references will be to the Seton Hall version.

15. For a description of the general features of this taxonomy later in the paper, see *infra* notes 29-34 and accompanying text.

16. Because the client was acquitted, there is no reported opinion providing even part of the facts of this case.

gave chase on foot, following my client into an alley. He testified that as the suspect exited from the alley and ran between nearby buildings, Byrd, holding the gun in his left hand, fired at the officer. The officer testified that the bullet missed him, he returned fire and the shooter dropped his weapon and was apprehended. The officer's partner testified to a similar version of the events, although he saw different aspects as he drove the unmarked vehicle to a position to cut off the fleeing suspect.

One critical point was that the subsequent investigation failed to back up the officers' story with physical evidence. The investigation failed to locate the apparent point of impact of the bullet Byrd had allegedly fired, and no bullet was recovered to match with the gun the officers testified they found when Byrd threw it after the officer returned fire. No gunpowder residue was recovered from my client's hands.¹⁷

Byrd's testimony at trial was consistent with some aspects of the officers' testimony and inconsistent with others. He testified that he indeed did run from the two men, who were not in uniform, because he did not know they were police officers. He said he thought they were the ones who were suspicious, and he feared they might do him harm. He testified that, while he did run away, he did not have a gun and did not fire at the officer.¹⁸

The claim that he had not fired the gun, but instead the officers had acted in a trigger-happy fashion, had some particular plausibility to me, although my information would be inadmissible at trial. While it was rare for officers to fire their weapons in Washington, D.C., these same two officers had been involved in a case of a juvenile client that I had handled several years earlier. One member of the team had fired at my juvenile client as he fled. There too the officers testified that they thought the suspect had a weapon in his hand as he fled, but only produced a syringe of the type used by drug addicts with illegal drugs. The officers mistook the syringe, which the juvenile had discarded as he ran away, for a gun.¹⁹

Byrd contended in conversations with me, as he subsequently testified at trial, that he was clearly right-handed. I do not fully remember when I discovered the apparent inconsistency between the left-handed reference in the police report and what appeared to me to be Byrd's right-handedness. I know I observed him sign papers and write with fine handwriting with his right hand. Moreover, when I asked, his mother agreed that he was quite clearly right-handed and had been so all his life.

17. No test was performed on either of Byrd's hands to determine the presence of gunpowder residue.

18. The only independent witness to testify was from a nearby building, who stated that the officers had planted the gun. I do not wish to present this evidence as powerful as it might sound, because, although I found the witness independently from my client and discerned no connection between him and Byrd, the witness had a substantial criminal record (not unexpected given the high crime area where the altercation occurred), and was perhaps biased against the police.

19. For a further discussion of the facts of this case, see *In re J.G.J.*, 388 A.2d 472 (D.C. 1978).

From all I could see about the location, it made little sense from my client's perspective to have fired with his "off" hand if he had indeed attempted to fire at the police. I posited a number of hypotheses, including some that would have made the officers' story plausible, such the happenstance that he was carrying the gun in his left pocket and had to get to it quickly as he ran.

At trial, I wanted to argue (and ultimately did) that the officers reported the location of the gun incorrectly in my client's left hand because he never had a gun in either hand for them to see. Moreover, I argued that they had a reason to pick his left hand: to explain away the inconvenient lack of physical evidence corroboration. In the spatial arrangement where the shot was allegedly fired, failure to find the bullet or evidence of the bullet's impact was more likely if the gun had been in Byrd's left hand than his right. Because the officers, I argued, knew none of this evidence would be found from the beginning (because they knew no shot was fired at them), they included the left hand reference in their initial version of the facts to aid their explanation.

Proof of right- or left-handedness for many people is easy through the testimony of family, friends and co-workers, and Byrd's mother would have so testified. Such testimony would not have been very effective, however, given the heavy discount I believe the jury would have given to the testimony of Byrd's family and friends, particularly because of Byrd's substantial criminal record. Because of that record, he lacked the type of reputable life-time friends and co-workers who could document handedness.

Proof by expert was more difficult than I had originally assumed. For example, handedness is not provable in most people by having a physician examine the differences in muscle development.²⁰ After a number of telephone calls, I located a medical technician at a local university medical facility whose job was to determine handedness for brain-damaged Vietnam veterans who sometimes could not remember which was their dominant hand and, in some instances, needed a determination of which of their hands was currently more functional so that rehabilitation could be done with that now-dominant hand.²¹ She clearly had a methodology for her determinations, but she had done no blind testing and certainly had not tested her accuracy with undamaged subjects who might try to deceive her.

She tested my client's fine motor skills with a number of her tests and found that he was clearly right-handed and that his "off" hand was perfectly

20. As a movie buff, I had recently watched Sydney Poitier playing a northern big city detective who incurred the racist wrath of a white suspect when he conducted a tactile examination of the muscles of that man's arms to determine whether he was, like the murderer, left-handed. See *IN THE HEAT OF THE NIGHT* (United Artists 1967). Thus, I initially thought that handedness could be easily determined by a trained individual merely feeling the muscle structure of a person's arms. I learned from physicians, however, that this task was not simple. Except for extraordinary athletes, such as tennis players who use one hand extensively and repeatedly, no clear difference in muscle structure related to the handedness of the person is discernable by tactile examination.

21. I found this expert, as I found most of my "off-beat" experts, by making numerous calls to local universities and/or university hospitals seeking credentialed individuals in related fields.

functional like most individuals, though not close to making him ambidextrous.²² When I presented this example at the symposium, one of the questions was whether I had informed the expert of my “desired” result or whether she was testing the client in a blind situation.²³ My memory is that I gave her no prior information on my position regarding my client’s handedness. I am relatively confident of this proposition for two reasons. First, like many witnesses I ultimately called, I sensed this witness began with no great interest in spending her time testifying in a criminal case, and any indication she was being manipulated or helping to distort the truth on behalf of a potentially dangerous criminal would have resulted in the termination of her involvement. My modest witness fee would not have compensated for her sense of honor. Second, I felt no need to fudge the results; I had not the slightest personal doubt myself about my client’s “right”-handedness.

I offered the technician as an expert witness. No extensive hearing was held regarding admissibility, and no *Daubert*-type²⁴ challenge to her methodology was raised. The judge accepted her as an expert.

The expert educated the jury, but the testimony she offered also involved a specific opinion involving the client and a fact of consequence in the case—that he was right-handed.

She also brought the results of the tests she had administered. She explained her simple methodology and showed the jury the drawings produced by the client with each hand. She then expressed her opinion that he was right-handed and not ambidextrous, or even close to it. Some of the limits of her knowledge were probed on cross-examination. For example, she acknowledged that she was not skilled at judging those involved in purposeful deception, although she believed she would likely detect some efforts to deceive. Moreover, the client’s performance with both his apparently dominant and his apparently

22. My memory of the tests is that they consisted of a series of drawing and tracing enterprises done with each hand. Some of the tests required free-form action that involved looking at and reproducing a pattern or figure, while others required tracing with fine, intricate movements or large looping motions.

23. This question came from Michael Risinger. As part of his helpful taxonomy of expertise that sets differing standards of justification for different types of expertise, he argues that blind testing is a powerful justification for admissibility of expertise in otherwise marginal determinations. See, e.g., Mark P. Denbeaux & D. Michael Risinger, *Kumho Tire and Expert Reliability: How the Question You Ask Gives the Answer You Get*, 34 SETON HALL L. REV. 15, 58-59, 64 (2003) (arguing for general importance of blind testing in determining validity and noting its unfortunate absence in many fields). As a related factor, he distinguishes secondary source information gained before involvement in litigation from that gained after involvement. See Risinger, *supra* note 14, at 515 (stating that expert should be qualified to evaluate all information, not just that acquired after litigation begins).

24. Any challenge would have been judged under the then-applicable test set out in *Frye v. United States*, and a challenge could have been raised because this was “novel” evidence. 293 Fed. 1013, 1014 (D.C. Cir. 1923) (“When the question involved does not lie within the range of common experience or common knowledge, but requires special experience or special knowledge, then the opinions of witnesses skilled in that particular science, art, or trade to which the question relates are admissible in evidence.”). The prosecutor, however, made no vigorous challenge to the theoretical or methodological underpinning of the expertise.

“off” hand appeared typical of normal people. She believed she would detect at least poorly performed efforts to deceive.

I do not believe she was asked whether the rare person who was truly ambidextrous might be able to deceive her by performing normally with his supposedly dominant hand and reducing slightly his skill with the other. My guess is that she would have answered that she might well not be able to detect such action and certainly had never put her skill to any type of test in such a situation.

On cross-examination, she acknowledged that she was not saying that Byrd was incapable of holding or firing a gun with his left hand. Also, she had no knowledge of whether he had fired the gun at the officer.

She was, in my opinion, a very effective witness both as a person and in her message. I believe she did establish in the jury’s mind that my client was clearly right-handed, and I also believe that it would have been difficult, perhaps impossible, for me to have reached the same level of proof through available lay witnesses.

The jury considered the evidence, including her testimony, and ultimately acquitted my client. I believe the technician’s testimony was valuable and should have been received.²⁵

Professor Michael Risinger has argued for an approach to admissibility of expert witnesses based upon a taxonomy grounded in the function of their testimony in the case as noted earlier.²⁶ I find great value in his approach. Beyond his approach, I find quite insightful his observation that “the notion of expertise as currently approached is in much the same position as the idea of judicial notice before Kenneth Culp Davis.”²⁷ For those not steeped in evidence analysis, the core of the Advisory Committee Note for Rule 201 of the Federal Rules of Evidence on judicial notice of adjudicative facts is grounded in terminology and distinctions developed by Professor Davis.²⁸ When I read that commentary, I continue to have some questions about, and some disagreements with, a few of Davis’s points. I am left, however, with a relatively clear sense

25. I use the term “ultimately” with respect to the acquittal because the story of this case is relatively complicated. An initial trial with this expertise and unrelated “other crimes evidence” resulted in a guilty verdict. The trial court then took the highly unusual action of granting my motion for a new trial based upon prosecutorial misuse of evidence during the closing argument. It also granted my severance motion and confined the “other crimes evidence” to a separate trial. On retrial of the case described in the text, the jury acquitted. The subsequent history of this client showed him to be a very violent and dangerous individual. The question of admissibility of this expertise should generally not be based on whether in some larger sense justice was served. If this were the case, one might question admission. Nothing that I saw in that case or subsequently, however, ever suggested to me that my client was anything other than a normal individual with a dominant right hand. Thus, I do believe that truth on the particular issue involved--handedness--was served by the expert’s testimony.

26. See Risinger, *supra* note 14, at 509 (“The only classification commonly attempted is to distinguish between scientific and non-scientific expertise, and that attempt has not been wholly coherent or successful.”).

27. *Id.* at 508.

28. See generally FED. R. EVID. 201 advisory committee’s note (discussing commentary from Professor Davis).

of what the rule is meant to cover because of the clarity and authoritativeness of his system of classification. I believe a quite different system for judicial notice might be defensible, but that thought is beside the point. I, and more importantly courts, have been given explicit and apparently definitive guidance.

I agree with Professor Risinger that a taxonomy of expertise as it relates to the validation necessary for admissibility is logically appropriate. I also agree that we are in a situation that lacks both such a taxonomy and a commentary that points toward a choice of an organizing language or set of values like Davis provided to judicial notice.

Risinger sensibly divides experts who are educators or summarizational experts from those who translate data through their expertise into opinions (“translational” experts).²⁹ He further divides summarizational experts who base their education on personal experience from those who derive their knowledge from secondary sources, particularly scholarly sources.³⁰ He divides “translational” experts who employ subjective systems of discrimination (clinical or black box experts) from those who rest their opinions on objective indicators.³¹ His system also divides those who developed their expertise separately from and before litigation from those who develop their expertise for litigation purposes.³² Each of these distinctions is the basis for differing levels of justification, which he believes is supported by the Court’s mandate to judges in *Kumho Tire*. He argues:

[I]t must be remembered that while *Kumho Tire* requires the judge to apply a proper standard of threshold dependability to all proffered expertise . . . , it does not say that exactly the same threshold standard is applicable to every kind of expert evidence in every kind of case. Rather, it appears more consistent with the opinion’s emphasis on flexibility to conclude that proffered evidence must be shown to be sufficiently reliable for the task at hand, given the jury’s role and capacities, and the nature of the case.³³

Under Risinger’s taxonomy, the thought experiment discussed next in this essay is easily admissible as an educational expert based on experience, and the flexible receipt of expertise that I encountered pre-*Daubert* would not change. Admission of the current handedness expert, however, is far more problematic. She is an expert relying on subjective or black box determinations and has no overall track record—either individually or that can be ascribed to her field in

29. See Risinger, *supra* note 14, at 511-26 (identifying types of experts).

30. See *id.* at 515-18 (stating that “every day” and “academic” experts “defin[e] two poles on a continuum of ease of jury evaluation”).

31. See *id.* at 521-23 (describing distinctions within translational system).

32. See *id.* at 515 (identifying “two important time variables for when secondary source information might be acquired”). For a further discussion of some of the distinctions between different origins of expert testimony (commissioned or freelance), the utility of summarization expertise and varying uses of expert evidence, see Richard Lempert, “Between the Cup and the Lip”: *Social Science Influences on Law and Policy*, 10 LAW & POL’Y 167 (1988).

33. Risinger, *supra* note 14, at 534.

general—and no basis to distinguish right answers, which are clearly the claim of the expert, from wrong answers.³⁴ The admissibility determination would be far easier under Risinger's system if the expert were to stop short of giving an opinion and instead educate the jury, using her specific test results, on how one would make the distinction between right- and left-handedness.³⁵

I am strongly attracted to the distinctions Risinger makes. My principal protest to him is that his interpretation of the implications of *Kumho Tire* for varying degrees of justification based on a system resembling his are not stated in the opinion, nor are they emerging from subsequent cases. My protest to Caudill and LaRue is that some type of accepted taxonomy would seem virtually required if a reasonably workable system for dividing admissible from inadmissible experts is to be developed without resort to unfounded optimism regarding the capacities of lawyers and judges.

If I were allowed to develop a taxonomy of expertise for the Court, it would also recognize a division of justification based on the accessibility of the expertise to the common understanding of the jury. The level of required validation would be reduced as the expertise approached matters the juror could readily comprehend from their personal experiences. All experts are, to use Caudill and LaRue's metaphor, given a wand—a special license regarding their testimony—but some wands appear to possess powers that are more mysterious than others.

I believe that the handedness expert in the Byrd case added value when she gave her opinion on handedness and the degree of difference between use of right and left hands. Thus, restricting her to educating the jury and prohibiting her from giving an opinion may reduce the problem, but such a limitation does not eliminate the full problem because it also reduces the legitimate value of the expert's testimony. That expertise should be received rather than restricted because the jurors can meaningfully interpret and weigh its value. The expert's testimony was simple and her methodology and conclusions were highly accessible. Figuratively, her wand claimed little mystery.³⁶

34. *See id.* at 522-23 (discussing personal subjective translational system).

35. I contend that the result would be inferior, however, if this expert were not allowed to draw a conclusion. She has expertise in judging the quality of line drawing, which should be superior to that of jurors. Her expertise has as its basic foundation the theory that handedness affects one's ability to do certain skilled tasks, such as drawing. Because the results of any test could have significant consequences for her patients, erroneous results would give rise to corrective feedback.

We might prefer a better ability to detect deception, but in litigation, which requires answers in real time and with limited cost, her expertise should improve accuracy. The evidence might be excluded if her expertise seemed opportunistically acquired (developed for litigation) or if it operated contrary to well-established general principles. Neither objection, however, is applicable in this case. Moreover, as argued in the text below, any weakness in her ability to detect deception is fully comprehensible to the jury, which should impose the appropriate discount to her testimony. In these circumstances, I contend that the value of the expert's statement of opinion should prevail over the argument to restrict her testimony to simply educating the jury on how its members may evaluate the defendant's handedness on the basis of the drawings available for their review.

36. Admittedly, at some point the jury's ability to evaluate fully the evidence means

I contend that my distinction is a reasonable one. I must also acknowledge that the type of argument I am making was presented by an amicus brief in *Kumho Tire* and arguably implicitly rejected there.³⁷

The Advisory Committee has not established the type of sophisticated taxonomy that Risinger proposes under Rule 702. Instead, the Advisory Committee adopted a different division for another purpose in the Note to the 2000 amendment to Federal Evidence Rule 701. This division may be seen as providing some indirect support for the general distinction I suggest, and it could provide a modest platform from which to develop a more sophisticated taxonomy for expertise to be scrutinized under Rule 702.

In the Note to the revision of Rule 701, the Committee separates some accessible expertise from other expertise, terming at least some of the accessible expertise to be lay opinion, which is based on particularized rather than specialized knowledge that produces expert opinion. It recognizes that parties have two reasons to want to introduce opinion evidence under the category of lay opinion rather than acknowledging that they are using expert opinion. First, if the opinion is treated as lay opinion, a party can avoid the reliability requirements imposed on scientific, technical or other specialized knowledge.³⁸ Second, lay opinion can also evade discovery requirements imposed in criminal cases on expertise.³⁹ The rule's provisions are designed to prevent these evasions, and its justifications are understandable and laudable.

I thus understand the goals of the Rule 701 commentary, and find no fault there. I do find the description of the distinction somewhat inadequate in failing to carefully explain it, which I will attempt to explicate more clearly as it might

that no expertise should be allowed because it is not sufficiently helpful to the jury. See Robert P. Mosteller, *Syndromes and Politics in Criminal Trials and Evidence Law*, 46 DUKE L.J. 461, 472-73 (1996) (discussing corrective function of evidence). I do not believe such an argument, however, would be sound as to the handedness expert. Courts frequently, but I believe often erroneously, exclude eyewitness experts on a similar basis. See *id.* at 494-95 (noting that one factor leading to exclusion "is the perceived impact of the [expert] testimony [on eyewitness identification] on outcomes"). Eyewitness experts are least needed when their testimony tracks common understandings, and should be most easily admitted when it corrects commonly held misunderstandings. See *id.* at 505-06 (stating that expert testimony should be admitted "when [the] circumstances support special treatment"). The handedness expert is treating an area accessible to the jury; however, she is providing a detailed analysis of the application of that common understanding, rather than a summary of the accepted understanding—which is the situation where eyewitness experts are appropriately excluded as unhelpful.

37. See generally Brief for Neil Vidmar et al. as Amici Curiae Supporting Respondents, *Kumho Tire v. Carmichael*, 562 U.S. 137 (1999) (No. 97-1709) (arguing that this was not situation where jurors were unable to competently evaluate competing claims of two parties' experts). Although the Court decided the case against the respondents on whose behalf the brief was filed, the Court did not decide the case on the basis of juror incompetence. See *Kumho Tire*, 562 U.S. at 152-59 (finding expert's testimony unreliable). However, as to my argument, I must acknowledge that the Court did not give any indication that a distinction based on the accessibility of the expertise to juror understanding should be the basis for a differing standard of judging the validity of technical expertise. See *id.* (same).

38. See FED. R. EVID. 701 advisory committee's note (noting elimination of Rule 702 reliability requirements).

39. See *id.* (explaining that lay witness testimony is not subject to disclosure requirements).

relate to my argument for taxonomy. One example given in the Note for particularized knowledge that is to be treated as a lay opinion is that of the officer of a business testifies as to the business's value or projected profits, which the Note states is based on particularized knowledge of the person of that specific business rather than on expertise under Rule 702.⁴⁰ That is understandable and perhaps defensible.

The next example demonstrates that heavy amphetamine users are properly permitted to testify that a substance was amphetamine.⁴¹ This is also treated as lay opinion rather than expertise.⁴² My sense is that this is the ultimate "black box" or subjective expert who should be subject to some type of reliability testing. It may be treated as lay opinion, however, presumably because any validation or reliability requirement would be fatal to admissibility, which is presumably not the intent of the change in Rule 701. Now I reach the example that I find problematic. It is of the law enforcement agent testifying "on the basis of extensive experience that the defendant was using code words to refer to drug quantities and prices," who would be subject to "the rules on experts."⁴³

The Note explains that its taxonomy between lay and expert witness testimony rests on the distinction that "lay testimony 'results from a process of reasoning familiar in everyday life,' while expert testimony 'results from a process of reasoning which can be mastered only by specialists in the field.'"⁴⁴ There is nothing particularly complex, however, about decoding the drug trade terminology of criminals other than experience. It can certainly be mastered by the criminals themselves because of their personal knowledge of their own trade, a situation similar to that of the business owner/lay witness. The decoding, therefore, can be mastered by persons other than outside "specialists" interested in the field using their expert process of reasoning. The Note is consistent in that it would apparently make this expert/lay witness distinction apply to criminals as well. It states that if the same amphetamine user "were to describe the intri-

40. *See id.* (finding "no abuse of discretion in permitting plaintiff's owner to give lay opinion testimony as to damages, as it was based on his knowledge and participation in day-to-day affairs of business" (citing *Lightning Lube, Inc. v. Witco Corp.*, 4 F.3d 1153 (3d Cir. 1993))). This example may conflict with Risinger's treatment of the shoe business witness as a translational expert, but I assume that Risinger is speaking of a witness who does generalize outside of particular experience, which the Note would seem to say constitutes expert rather than lay opinion. *See* Risinger, *supra* note 14, at 511-12 (providing example of testimony involving expertise that appears functionally similar to ordinary fact testimony).

41. *See* FED. R. EVID. 701 advisory committee's note (noting that "courts have permitted lay witnesses to testify that a substance appeared to be a narcotic, so long as a foundation of familiarity with the substance is established." (citing *United States v. Westbrook*, 896 F.2d 330 (8th Cir. 1990))). The *Westbrook* court held that "witnesses who were heavy amphetamine users were properly permitted to testify that a substance was amphetamine; but it was error to permit another witness to make such an identification where she had no experience with amphetamines." *See Westbrook*, 896 F.2d 330.

42. *See* FED. R. EVID. 701 (stating that testimony was based on personal, rather than specialized, knowledge).

43. *See id.* (referring to *United States v. Figueroa-Lopez*, 125 F.3d 1241, 1246 (9th Cir. 1997) (stating that agents testified that use of code words was "consistent with an *experienced* drug trafficker") (emphasis in original)).

44. *Id.* (citing *State v. Brown*, 836 S.W.2d 530, 549 (Tenn. 1992)).

cate workings of a narcotic distribution network, then the witness would have to qualify as an expert under Rule 702.”⁴⁵

The latter is a skill based on experience, but it does involve some measure of intellectual exercise and arguably some generalization outside of personal experience. Perhaps it is this intellectual component that makes it different than the skill of the amphetamine user in presumably judging its taste and the effects of the substance on the body.⁴⁶

The distinction between the lay opinion designation being given to the amphetamine user appears in part based on the witness’s extremely accessible reasoning and the expertise label given to the work of law enforcement officers who master drug codes from outside the crime organization based on only slightly less accessible intellectual skill. Such a distinction could provide precedent for more broadly treating expertise differently based on its accessibility to the reasoning process of jurors. Presumably the lay witness is allowed to testify that a substance was amphetamine without any validation whatsoever because the jury can freely discount it. Even though reliability requirements are imposed on police officers testifying to the meaning of drug trade code words, presumably the reliability level demanded will be quite low in terms of validation studies and error rates. I make this assumption because the Note does not suggest that such expertise is to be excluded if the reliability requirements of Rule 702 are imposed on such expertise, and I believe no systematic evidence exists to prove such reliability.

I hope this small bit of official taxonomy in the Note to Rule 701 will be used as the model for development of the type of taxonomy needed to make easily workable judgments regarding levels of reliability required for admission of different types of expertise under Rule 702 of the type Kenneth Culp Davis provided for judicial notice.⁴⁷ I am, however, not optimistic.

B. *Experts in Rastafarian Dialect and Culture and Their Impact on English Language Comprehension*

The second case and thought experiment involves a native of Jamaica, who was a Rastafarian.⁴⁸ He was charged with felony murder in the killing of a taxi driver during a robbery attempt. He had signed a lengthy confession that included a host of details about the crime, only a small portion of which was un-

45. *Id.*

46. *See Westbrook*, 896 F.2d at 335 (stating that witnesses testified as to effect of drug in identifying it as amphetamine).

47. *See generally* FED. R. EVID. 701. Admittedly, the taxonomy in the Note to Rule 701 has a different purpose and could even be interpreted as inconsistent with my suggestion. It could be read that there is a great divide between lay and expert testimony based on precisely the type of distinction--accessibility or personal experience--and that all expertise is to be judged on a very different basis that requires a clear showing of substantial reliability regardless of its greater accessibility to jurors. As a result, the Rule 701 taxonomy might, instead of supporting my broader taxonomy, serve as a stumbling block to other broader efforts.

48. *See Bliss v. United States*, 445 A.2d 625, 627-29 (D.C. 1982) (reciting facts of case). My client’s name was Peter Bliss.

equivocally incriminating.

The taxi driver was seen picking up two young black men in downtown Washington, D.C. in the early morning hours of June 30, 1978. Some time later in another part of the city, the cab careened down the street while sideswiping cars, eventually coming to a stop against a tree. A police officer who lived nearby was awakened by gunshots. She testified that two young black men stood outside the car. One of those men, Peter Bliss, later became my client. Both of Bliss's legs were injured—he had been shot in one and the other was broken. Not surprisingly given his condition, he did not run as the police officer approached. The other man, who was the apparent gunman, was quite mobile. This man fled the scene and was never apprehended. The cab driver, dead from a gun shot wound, lay in the back seat of the cab.

Bliss testified at trial that he was unaware of the robbery attempt until his acquaintance of a few days pulled out a weapon and tried to rob the cab driver. He testified that his leg was broken as he attempted to jump from the car as it careened down the street and that he was wounded in the struggle between the other passenger (the acknowledged shooter) and the cab driver. His testimony at trial was similar to the first statement he gave to a homicide detective after being treated for his injuries.⁴⁹ Bliss's written statement, however, contained a critically different version of the events, although the differences were confined to only a couple sentences in which he contradicted his initial statement by acknowledging that he was aware of the robbery plan when he entered the cab.

Bliss testified that he had not made that incriminating statement to the detective and that he had not understood this part of the statement to be contained in the written form of his statement, which he had signed, when it was read to him. His claim of lack of attention to detail, which was clearly disputable, was made more plausible by a physician who testified that my client was in considerable pain during the interrogation because the type of break he suffered was quite painful. That expert's testimony fell within the broad range of accepted expertise for medical doctors, was not challenged, and is not of interest to this discussion.

The part that I considered somewhat innovative was the testimony from an expert about the Rastafarian community both in Jamaica and in the United States, including the community's modified form of English and its insular quality. All of this went to the plausibility of Bliss's claim that he might not have understood the critical details in the written confession because it was in "standard" English.

The expert taught a course at Howard University centering in part on the Rastafarian culture. She had no knowledge of my client and no allegiance to any element of his defense before my contact. Although the expert did not render a direct opinion on Bliss's understanding of what was presented to him because she could not do so, she did provide background and context in an effort to educate the jury.

49. See *id.* at 627 (describing varying accounts of events from suspect). As the opinion notes, according to police officers' testimony, Bliss gave other versions of the incident. *Id.*

My memory on this point is somewhat hazy, but I believe the prosecutor presented little more than a pro forma objection to the expert's testimony. In any case, the trial judge admitted the testimony and the prosecutor cross-examined the expert, pointing out its obvious weaknesses. No *Daubert*-type inquiry occurred, and the expert's methodology was not challenged. A modest witness fee was paid because preparation time was limited. The jury ultimately returned a conviction, although it is interesting that the juror who held out for acquittal the longest was a recent immigrant from Italy for whom English was a second language that he still spoke imperfectly.

The thought experiment involved in these two cases concerns what has changed with the advent and development of the *Daubert* Trilogy. It may be that little has changed in the admissibility of experts of the type I discuss here. It may be that courts draw a clear distinction of the type that Risinger proposes between experts who give only background to educate the jury and those who render opinions. It may be that distinctions are also recognized based on whether summarization experts depend on experience rather than summarized academic material, and that accessibility of the expertise to juror understanding is a recognized reason to receive subjective expertise that results in opinions on facts potentially important to the trial outcome. I have not, however, seen a clear pattern or widely accepted intellectual construct recognizing those reasonable distinctions. I am therefore not confident that admissibility of either expert described above would be as easily forthcoming after *Daubert* as it was in the earlier period of my legal practice.

Moreover, I worry that an expert like my handedness expert could not be admitted because her field lacks the validation necessary, and for the limited purpose in my litigation, I could not possibly fund an individualized validation. This specific case-related concern leads to a more generalized problem. Even, if upon careful presentation of supporting documentation, *Daubert* would permit admission of such experts, the increased effort necessary to gain admission of the expert testimony would increase costs and have the ultimate effect in some cases of denying admission. A system that does no more than run up litigation costs to document the quality of expertise to trial judges ordered to be vigilant gatekeepers will have some impact on litigants with limited resources; the same limiting impact should operate on judges when ruling on defense motions for the appointment of experts in areas where the decision to provide an expert is not clearly mandated by statutory or constitutional law but within the discretion of the trial judge.

III. THOUGHT EXPERIMENT # 3—DID *KUMHO TIRE* GET IT WRONG? AND IF (ARGUABLY) SO, WHAT DOES THAT SAY ABOUT THE BASIC TEST TO SCREEN GOOD FROM BAD EXPERTISE?

I have the sense that most, but not all, evidence scholars are not bothered at all by the decision in *Kumho Tire Co. v. Carmichael*.⁵⁰ I am not troubled by

50. 526 U.S. 137 (1999).

the decision's principal rulings. These are: (1) "that *Daubert's* general holding—setting forth the trial judge's general 'gatekeeping' obligation—applies not only to testimony based on 'scientific' knowledge, but also to testimony based on 'technical' and 'other specialized' knowledge[;]"⁵¹ and (2) that the trial court has flexibility in deciding how to determine reliability in such expertise, which include, but are not limited to, the reliability factors noted in *Daubert*.⁵² My sense is that something like these two conclusions virtually had to be the starting point for further analysis, and these conclusions are particularly appropriate for technical or specialized knowledge grounded in or derived from scientific principles. I believe these conclusions have virtually universal acceptance.

Kumho Tire involved a tire failure of the rear tire of the Carmichaels' minivan. The right rear tire blew out, causing the driver to lose control and the minivan to roll over. Six of its eight passengers were ejected, and all eight passengers suffered injuries, with one dying from the injuries sustained.⁵³ When I question whether the result in the case was right, it is not the two principal legal holdings described above, but rather whether the expert testimony in the case was really bogus, and whether instead the expert for the Carmichael family was fundamentally (or even arguably) correct in attributing the tire failure to manufacturing or design defect rather than to owner abuse.

Justice Breyer's opinion appears to punch holes in the expert's methodology, and I am not claiming that any of his points are clearly wrong. It appears to me, however, that the expert is more credible, and the process more sensible, than the opinion makes it appear. First, the opinion notes that the plaintiff's expert, Dennis Carlson, Jr., inspected the tire for the first time on the morning of his first deposition and then for only a few hours, basing his initial conclusion on his observations from photographs of the tires.⁵⁴ That is correct, in part. The more complete story, however, is that the plaintiffs originally secured expert George Edwards, who examined the tire carcass. Edwards determined that the tire's failure was caused by a defect in design or manufacture, not the result of abuse. Before Edwards was able to give his deposition, he became too ill to testify and transferred the case to his employee, Carlson. As the Court of Appeals opinion states, after reviewing the file and discussing the case with Edwards, Carlson confirmed Edwards's conclusion.⁵⁵ Carlson was thus relying on more than photographs when he rendered the opinion—he relied also on his boss's earlier examination and opinion in reaching his own opinion.⁵⁶ Reliance

51. *Id.* at 141 (outlining application of *Daubert* standard).

52. *See id.* at 141-42.

53. *See Carmichael v. Samyang Tires, Inc.*, 923 F. Supp. 1514, 1516 (S.D. Ala. 1996).

54. *See id.* at 1519.

55. *See Carmichael v. Samyang Tire, Inc.*, 131 F.3d 1433, 1434 (11th Cir. 1997) (describing expert's method of arriving at conclusion).

56. *See id.* Attorneys for the plaintiff also note that, in addition to the one-hour examination before his first deposition, the testifying expert inspected the tire for three additional hours after that deposition and before he was deposed a second time. *See Brief of Respondents at 9, Kumho Tire Co. v. Carmichael*, No. 97-1709 (U.S. Oct. 19, 1998). The company's attorneys counter that all examinations of the tire were effectively conducted after the fact

upon the work of colleagues and superiors supplemented by one's additional examination, albeit a more limited examination than would have been conducted in the absence of that other work, would seem to be standard practice rather than obviously substandard performance.⁵⁷

The Court does not directly challenge the expert's basic methodology, which appears to be a reasonable process of elimination. Tire separation is either caused by abuse or by defect in design or manufacture. If abuse is not shown, then the conclusion is that a defect exists. Both Edwards and Carlson found insufficient evidence of abuse, resulting in their conclusion that the cause was a defect in manufacture or design. This looks very much like the process of differential diagnosis in many clinical determinations.

Thus, the key question is whether abuse could be accurately eliminated as a cause by the plaintiff's expert's methodology—a visual and tactile inspection of the tire. Some causes of failure are relatively easily excluded, such as whether the separation was caused by the inadequate repair of a puncture.⁵⁸ Unfortunately, the most common source of abuse is termed “overdeflection,” “which consists of underinflating the tire or causing it to carry too much weight, thereby generating heat that can undo the chemical tread/carcass bond[.]”⁵⁹ This cause is apparently more difficult to rule out. Carlson set out four observable physical signs of such abuse and articulated a “rule of thumb” that unless two of the signs were observable, he would exclude overdeflection as a potential cause of failure.⁶⁰

because the expert rendered his opinion based on pictures before he conducted any in-person examination. *See* Reply Brief for Petitioners at 12, *Kumho Tire Co. v. Carmichael*, No. 97-1709 (U.S. Nov. 19, 1998). The company's argument would appear erroneous for independent experts who operate in good faith. In this instance, later-acquired information would be included in the expert's information base because the expert would be assumed to alter his or her opinion if that new information warranted a change. The company's position is apparently based on the assumption that Carlson was not acting as an independent and honest expert.

57. *See* FED. R. EVID. 703. Indeed, under Federal Rule of Evidence 703, experts are explicitly authorized to rely upon the opinions of other experts if such opinions are “reasonably relied” on by those working in the field. *See id.* There is no indication in the briefs or any source I have examined that such reliance by the expert in *Kumho Tire* was not fully in compliance with this sound principle. *See generally* *Kumho Tire v. Carmichael*, 526 U.S. 137 (1999).

58. *See generally* *Kumho Tire*, 526 U.S. at 137. Carlson testified that tire failure caused by an inadequately repaired puncture can be readily determined by visual inspection because the puncture hole will show “obvious signs of ‘polishing’ if the puncture caused the separation.” Brief for Respondent at 7, *Kumho Tire Co. v. Carmichael*, No. 97-1709 (U.S. Oct. 19, 1998). Whether he clearly ruled that out as a cause is somewhat in dispute. Brief for Petitioners at 33, *Kumho Tire Co. v. Carmichael*, No. 97-1709 (U.S. Aug. 25, 1998) (contending that Carlson did not rule out one of two repaired punctures as cause of tire failure but failing to point to any testimony from the *Kumho Tire* expert that visible signs of failure were observed at site of either repaired puncture, which according to Carlson would be apparent if that was cause of separation).

59. *Kumho Tire*, 526 U.S. at 144 (defining term “overdeflection”).

60. *See id.* (describing methods of reaching conclusions); *see also* Brief for Respondent at 7, *Kumho Tire Co. v. Carmichael*, No. 97-1709 (U.S. Oct. 19, 1998). By contrast, *Kumho Tire's* expert testified that he found “unmistakable evidence,” based on his observations, that

The Court acknowledged that tire abuse may often be identified by an examination of the type Carlson performed if conducted by a qualified expert.⁶¹ There did not seem to be a disagreement as to the fact that visual/physical examination could identify abuse as recognized by the Court. Beyond that point, however, agreement was more difficult to find. The two sides sparred over whether their experts used the same methodology. In support of its position that Carlson's methodology was sound, the Carmichaels' lawyers claimed that experts from both sides performed similar examinations, but Kumho Tire's lawyers claimed they did not. The two major points of disagreement between Carlson's methodology and Kumho Tire's methodology seemed to be: (1) whether a process of elimination was appropriate; and (2) whether the use of a two-factor "rule of thumb" was sound.⁶²

For the Court, however, it came down to doubts about "the use of Carlson's two-factor test and his related use of visual/tactile inspection to draw conclusions on the basis of what seemed small observational differences."⁶³ The Court found that: (1) no evidence that other experts used this two-factor test; (2) no article validated this approach; and (3) in an unusual point, no one had *argued* Carlson would have reported a defect to his earlier tire industry employer on identical grounds to those on which he rested his conclusion.⁶⁴ The Court acknowledged that Carlson claimed that his method was accurate, but it dismissed his claim because it was supported "only by the *ipse dixit* of the expert."⁶⁵

Justice Breyer's criticism of the expert testimony is rhetorically powerful, but as Professor Giannelli has argued, it is "something one would expect during cross-examination at trial, not in a Supreme Court opinion."⁶⁶ Moreover, I am not at all certain how the Supreme Court can confidently separate the "wheat from the chaff" in an area both where technical expertise is involved and where the parties, backed by qualified experts, have credible arguments on the type of points they make.

Justice Breyer's strongest criticism is that Carlson's two-factor test is not adequately supported. Whether that means that Carlson was using a bogus technique or whether he simply articulated his methodology in a different way

the tire failed due to overdeflected operation. See Reply Brief for Petitioners at 12, *Kumho Tire Co. v. Carmichael*, No. 97-1709 (U.S. Nov. 19, 1998).

61. See *Kumho Tire*, 526 U.S. at 156.

62. See Brief for Respondents at 40, *Kumho Tire Co. v. Carmichael*, No. 97-1709 (U.S. Oct. 19, 1998) (claiming that both of Carmichael's experts and Kumho Tire's expert used same methodology); Reply Brief for Petitioners at 11-13, *Kumho Tire Co. v. Carmichael*, No. 97-1709 (U.S. Nov. 19, 1998) (disputing similarity of methodology generally and specifically as to two points noted in text).

63. *Kumho Tire*, 526 U.S. at 157.

64. The failure to make an argument seems most significant if the court or the other party asks whether the argument can be made. I cannot find that the invitation to make that argument was issued. It is less significant, but still noteworthy, if a relatively obvious argument to make. That such an argument is one to make is certainly not obvious.

65. *Kumho Tire*, 526 U.S. at 157 (internal quotation marks omitted).

66. See Giannelli, *supra* note 3, at 196.

from other experts is both important and, I believe, entirely unresolved. Carlson clearly failed to use one of the recognized proxies for translational expertise to help negate a label of subjectivity. That proxy is the use of a test common among other technicians in the field that employs standard terminology that ideally leads to a uniform classification of observations and to a determinate result.⁶⁷ The problem with that proxy, however, is that it is only an indirect measure of validity. Systems that may be replicated are, in scientific terminology, reliable in that the test produces the same result upon repetition, but they may be repeatedly wrong. Moreover, a technician may be correct even though the technician does not use the trade's terminology.⁶⁸

Carlson clearly performed poorly on the proxy test and therefore, if validation is required for his results, some alternative showing would be required that was not apparent in the record. My point here is that the failures identified by the Court do not show that the outcome of Carlson's examination was in error, but rather that he did not satisfy tests that, unfortunately, were only articulated to satisfy a Supreme Court that at that time was arguably too skeptically inclined to the result Carlson reached.

At trial, the weaknesses that Justice Breyer, the defense counsel and the defense experts pointed out could have been tested through the adversarial process. It is unclear to me why the appropriate way to resolve contested areas of expertise, where the methodology is arguably sound and where they jury can be reasonably expected to evaluate the evidence, is not through admission and the adversary process. Indeed, the Court stated simply that the trial court's initial doubts regarding the reliability of the methodology were reasonable as was the trial court's ultimate decision to exclude the evidence.⁶⁹ Reasonable does not mean required and thus the decision suggests that a contrary conclusion could also have been reasonable. In the situation where the decision to exclude a witness is simultaneously a decision on the merits of the case that ends the litiga-

67. See Risinger, *supra* note 14, at 522-23. Risinger argues that a good indirect method of validation is achieved when the field has a demonstrated high rate of accuracy and individual examiners follow a common taxonomy that uniformly identifies relevant observations that produce definitive results. See *id.*

68. See *id.* at 524. Risinger uses astrology, which will (between practitioners) result frequently in similar readings, to illustrate that reliability in coding stimuli and producing outcomes does not equal validity. See *id.* at 524 n.28. He notes that an individual practitioner who does not use standard terminology may be highly accurate for reasons that cannot be objectively defined but contends that such a practitioner might properly be required to undergo individual proficiency testing. See *id.* at 524.

69. See *Kumho Tire*, 526 U.S. at 153. Another reason to be troubled by the result in *Kumho Tire* is the critical deference the appellate courts are required to give to the determination of the trial court. The trial court appeared committed to an outcome regardless of reasoning. The initial ruling was indefensible in that it excluded the expertise based on a wooden application of *Daubert's* four factors, which given the type of expertise involved were inapplicable. See *Carmichael v. Samyang Tires, Inc.*, 923 F. Supp. 1514, 1520-22 (S.D. Ala. 1996) (describing application of *Daubert* to present case). As the Supreme Court notes, the trial court did broaden the basis of its exclusion on *Carmichael's* motion to reconsider. See *Kumho Tire*, 526 U.S. at 158. Nevertheless, this does not erase the sense of the initial opinion—that a commitment to a result rather than failures in the expert's methodology drove the trial court's decision, which nevertheless receives a deferential review on appeal.

tion, the reasonable decision of the trial judge that could have gone either way is more important than most evidentiary rulings comfortably left to the judge. It is a decision that implicates the Seventh Amendment right to a trial by jury, not a trial by the court.⁷⁰ That formulation of the objection suggests a broader challenge to parts of the Court's approach in *Daubert* and its progeny, which I think is worthy of serious concern. I, however, want to leave those larger questions to one side in this more limited examination of the appropriate methods for determining the admissibility of expert opinions.

Instead, I would like to move to the thought experiment as it bears on whether *Kumho Tire* reached the wrong result. Some readers may be modestly persuaded by my arguments concerning the uncertainty of Breyer's points, while others will be unmoved. I would like to add some information and perhaps generate a new mindset about this case.

In determining whether to admit or exclude expert testimony, judges must be affected in their conclusions, because they are human, by their appreciation of whether the expert is rendering a sensible judgment—whether the expert got the outcome roughly right. Indeed, the Court in *General Electric Co. v. Joiner*⁷¹ recognized the validity of such a determination, at least when starkly presented. It stated:

[Respondent] claims that because the District Court's disagreement was with the conclusion that the experts drew from the studies, the District Court committed legal error and was properly reversed by the Court of Appeals. But conclusions and methodology are not entirely distinct from one another. Trained experts commonly extrapolate from existing data. But nothing in either *Daubert* or the Federal Rules of Evidence requires a district court to admit opinion evidence that is connected to existing data only by the *ipse dixit* of the expert. A court may conclude that there is simply too great an analytical gap between the data and the opinion proffered.⁷²

One might imagine that those who supported exclusion of the plaintiff's expert doubted the accuracy of his opinion that the tire separation was the result of a manufacturing or design defect rather than abuse. Was their thinking not along the lines that: (1) tires are generally safe and reliable; (2) tire failures are isolated events; and (3) the failure is likely the result of owner abuse or neglect? Accordingly, the haphazard testimony of the hired-gun expert was likely wrong on the merits, likely bogus as to methodology, and properly excluded by the trial court.

I suggest that the mindset would have been different if the case had come

70. As I will discuss in my fourth thought experiment, in rejecting what it saw as an overly-rigid and exclusionary federal *Daubert* approach, the North Carolina Supreme Court in *Howerton* saw *Daubert* threatening the state constitutional right to jury trial. See *Howerton v. Arai Helmet*, 597 S.E.2d 674, 691-92 (N.C. 2004).

71. 522 U.S. 136 (1997).

72. *Id.* at 146.

to court just a couple years later, in December 2000 rather than December 1998.⁷³ In February 2000, a national story developed on tire separation, roll-over accidents and deaths involving Firestone tires, which were attributed to defects in manufacture and design. As a result of the publicity, the National Highway Transportation Safety Administration (NHTSA) opened an inquiry, and Firestone instituted a voluntary recall of some of the tires involved. Congress held hearings, and with breakneck speed, prior to the November 2000 elections, enacted the Transportation Recall Enhancement, Accountability, and Documentation Act. Ford Motor Company, manufacturer of the Explorer on which many of the tires that failed were mounted, unhappy with the limited scope of Firestone's recall, instituted its own recall. NHTSA reported that through October 4, 2001, 271 people had died and over 700 people had been injured in accidents involving Firestone Wilderness AT and ATX tires.⁷⁴

Like the accident in *Kumho Tire*, many of the most serious Firestone tire accidents involved tire separation of a rear tire that caused loss of driver control and resulting in vehicle rollover.⁷⁵ There are clear differences between these accidents, leading to the recall, and the accident in *Kumho Tire*, chief among them differences in the tires themselves.⁷⁶ There are, however, similarities as well.⁷⁷ Perhaps just as significant are similarities in litigation issues between

73. I first heard this argument about Firestone tire failure from other evidence professors and found it immediately persuasive. Recently, Professor Giannelli made it in his essay in EVIDENCE STORIES: "Perhaps, if the massive Firestone tire recall had occurred before *Kumho* was decided, the Court might have adopted a less intrusive role for judges." Giannelli, *supra* note 3, at 201. Professor Giannelli attributes the point, which he found persuasive, to his editor, Professor Rick Lempert. I am indebted to both for both the specific point and for more general assistance.

74. See Kevin M. McDonald, *Don't Tread on Me: Faster than a Tire Blowout, Congress Passes Wide-Sweeping Legislation that Treads on the Thirty-Five Year Old Motor Vehicle Safety Act*, 49 BUFF. L. REV. 1163, 1174 (2001) (reporting number of dead and injured from faulty tires).

75. See *id.* at 1174; see also Robert E. Ammons & Vuk Stevan Vujasinovic, *Tires that Kill: The Firestone Tire Recall and its Surrounding Events Should Bolster Products Claims Involving Tread Separation*, 36 TRIAL 52, 52, 58-59 (Nov. 2000).

76. See Ammons & Vujasinovic, *supra* note 75, at 58-59. The tires at issue in the initial recall were of a different type—AT and ATX—that were manufactured by a different company, and that were chiefly mounted on Ford Explorer SUVs. See *id.* A government report examining the Firestone/Bridgestone tire failures concluded that the failure rate for these tires was far worse than for other similar tires. See Engineering Analysis Rep. and Initial Decision Regarding EA00-023: Firestone Wilderness AT Tires 29 (U.S. Dep't of Transp., Nat'l Highway Traffic Safety Admin.)(2001). Indeed, installed on approximately the same number of Ford Explorers, a comparable tire manufactured by Goodyear had only one tread separation claim as compared with almost five hundred for Firestone tires. See *id.* at 14. On the other hand, the data shows that the NHTSA Office of Defects investigation had received numerous tire separation claims beyond those associated with recalled or investigated Firestone tires. Its March 2001 database contained 6,185 total tire separation complaints, with 2,855 associated with these Firestone tires. See *id.* at Figure 2. The report shows that tread separation was far more likely with Firestone tires, but it also shows that this potentially catastrophic event was not rare for other tires. See *id.*

77. See generally *Kumho Tire v. Carmichael*, 526 U.S. 137 (1999). Like many of the Firestone accidents, the *Kumho Tire* accident, which occurred in the summer, was located in a "warm weather" state, the tire failed due to separation, and it was a rear tire that failed. See

these apparently meritorious Firestone tire claims and those in *Kumho Tire*. The major issues raised in defense—primarily abuse either as a result of low inflation of the tires or overloading⁷⁸—coupled with the need for expert testimony to rule out or to establish alternative causes of the failure in order to establish that it resulted from a manufacturing or design defect. The litigation issues between the Firestone cases, which caused a national outrage, and the Carmichaels' accident, which the Court seemed to see as without merit (based on worthless (and improbable) expertise), strongly overlap.⁷⁹

I would suggest that in the aftermath of the numerous deaths and furor over what was regarded as widespread design and manufacturing defects with Firestone tires, reflexive legislative action and the massive recalls, judges would have been more cautious about labeling the expert evidence bogus.⁸⁰ They might have been more hesitant to exclude expert testimony based on skepticism, directly or indirectly articulated, of the conclusion that the cause of the Carmichaels' accident was not owner abuse and therefore was plausibly the responsibility of the manufacturer. Otherwise, many accidents that apparently had a common cause, the failure of Firestone tires, might be unprovable.

Obviously, I cannot say with confidence that Justice Breyer got it wrong.⁸¹ What I can say confidently is that he was not sufficiently modest in his claims

also McDonald, *supra* note 74, at 1174; Ammons & Vujasinovic, *supra* note 75, at 52.

78. See McDonald, *supra* note 74, at 1172 n.33.

79. See Ammons & Vujasinovic, *supra* note 75, at 59.

80. See Nancy Pennington & Reid Hastie, *Cognitive Theory of Juror Decision Making: The Story Model*, 13 CARDOZO L. REV. 519, 520 (1991). Professors Pennington and Hastie developed an influential theory of jury decision making which argues that "a central cognitive process in juror decision making is *story construction*." See *id.* (emphasis in original). Jurors, they contend, decide cases by choosing between competing narratives or "stories" by selecting the one that is the "best," which they believe is based on several factors that include the story's plausibility. *Id.* at 527-28. One way to look at what happened in *Kumho Tire* is that judges, who no doubt use similar thought processes in their human reasoning, lacked the alternative, plausible story. The competing story lines could have been (1) the "junk science" narrative (bad science hurting business) versus (2) the Firestone narrative (poorly designed and/or manufactured tires causing injury and death). The problem, however, was that at the time *Kumho Tire* was decided, the latter story had not been written yet and was likely seen as implausible.

81. A general point of my argument concerns the basic question of how courts should decide the admissibility of expertise when that expertise is not as well developed as they might want it to be and cannot approach a guarantee of certainty. In an imperfect world of limited resources where science indicates answers change with new knowledge, how much we should demand from science before we permit a case to be based on expertise is a difficult question. Indeed, it is the question that the *Daubert* system attempts to answer. I suggest that at least the civil litigation system should not purport to guarantee error free results nor should it systematically decide cases in favor of the defense because the scientific evidence is uncertain or arguably insufficient. Rather, cases should often be decided on the best evidence available, even if that best evidence is not without its uncertainties.

Viewing the *Kumho Tire* decision in light of the Firestone tire failures and recall demonstrates, I believe that courts are influenced by more than just the quality of the scientific or technical knowledge. They are also influenced by their general sense of correct results. As noted below, judicial modesty should flow from such an observation as well as moderation in rigidity of the system that determines admissibility of expertise. Imperfect information may also be considered adequate where the expertise at issue is fully comprehensible to jurors.

of knowing the correct result. Admittedly, the testimony of the plaintiff's expert was an inviting target. It was largely, if not entirely, subjective, and it could not demonstrate even a superficially common nomenclature for the specific test used by the expert to show overdeflection.

Many areas of expertise, including those routinely admitted (e.g., fingerprint comparison), are fundamentally subjective despite their trappings of objectivity.⁸² They have, however, some basis to claim generally accurate results, whether or not validity can be transferred from them to specific, sometimes problematic cases. Individual examiners upon whose skill individual case results depend get the benefit of background levels of proficiency for the field.⁸³ The later events of the Firestone tire failures, coupled with publicity regarding the scope of the carnage, would likely close the gap somewhat between the expert in *Kumho Tire* and those largely subjective judgments in fields that have a history of wide public acceptance. Additionally, the result in *Kumho Tire* has probably chastened experts to be careful in trying to establish minimal levels of superficial objectivity, by such methods as parroting a common language that suggests an established methodology that is often treated as a proxy for validity. The Carmichaels' expert lacked the benefit of either factor when he testified. One may wonder if the Justices' baseline expectation had been different regarding the likelihood of tire failures caused by a defect in design or manufacturer whether the expert's failure to apply a broadly shared terminology and/or methodology would have been considered to be so critical.

I think it is both logical and correct to be bothered by the fact that our system for policing the admission of expert testimony embodied such confidence that a Supreme Court justice could act as if he could sort through the claims of the parties to reach a definite result. Arguably, he might have reacted differently only a few years later as a result of watching the evening news reports about the avalanche of tire failures broadly attributed to manufacturing and design defect. It is unclear to me why *Kumho Tire* was not a case for the jury to evaluate, choosing between experts who were battling in a grey area of subjective judgments, some of which are right and some of which are wrong.⁸⁴ I have trouble accepting that the expert testimony was so clearly wrong as a matter of our values and laws that it should not have been presented to a jury. *Kumho Tire* was a case that, at a minimum, the Supreme Court should have remanded

82. See generally Paul C. Giannelli, *Daubert Challenges to Fingerprints*, 42 No. 5 CRIM. L. BULL. 5, 627 (2006) (describing identification system that appears objective in terms of points of similarity and dissimilarity but recognizing that determination is at its base subjective and that methodology is really judgment of examiner).

83. See Risinger, *supra* note 14, at 522-23. Professor Risinger notes that in many situations what one can hope to find is a generally proficient group and individual practitioners who follow a well-developed methodology. See *id.* That pattern does not directly show but gives some basis to expect accuracy in the particular case. See *id.*

84. See generally Brief of Amici Curiae of Neil Vidmar et al. in Support of Respondents, *Kumho Tire Co. v. Carmichael*, No. 97-1709 (U.S. Oct. 19, 1998). One of the numerous amicus briefs filed in the case, this one by a group of law professors argued that whatever the merits of the expertise, this was not a situation where jurors were unable to evaluate competently the competing claims of the two parties' experts. See *id.*

to the lower court for additional factual inquiry to determine whether abuse of discretion may have occurred—why the majority chose not to do so is perhaps the least defensible part of the Court’s consideration of the case.⁸⁵

Regardless, the Court’s decision mandated exclusion. It was an important step to transforming *Daubert* into a standard of unforgiving certainty and rigor. It is, in my judgment, a reminder of the importance of context and timing. It is also an argument for judicial modesty in evaluating expert evidence,⁸⁶ even for Supreme Court justices, who could not take into account the Firestone tire thought experiment.

IV. THOUGHT EXPERIMENT NO. 4—BUSINESS ETHICS EXPERTS IN A CHANGING LEGAL ENVIRONMENT

As noted in the Introduction, my paper is largely about a group of thought experiments involving *Daubert* and its progeny, which I hope are valuable. I know that the particular experience in this fourth thought experiment taught me a great deal—indeed, its emotional power may have affected me too much. Due to a coincidence between the timing of my consulting work during the summer of 2003 and a North Carolina appellate decision embracing *Daubert*, I experienced what it is like to have an expert evidence issue move suddenly from a jurisdiction with a more lenient admissibility standard to a *Daubert* jurisdiction. To say the least, the change was jolting.

I handle some litigation, almost all of it pro bono criminal litigation, building on my experience as noted earlier as a criminal defense lawyer with the Washington, D.C. Public Defender Service. However, in the summer of 2003, I worked outside that sphere. I was asked to consult and prepare a defense to an anticipated motion *in limine* to exclude expert testimony in a North Carolina class action suit alleging unfair trade practices against a national computer printer manufacturer.

At that time, in Paul Giannelli’s terminology, North Carolina was a “Pre-*Daubert* Reliability Jurisdiction.”⁸⁷ Before *Daubert* was decided by the United States Supreme Court in 1993, the North Carolina Supreme Court had already rejected *Frye*⁸⁸ and adopted a reliability approach that has some kinship to *Daubert*. Although a relatively recent state supreme court case had cited *Daubert*, the test that the state courts had developed, the generous tenor of the application and the continued embrace of past methods of analysis made it, in

85. See *Kumho Tire v. Carmichael*, 526 U.S. 137, 159 (1999) (Stevens, J., concurring in part and dissenting in part) (dissenting from failure to remand).

86. For a further discussion of the theme of modesty by experts and members of the legal community in applying the *Daubert* Trilogy, see *supra* notes 50-85 and accompanying text and *infra* notes 127-38 and accompanying text.

87. PAUL C. GIANNELLI & EDWARD J. IMWINKELRIED, SCIENTIFIC EVIDENCE §1-14 at 82-83 (3d ed. 1999).

88. *Frye v. United States*, 293 F. 1013 (D.C. Cir. 1923) (establishing early test for admission of expert scientific testimony). The North Carolina Supreme Court declined to follow *Frye* in *State v. Bullard*, 322 S.E.2d 370, 380 (N.C. 1984), and rejected *Frye*’s requirement of general acceptance in *State v. Pennington*, 393 S.E.2d 847, 852 (N.C. 1990).

my judgment, not *Daubert*, but “*Daubert-lite*.”⁸⁹ It was under that legal regime that I started my research.

The expert whose testimony was at issue was to testify about how the company’s practices in question related to business ethics. He also proposed to render an opinion that those practices violated both general norms of business ethics and the company’s own policies on ethical practices. My initial reaction was that this testimony might or might not be properly received and that a reasonable judge could easily rule against admissibility.

The suit involved a claim of unfair trade practices. Thus, the fact that remedying deficiencies in business ethics was expressly cited by the legislative history to the North Carolina unfair trade practices statute as a basis for the legislation made the expert’s opinion at least moderately relevant.⁹⁰ It might well be properly excluded, however, because the opinion approached, or could be viewed as suggesting, a legal conclusion.⁹¹ Moreover, it might be excluded as unhelpful on balance, being more in the nature of a good closing argument by plaintiff’s counsel than an expert’s opinion, and the witness might be seen as figuratively serving as an “oath helper”⁹² rather than providing true assistance to the jury.

My concern, however, was not with North Carolina’s version of *Daubert*. If the testimony was excluded, that should not provide the basis for its exclusion. The expert was superbly credentialed to render an opinion on business ethics. He had no formal methodology, but that is not what is expected of many experts who perform academically-based evaluations of evidence. They are instead expected to apply their accumulated knowledge to a particular situation by giving either an explication of the issue to educate the jury or their opinion on how conduct likely fits a standard as to which certainty, I believe, cannot be ascertained.

As I was preparing to submit my work, I did a final check of recent case developments in North Carolina to be sure that nothing had changed substantially regarding the law on the admission of expert testimony. What I found was truly shocking to me, and from the perspective of a plaintiff’s lawyer, taught me the uncertainty of admissibility under *Daubert*, gave me a feeling of

89. See *Pennington*, 393 S.E.2d at 853. The North Carolina Supreme Court stated in *Pennington*:

[W]e have focused on the following indices of reliability: the expert’s use of established techniques, the expert’s professional background in the field, the use of visual aids before the jury so that the jury is not asked “to sacrifice its independence by accepting [the] scientific hypotheses on faith,” and independent research conducted by the expert.

Id. (quoting *Bullard*, 322 S.E.2d at 382). The last decision by the Supreme Court before *Howerton*, *State v. Goode*, 461 S.E.2d 631, 640 (1995), had used this same quotation, and favorably cited *Daubert*. See *id.* at 639.

90. See N.C. GEN. STAT. § 75-1.1.

91. *Cf.* FED. R. EVID. 704 advisory committee’s note (authorizing exclusion for “opinions phrased in terms of inadequately explored legal criteria”).

92. See FED. R. EVID. 704 advisory committee’s note (giving as reason why expert opinion should be excluded that it “merely tell[s] the jury what result to reach, somewhat in the manner of the oath-helpers or an earlier day”).

helplessness and filled me with a moderate sense of terror.

A couple days before my search, on June 17, 2003, the North Carolina Court of Appeals had affirmed the trial court's rejection of expert evidence in *Howerton v. Arai Helmet, Ltd.*⁹³ In that opinion, it stated that "it is eminently clear that North Carolina has adopted the *Daubert* analysis."⁹⁴ Rather than nearly being finished, my work in a sense had just begun.

Daubert had set out five potential tests.⁹⁵ The Advisory Committee Note to the 2000 amendment to Federal Rule 702 added five more tests to that list,⁹⁶ providing ten different grounds for arguments to exclude the expert evidence.

What exactly the court of appeals meant by adopting *Daubert* was at least a bit ambiguous,⁹⁷ and what it would mean to be a "*Daubert* state" is theoretically even more unclear.⁹⁸ However, my immediate concerns were more prac-

93. 581 S.E.2d 816 (N.C. Ct. App. 2003), *rev'd*, 597 S.E.2d 674 (N.C. 2004).

94. *Id.* at 826.

95. Sources differ as to whether there are four or five factors, the different number depending on whether the concepts that appear together in a single paragraph in *Daubert*—(1) the known or potential rate of error of the technique or theory when applied and (2) the existence and maintenance of standards—are combined or listed separately. *See Daubert v. Merrell Dow Pharm., Inc.*, 509 U.S. 579, 594 (1993) (listing additional considerations for analyzing scientific techniques). The Advisory Committee's Note to the 2000 amendment of Federal Rule of Evidence 702, for example, separates them and accordingly lists five factors. The division is of no substantive consequence.

96. The Advisory Committee's Note to the 2000 amendment of Federal Rule of Evidence 702 lists five additional factors:

(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." *Daubert v. Merrell Dow Pharm., Inc.*, 43 F.3d 1311, 1317 (9th Cir. 1995).

(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 be in his regular professional work outside his paid litigation consulting." *Sheehan v. Daily Racing Form, Inc.*, 104 F.3d 940, 942 (7th Cir. 1997). . . .

(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. . . .

FED. R. EVID. 702 advisory committee's note.

97. A reference to *Daubert* could simply mean the holding in the *Daubert* case. Alternatively, it could mean the holding in that case plus the other cases decided by the United States Supreme Court, the federal courts of appeal and the subsequent revision of Rule 702 in 2000. Unless specifically limited, I will use the term from this point forward in the latter sense of what might be called the federal *Daubert* regime.

98. This experience led me to wonder what it means to be a true "*Daubert* state." I cannot take seriously a claim that the precise interpretation of the original version of Federal Evidence Rule 702 given to it by the United States Supreme Court in *Daubert*, *Joiner* or *Kumho Tire* was compelled by the words of Rule 702. The federal *Daubert* approach also encompasses the rigorous interpretive gloss placed on gatekeeping by the federal courts of appeal culminating in the Court's statement in *Weisgram*. *See generally Weisgram v. Marley*, 528 U.S. 440 (2000). Then in 2000, Federal Rule 702 was formally amended as a result of the work of the federal advisory committee's recommendations, some of which went beyond the Supreme Court's specific rulings, and it provided a new advisory committee's note with important interpretive content, including five additional tests. *See generally* FED. R. EVID. 702

tical: What tests would the opponent argue should be applied to this expertise, and how would the trial judge choose to evaluate it? As *Kumho Tire* indicated, it was not possible to map a specific type of test to a particular expert,⁹⁹ and how a trial court might apply one of those tests was uncertain.¹⁰⁰ Moreover, errors in either the selection of the test or its application would be reversed on appeal only if the trial court's determination constituted an abuse of discretion.¹⁰¹

I was also now faced with a very difficult precedent. A few years earlier in what I had previously thought was a mistakenly rigorous interpretation of *Daubert* under North Carolina law, a North Carolina Superior Court judge had questioned the "methodology" of a business ethics expert. That judge stated in relevant part:

A review of all the evidence and/or an evaluation of the totality of the circumstances does not constitute a reliable methodology. Such a method is not subject to any peer review, nor is there any way to determine how often [the expert] is right and how often he is wrong. There is no way to determine the rate of error in his methodology.

advisory committee's note (2000).

When a state with a Rule 702 that is the same as the original federal version adopts the "*Daubert* approach" at any particular point in time, its adherence to that approach would seem not dictated by its rule but a sense that the interpretive work of the federal courts was appropriate at that time. Each new development would appear to call for new discretionary judgments. It is unclear to me why a state would cede the development of its law about a non-constitutional area so fully to the federal courts that it could confidently be called a *Daubert* state. To be a true *Daubert* state, the state would have had to adopt each of the various developments in the federal *Daubert* approach, which were derived from a number of different federal sources.

The North Carolina Court of Appeals in concluding North Carolina was a *Daubert* state gave something of an explanation. It said in essence that prior to the *Daubert* decision, North Carolina courts "struggled to articulate a flexible [test]" and that "[a]fter the United States Supreme Court announced *Daubert*, . . . our appellate courts essentially stopped developing and refining the [state's own test] . . . [and] simply began to [follow] *Daubert* . . ." *Howerton*, 581 S.E.2d at 826. As discussed below, the North Carolina Supreme Court disagreed, *inter alia*, about the hand over of state law development to federal authorities. *See* *Howerton v. Arai Helmet, Ltd.*, 597 S.E.2d 674, 689 (N.C. 2004) (concluding that North Carolina approach is distinct from *Daubert* standard).

99. *See Kumho Tire Co. v. Carmichael*, 526 U.S. 137, 150 (1999) (stating that "we can neither rule out, nor rule in, for all cases and for all time the applicability of the factors mentioned in *Daubert*, nor can we now do so for subsets of cases categorized by category of expert or by kind of evidence").

100. A complaint I make here and elsewhere in the paper against uncertainty can be read to be a protest against the lack of a single clear standard of admissibility. I mean to be lodging a different complaint, however, that is a complaint against uncertainty of the applicable standard in combination with a rigorous regime of exclusion for failure to satisfy what the court concludes is the applicable test in the case. Moreover, as discussed below, if the trial court's decision is to exclude expert testimony, review will be under the extremely difficult to meet abuse of discretion standard.

101. *See Kumho Tire*, 526 U.S. at 152 (applying abuse of discretion standard of review to trial court's decision on how to determine reliability); *General Elec. Co. v. Joiner*, 522 U.S. 136, 141-43 (1997) (establishing abuse of discretion as standard for reviewing trial court's decision to admit or exclude expert evidence).

There are no independent, objective indicia of reliability of his method, nor has it been subject to peer review. “[N]othing in either *Daubert* or the Federal Rules of Evidence requires a district court to admit opinion evidence which is connected to existing data only by the *ipse dixit* of the expert. A court may conclude that there is simply too great an analytical gap between the data and the opinion proffered.”¹⁰²

I have come to see this articulation of exclusion of expertise as an eleventh test—the “*ipse dixit*” test. Under it, the judge excludes expert evidence if he or she doubts the validity of the result and is not confronted with a well documented methodology or a pattern of results supported by empirical validation.¹⁰³

As the attorney for whom I consulted later suggested to me, one of the chief impacts of *Daubert* is to run up litigation costs. There was nothing that could be done about most of the potential arguments that might be raised against admission. For example, the expert could not submit to peer review his specific report on how the practices in question complied with business ethics. He could, however, document that the foundation for the business ethics principles he relied upon were well established in published authorities in the field. Although it did not improve the quality of his opinion, which appeared to me to have solid bases, we began to document methodological matters of the sort that I anticipated might be helpful or required.

I also sensed that the evidentiary focus might shift from the really problematic elements of the opinion—whether (1) it was helpful or confusing to the jury, and (2) it involved standards of ethics that were different than legal standards but might be treated by the jury as such or might be over-persuasive—to the less substantively meritorious “*Daubert*” issues. If the trial judge was inclined to accept the *Daubert* attack, arguments would be available to support excluding the testimony. The new focus might result, however, in admission of the evidence if the judge sensed, as I judged to be correct, that a *Daubert* attack was substantively misguided. To accept such an attack on general methodological inadequacy would mean that much expert evidence conducted for the particular case would be excluded without the happenstance that a large body of

102. *Praxair, Inc. v. Airgas, Inc.*, No. 98-CVS-008571, 2000 WL 33954577, at *8 (N.C. Super. Aug. 14, 2000) (quoting *Joiner*, 522 U.S. at 146). Although this superior court judge clearly found the *Daubert* inquiry applicable, one might argue that experts who rely solely on experience and render subjective opinions should not be subject to exclusion on an analytical system that is arguably centered in some concept of “testability” or empirical validation.

103. I perceive a tendency in some courts to conclude that disagreement must mean that one of the two experts is unreliable, which in some instances is true, but as Caudill and LaRue note, is not the intent of Federal Rule 702. See CAUDILL & LARUE, *supra* note 1, at 43 (quoting the Advisory Committee’s Note to the 2000 amendment of Rule 702 that “the emphasis in [Rule 702] on ‘sufficient facts or data’ is not intended to authorize a trial court to exclude an expert’s testimony on the ground that the court believes one version of the facts and not the other”).

pre-existing research existed on the issue in the case. Many clinical determinations would be excluded, it seemed, and all but the most exhaustive examinations of the general type involved here might be excluded.

The attack from the opponents was very much what I had predicted after the court of appeals decision in *Howerton*.¹⁰⁴ They argued for exclusion on a number of grounds, but the principal basis was on *Daubert* grounds and they construed those tests, in my judgment, quite broadly. The most consistent point and one that was stated in several different forms was that what the expert testified about was not a “testable methodology;” it was not an opinion “grounded in a testable analysis of actual facts.”¹⁰⁵

Most interestingly, the fundamental attack that the corporation argued showed that the inadmissibility of the expert testimony is also a basis that two particularly adept evidence scholars argued should render *Daubert* inapplicable.¹⁰⁶ Professor Rick Lempert¹⁰⁷ argued:

[B]usiness ethics is not covered by *Daubert* at all as it does not involve science or, as in *Kumho Tire*, a methodology that could and should be verified by science. There is in fact no correct judgment of what business ethics entails in the sense... [of] whether Bendectin causes birth defects or the cause of a blowout. So what we have . . . is the helpfulness test shorn of *Daubert*'s particular requisites.¹⁰⁸

Professor Paul Giannelli¹⁰⁹ expressed some uncertainty about exempting experts from *Daubert* scrutiny because they only “rely on experience and render subjective opinions.” He would generally cover under *Daubert* analysis experts

104. See, e.g., The Motion to Exclude Testimony, the Memorandum in Opposition, Reply Memorandum, and Order denying the Motion to Exclude in *Hughes v. Hewlett-Packard Co.*, No. 01-CVS-46 (on file with author).

105. It argued, *inter alia*, that the expert's testimony should be rejected because he did not employ a “reliable and testable methodology,” or show his “analysis could be tested in peer review,” because he “does not offer an opinion grounded in a testable analysis of actual facts,” and because his methodology consisted merely of reviewing materials submitted and conducting some independent research. Motion to Exclude at 11-12; Reply Memorandum at 6.

106. This particular facet of the thought experiment was fortuitous and entirely unintended. When I sent my draft to Professors Giannelli and Lempert it contained only that there was a general *Daubert* challenge to the business ethics expert's testimony rather than the particular challenge to the testability of that testimony. This was because I no longer had copies of the opponent's pleadings, which I subsequently obtained by a visit to the court clerk's office.

107. Lempert is the Eric Stein Distinguished University Professor of Law and Sociology at the University of Michigan Law School. His writing spans law and particularly the social sciences.

108. E-mail from Rick Lempert, Professor of Law and Sociology, University of Michigan Law School, to Robert P. Mosteller, Professor of Law, Duke University Law School (Sept. 21, 2006) (on file with author). Minor editorial alterations have been made without notation because of the informality of the medium.

109. Giannelli is the Albert J. Weatherhead, III and Richard W. Weatherhead Professor at Case Law School. He is co-author of a leading scientific evidence treatise and writes extensively regarding the admissibility of scientific and other expert testimony.

of this sort who “can be empirically tested—if not the technique, then the examiners.” He believes that the first *Daubert* factor—testability—is the critical one as to which all others relate. “Here, *Kumho Tire* is correct; forget the label scientific or technical and ask whether the expertise can be tested. The ethics expert, however, is different.”¹¹⁰

I find this situation somewhat amazing. The opponent is arguing that evidence should be excluded for reasons that exceptionally well-qualified evidence professors believe is a reason for exclusion from *Daubert* scrutiny entirely. My position is much closer to that of Professors Lempert and Giannelli (and may even be the same as my approach stated somewhat differently).¹¹¹ Of course, the lack of testability is not a reason to exclude the evidence from the trial. Indeed, it is almost nonsensical. This is not a situation, however, where the expertise is exempted from examination under the *Daubert* approach. *Daubert* and *Kumho Tire* tell us together that the key word in Rule 702 is “knowledge,”¹¹² and if that point is accurate, the general approach of rigor and gatekeeping, and the use of an appropriate test for validity should apply here as well. If knowledge is the key word in the rule, the structure of the rule makes some appropriate form of the general test apply to all expert testimony.¹¹³ Some relatively vague standard of soundness in the field is imposed, but not testability. The testability requirement, which is inappropriate for this type of expertise, is not to be applied because it cannot produce a correct division between admissible (reliable) and inadmissible (unreliable) expertise.

Regardless of how this dispute is resolved, I find most significant the stark nature of the disagreement about the impact of non-testability on admissibility. One of my criticisms of *Daubert* is that it demands precision in compliance

110. E-mail from Paul Giannelli, Professor of Law, Case Law School, to Robert P. Mosteller, Professor of Law, Duke University Law School (Sept. 18, 2006) (on file with author). Minor editorial alterations have been made without notation because of the informality of the medium.

111. I argue that a *Daubert*-based inquiry is appropriate, but under my differential system, scrutiny would be much relaxed. Professors Lempert and Giannelli may be meaning exactly the same analysis that I envision but assume that the alternative to rigid gatekeeping, which they and I agree would be erroneous for this testimony, is not treated as *Daubert*-type scrutiny at all. The all-or-nothing approach was the one assumed by the defense in my ethics expert case.

112. See *Kumho Tire Co. v. Carmichael*, 526 U.S. 137, 147 (1999) (discussing *Daubert*'s explanation of standard of evidentiary reliability). The Supreme Court stated:

In *Daubert*, the Court specified that it is the Rule's word 'knowledge,' not the words (like 'scientific') that modify that word, that 'establishes a standard of evidentiary reliability.' Hence, as a matter of language, the Rule applies its reliability standard to all 'scientific,' 'technical,' or 'other specialized' matters within its scope.

Id. (quoting *Daubert*, 509 U.S. 579, 589-90 (1993)).

113. *Kumho Tire* addresses in general, rather than specific terms, the matching of appropriate tests to differing types of expertise. See 526 U.S. at 150-52 (discussing application of tests to various types of expert testimony). Of course, if the appropriate test is effectively devoid of standards, which may be true, the distinction I am making between my position and that of Professors Lempert and Giannelli effectively disappears. The difference between my position (and theirs) and the point argued by the defendant-corporation, however, remains a chasm.

even though its application is subject to dispute. My argument is not that standards could not be set and are ultimately unknowable. It is rather that such standards effectively have not been set and cannot be derived clearly and definitively from the announced principles in Supreme Court case law and the amended Federal Rule 702. My principal complaint is against the uncertainty of standards in combination with a rigorous regime of exclusion for failure to satisfy what the judge ultimately concludes is the applicable test in the case. Moreover, if the trial court's decision is to exclude expert testimony, the case is frequently and effectively terminated and review will be under the extremely difficult to satisfy "abuse of discretion" standard. Too much is uncertain and left to disputable interpretation in a situation where accuracy is apparently required.¹¹⁴

In my case, the trial judge denied the motion to exclude, and the expert's testimony was received. A full trial ensued, including the disputed testimony. It concluded with a jury verdict for the defendant-corporation.¹¹⁵

The event continued to have an impact on me. The North Carolina Supreme Court granted certiorari to review the Court of Appeals decision in *Howerton*. Along with several other attorneys, I authored an amicus brief on behalf of the North Carolina Academy of Trial Lawyers opposing the adoption of *Daubert* as the guiding standard in North Carolina.¹¹⁶ As I now describe it, the North Carolina version of reliability analysis is similar to *Daubert*, but it is clearly distinct. I call it a "kinder and simpler" version of *Daubert*.

The North Carolina Supreme Court unequivocally rejected the lower appellate court's conclusion that the federal *Daubert* analysis had been adopted: "Contrary to the conclusion of the Court of Appeals, it is not 'eminently clear' that North Carolina adopted the *Daubert* standard."¹¹⁷ The Court stated that it took that position because it was not satisfied that the federal approach provided "the most workable solution to the intractable challenge of separating reliable expert opinions from the unreliable counterparts. . . ."¹¹⁸ It worried that the *Daubert* standard "has been anything but liberal or relaxed,"¹¹⁹ and that the

114. For a full discussion of my concern with a demand for rigor at the same time the standards are imprecise or as yet unstated, see *supra* note 100.

115. Although my sense is that *Daubert* challenges get far too much attention in situations where they should not be the defining inquiry, judges are not always distracted. In re *Welding Fume Products Liability Litigation*, No. 1:03-CV-17000, MDL 1535, 2005 WL 1868046, at *19-21 (N.D. Ohio Aug. 8, 2005) (analyzing opinions of one proffered expert). In *Welding Fume*, the court was presented with a challenge to just this type of expertise first, on *Daubert* grounds because the field lacked a standard methodology and second, on the basis that the opinion was unhelpful and confusing because the ethical standard and the applicable legal standard are different. *See id.* The court spent no time with the *Daubert* issue and instead concluded that potential confusion of moral and legal standards rendered the testimony unhelpful unless defense claims at trial that they complied with high ethical standards rendered it responsive. *See id.* (concluding that expert could not testify).

116. Brief for North Carolina Academy of Trial Lawyers, as Amicus Curiae, *Howerton v. Arai Helmet, Ltd.*, 597 S.E.2d 674 (N.C. 2004) (No. 383PA03) (on file with author).

117. *Howerton v. Arai Helmet, Ltd.*, 597 S.E.2d 674, 689 (N.C. 2004).

118. *Id.* at 690.

119. *Id.* at 691.

ability of defendants to exclude evidence under an exacting evidentiary standard might have the effect of undoing the deferential standard applied to summary judgment motions and effectively deny the constitutional right to a jury trial.¹²⁰

Why the North Carolina Supreme Court took this position, which went further than I thought was prudent to argue, is unclear to me. The court is neither reactionary nor liberal. I would characterize it in most areas as generally a moderate court that is politically somewhat to the right of center.

The notion of resources is only infrequently included in a discussion of the merits of *Daubert*. Caudill and LaRue note that a judge is not required to make the expert decision alone. Rather the judge has the assistance of the party-adversaries to elucidate the technical and scientific issues.¹²¹ That point is clearly correct, but I believe it is most helpful when the court has adequate time and resources to examine and understand the help offered.

In my evidence class during the *Daubert* discussion, I usually quip that this body of law, with all of its rigor, is evidence that the federal courts have too much time on their hands. In North Carolina, most trial judges “ride the circuit,” and remarkably they have no law clerks.¹²² As a result, trial judges have generally less time and resources to make such admissibility decisions and, I believe, are far too dependent on the parties. Making the standards too exacting and difficult for judges untrained in science and technical errors is almost certain to lead to errors, or to the direct translation of judicial bias into the admissibility decision.

I do not trumpet the decision of the North Carolina Supreme Court for its theoretical rejection of the rigor of *Daubert*. I do, however, support it on pragmatic grounds that recognize the limits of ordinary judges to be effective in accurately refereeing inquiries in areas of complex scientific and technical dispute. *Daubert* points in the right direction. Nonetheless, there is much to be said for moderation—a “kinder and simpler” version of *Daubert*—particularly in the world of quite limited resources that face many state trial courts (even if not at the level of North Carolina’s unreasonable decision not to fund law clerk positions for its trial judges). Caudill and LaRue’s search for a much more sophisticated version of my goal of a “golden mean” is a quite different but related effort at moderation.

I do suggest moderation in application may be superior to some alternatives. The title of my paper includes the term “golden mean.” That term suggests, I believe, simplicity, moderation and perfection.¹²³ I have noted that

120. See *id.* at 691-92 (discussing concerns with “stringent threshold standard for admitting expert testimony”).

121. See CAUDILL & LARUE, *supra* note 1, at 59 (explaining that expert testimony would be tested by cross-examination and testimony of other experts).

122. *Howerton v. Arai Helmet, Ltd.*, 581 S.E.2d 816, 827 n.7 (N.C. 2003), *rev’d*, 597 S.E. 2d 674 (N.C. 2004); *Howerton*, 597 S.E.2d at 690 (quoting from Ninth Circuit’s decision on remand in *Daubert* regarding daunting nature of task presented to federal courts).

123. “Golden mean” is defined in different ways in different dictionaries. One that carries the above connotations is “the way of wisdom and reasonableness between extremes.” WEBSTER’S THIRD NEW INTERNATIONAL DICTIONARY 975 (Philip Babcock Gove ed., Merriam-Webster Inc. 1986) (1961).

Caudill and LaRue's approach is sophisticated rather than simple, which I fear that any good system for admitting or excluding expertise must be. Thus, one part of the image of the "golden mean" may be inapplicable here.

The system can still be largely true to the remainder of my image of the golden mean even though not simple, provided the ways to satisfy the complex system are clearly set out. Complex yet clear is not as elegant as simple, but it can approach my image of the golden mean. I have been arguing throughout this paper that some official taxonomy of expertise may give us this clarity in a complex system. Such a taxonomy remains my goal. Unfortunately, I do not find such a taxonomy officially recognized or even on its way to recognition, although excellent opinions implicitly follow such a variegated system.¹²⁴

The system that *Howerton* rejected—the current *Daubert* system—is one that is complex, that lacks clarity in the tests applicable to types of expertise and that is too often rigorous and demanding in compliance with these unclear tests. Such a system is far from the golden mean and, as to perfecting it, I lack the optimism of Caudill and LaRue.

It is in this context that I find substantial merit in the *Howerton* decision by the North Carolina Supreme Court as a second-best outcome. If we do not have rigor, complexity and clarity, it is likely better to change rigor to moderation.¹²⁵ Some goals are realistically beyond the grasp of most courts, but moderation is one that is attainable.

Given my background as a criminal defense attorney, readers may wonder why I would support a more flexible form of gatekeeping. Many have noted that the forensic sciences often used by prosecutors are in great need of enhanced rigor. My response may be described as cynical, but I believe it is more accurately practical and realistic. I have seen little evidence that courts will exclude the forensic staples of the prosecution.¹²⁶ Maintaining an exacting standard for that purpose is a goal I would theoretically support, but it will make

124. See generally *United States v. Hines*, 55 F. Supp. 2d 62 (D. Mass. 1999). The decision in *Hines*, which is discussed in Part V, provides an example of such a case that requires different levels of validation for different types and uses of the evidence.

125. See D. Michael Risinger, *The Irrelevance and Central Relevance of the Boundary Between Science and Non-Science in the Evaluation of Expert Witness Reliability*, 52 VILL. L. REV. __, __ (2007) (arguing against "free-floating discretion"). In his paper for this symposium, Professor Risinger argues against "some free-floating discretion in the matter," which he notes is not at all the same as his contention that different levels of justification are appropriate for different types and uses of expertise. *Id.* I do not contend moderation, which is somewhat like "free-floating discretion," is a substitute for his preferred system. As I note, it is a second-best solution and preferable, in my judgment, against the current system rigidly and uniformly applied.

126. See CAUDILL & LARUE, *supra* note 1, at 75 (arguing against likelihood of raising admissibility standards). Caudill and LaRue appear to take a similar "realistic" view of the likelihood of raising the admissibility standards in a major way for forensic sciences, endorsing Professor Lillquist's "humorous and shrewd suggestion" that if Judge Louis Pollak's initial decision to forbid government fingerprint examiners from testifying that fingerprints belonged to a particular person, Congress would have passed something like "the Latent Fingerprint Admissibility Act." See *id.* (quoting R. Erik Lillquist, *A Comment on the Admissibility of Forensic Evidence*, 33 SETON HALL L. REV. 1189, 1203-04 (2003) (endorsing Lillquist's suggestion in criminal context)).

little practical difference in criminal cases if judged by the exclusion of prosecution evidence. The political realities, which I see as the judicial analogy to Caudill and LaRue's "social factors" of science, make exclusion very unlikely.

A more exacting standard might have the effect of improving the quality of such forensic evidence generally by forcing the adoption of standard procedures, proficiency tests, and the certification of quality programs. The impact of *Daubert* will, however, remain principally that of excluding expert evidence in civil cases but not the staples of the prosecution's forensic evidence arsenal, such as fingerprint comparison, despite the fact its reliability was not established for a long time and is somewhat questionable in some situations even now.

V. CONCLUSION—AN EMPHASIS ON APPLICATION AND DEVELOPING A REALISTIC, NON-IDEALIZED VIEW OF ALL PARTICIPANTS IN THE LITIGATION PROCESS

I regularly teach evidence, and in the course one of my favorite expert evidence cases is *United States v. Hines*.¹²⁷ I am attracted to it because of its complicated and nuanced treatment of expert evidence in two areas—handwriting and eyewitness identification. It seems to me that this case is a fine example of what Caudill and LaRue advocate in a set of comments in Chapter Four of their book, which focuses on the importance of application.

They state that the *Daubert* Trilogy "deflects attention away from abstract identification of scientific validity.... Instead, attention is directed toward the application of expertise to the particular case at hand."¹²⁸ I am less clear that this is what the *Daubert* Trilogy currently does, rather than what Caudill and LaRue argue quite soundly that it should do.

Speaking of reaction to *Daubert* at an earlier symposium, they provide three principles that seem me worth generalizing:

First, . . . [is] a pragmatic recognition . . . that the focus should be on how science is being used rather than on science in the abstract. Second, . . . [is] the recognition that the focus must be accompanied by a modest view of science rather than an idealized version of its capacity to produce knowledge for law. Third, . . . [is] an awareness that the focus on the application phase of expertise must also be accompanied by a modest view of law itself, including trial judges, lawyers, juries, and the appellate judiciary.¹²⁹

My sense is that *Hines* does much of what Caudill and LaRue advocate.

127. 55 F. Supp. 2d 62 (D. Mass. 1999). The case is in *Evidence, Cases and Materials* (6th ed. 2002), which I co-authored along with Professors Kenneth S. Broun and Paul C. Giannelli. Professor Giannelli is chiefly responsible for the materials in the book on expert evidence, and he selected this fine case for inclusion in the book.

128. CAUDILL & LARUE, *supra* note 1, at 49-50.

129. *Id.* at 50.

The opinion examines two types of expert evidence offered for distinctly different purposes in the case. The first type is handwriting analysis offered by the government, which *Hines* finds lacking adequate support under *Daubert* when used to reach a conclusion of authorship.¹³⁰ The court does not conclude that the expertise is worthless. Indeed, the court finds it sufficiently reliable to be admitted for the less exacting application of noting similarities and dissimilarities between the known exemplars and a note that was used during a robbery.¹³¹

Second, *Hines* examines eyewitness identification expert testimony offered by the defense. In contrast to handwriting expertise, the court finds the scientific underpinnings of this expertise to be solid under *Daubert*.¹³² The question here is a different aspect of application—whether those experimental findings can be usefully applied in real life settings.¹³³ The court ruled that they could be, and in doing so, it focused on the need for the evidence to correct jurors' sense of confidence in their perceptive abilities that may be misplaced in specific areas, such as cross-racial identifications.¹³⁴ Although the defense counsel can make similar points to the expert in closing argument, the court also found that without the supporting authority of expert testimony those points would likely carry little weight.¹³⁵

Decisions like *Hines* lack the simplicity and elegance that I sense many assume comes from a *Daubert* analysis. *Hines* gives few categorical answers, but answers questions only in specific contexts. This is how I think the intersection of law and expertise should generally appear. *Hines* does not give the definitive answer to admissibility that the *Daubert* Trilogy appears to promise on its surface.¹³⁶ The *Hines* approach may be correct, but it can hardly be said to be uniquely correct in that other nuanced results that were quite different would be reasonable as well. This type of analysis will almost always appear imprecise, conditional and therefore somewhat inadequate and unsatisfactory.

One does not have to be overly optimistic about the capacities of judges and experts to operate a system of analysis illustrated by *Hines*. One does, however, have to be optimistic about the willingness of courts to avoid resorting to "social" factors, such as bias or immodesty. It may be tempting to reach the

130. See *Hines*, 55 F. Supp. 2d at 68-71 (finding that expert handwriting testimony does not satisfy *Daubert* as to authorship).

131. See *id.* at 70-71 (finding that expert handwriting testimony does satisfy *Daubert* as to "similarities or dissimilarities between the known exemplars and the robbery note")

132. See *id.* at 72 (finding that "there is no question as to the scientific underpinnings of [the expert's] testimony").

133. See *id.* (stating that central debate is whether experimental conclusions could be applied to real life setting).

134. See *id.* (finding that testimony was necessary under Rule 702).

135. See *id.* (arguing that defense lawyers do not have same authority as expert scientific studies).

136. See generally Risinger, *supra* note 14. An approach like that in Professor Risinger's taxonomy supports the type of approach that I advocate above, and under its non-uniform treatment to the examination of expert testimony, much of what I advocate in my thought experiments should prove acceptable. See generally *id.*

definitive and often the easier resolution of litigation through a clear ruling of exclusion, labeling the evidence as junk science under the *Daubert* Trilogy. This tempting result is even more likely if *Daubert* is seen as part of tort reform,¹³⁷ and if it is understood to provide a regime of “exacting standards.”¹³⁸

I recognize that in seeking the “golden mean” I perhaps ask too much because it simultaneously suggests simplicity, moderation and perfection. It reflects expectations that only very rarely can be achieved by humans. *No Magic Wand* does not address the issues in the same way I do, nor does it recommend the same changes that my thought experiments might suggest, nor does it achieve my elusive goal of the golden mean in judging the introduction of expert testimony in differing contexts. Subtly, yet unmistakably, however, it pushes the discussion in the right direction. That is toward a more modest and moderate approach to judging the admissibility of expert testimony, which is on the way to the idealized and elusive goal of the golden mean. It is a very worthy effort.

137. See generally Giannelli, *supra* note 3 (tracing story of *Daubert*, including large elements of “tort reform” movement, assault on “junk science” and transformation of the admissibility test that gives it greater strength in civil cases where it works in combination with summary judgment motions than in criminal cases where rigorous application would principally restrict prosecution use of forensic evidence).

138. *Weisgram v. Marley Co.*, 528 U.S. 440, 455 (2000) (stating parties using expert evidence have had notice of exacting standards of reliability since *Daubert*).