EXPERT TESTIMONY:

JUDGES, SCIENCE, AND TRIAL BY JURY

2023 FORUM FOR STATE APPELLATE COURT JUDGES

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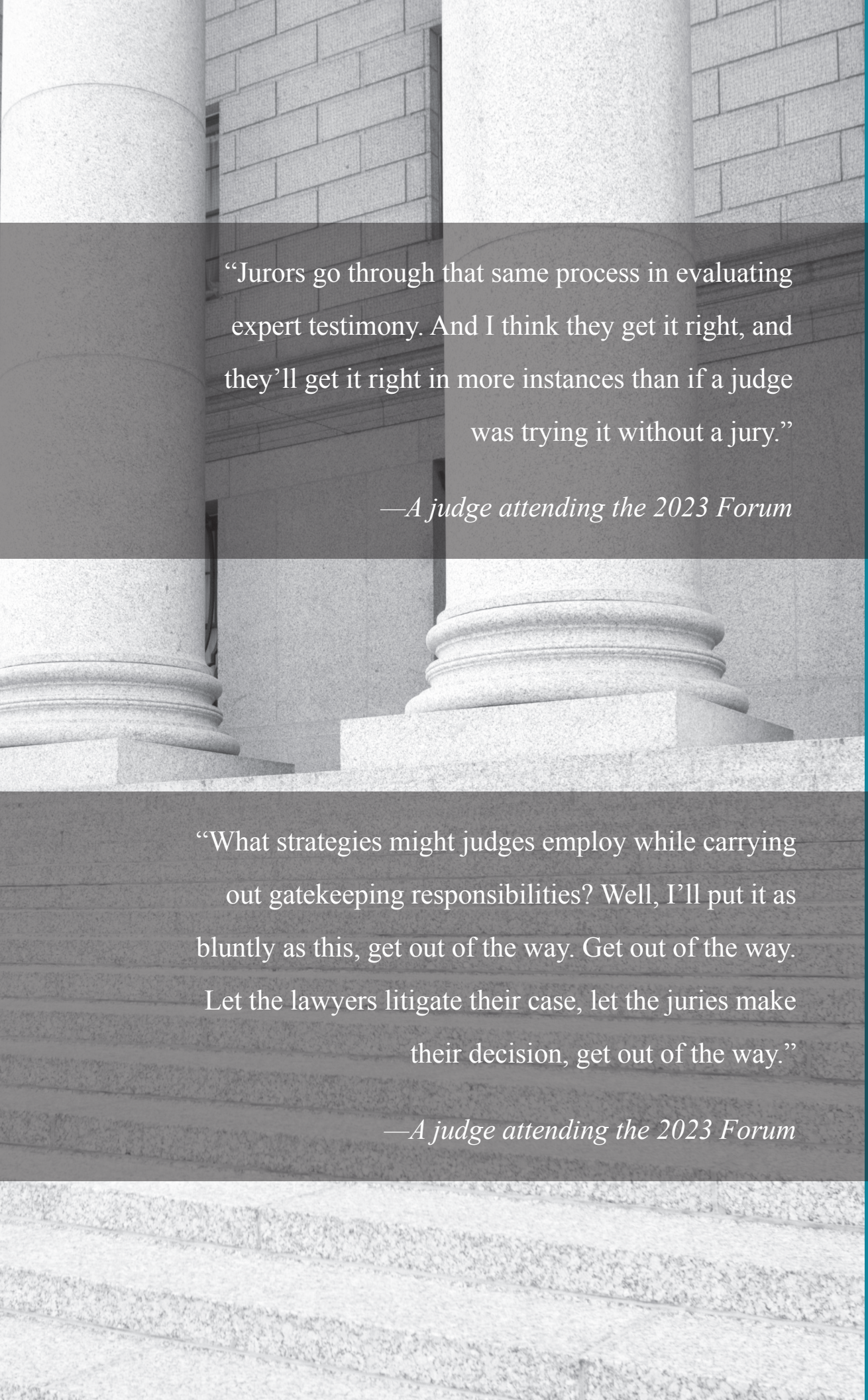

"Jurors go through that same process in evaluating expert testimony. And I think they get it right, and they'll get it right in more instances than if a judge was trying it without a jury."

—A judge attending the 2023 Forum

"What strategies might judges employ while carrying out gatekeeping responsibilities? Well, I'll put it as bluntly as this, get out of the way. Get out of the way. Let the lawyers litigate their case, let the juries make their decision, get out of the way."

—A judge attending the 2023 Forum

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FOREWORD

The 31st Forum for State Appellate Court Judges of the National Civil Justice Institute (formerly Pound Civil Justice Institute) was held on July 15, 2023. As with all of our past Forums, both comments and reviews clearly indicated that it was extremely well-received and thought-provoking. In continuing what has proven to be a very popular Forum setting, judges, practicing attorneys, and legal scholars this year considered crucial issues related to jury trial and the achievement of fairness in our civil justice system.

The Institute recognizes that state courts have a significant role in the administration of justice in the United States, and that state court judges often carry the heaviest of judicial workloads. NCJI tries to support state court judges in their work by offering our annual Forums so that judges, academics, and practitioners can have a brief, pertinent dialogue on civil justice issues through a varied day of presentations and small-group discussions. At times, the discussions lead to consensus, but that is not what is critical. Even when they do not, the exploration of varied experiences in multiple state court settings is inevitably fruitful. It is important that Forum participants bring a wide range of points of view and experience. We also make concerted efforts to include panelists with a wide range of outlooks, at times differing dramatically from those of many of the Institute's Fellows. We hope that this diversity of viewpoints emerges in our Forum reports.

Ever since their inception, our Forums for State Appellate Court Judges have been devoted to cutting-edge topics, ranging from the court funding crisis, to the decline of jury trial, separation of powers issues, rulemaking, forced arbitration, judicial transparency, state constitutionalism, aggregate litigation, confidentiality in our public courts, and the general subject of fairness in civil jury trials. We at NCJI are proud of our Forums, and we are quite gratified by the growth in interest and attendance we have experienced since their inception. Not just for this past year's Forum, but consistently, the Forums have been broadly well received with numerous positive comments from judicial attendees and participating faculty members. A full listing of our prior Forums is provided in an appendix to this report. Their reports and research papers—along with most of our other publications—are available for free download on our website: https://ncji.org/.

The Institute is indebted to a number of people who contributed to the success of the 2023 Forum:

- Hon. Debra Todd, Chief Justice, Pennsylvania Supreme Court, who delivered welcome remarks to the Forum participants;
- Professor Michael Saks, who wrote and presented the morning's academic paper that initiated the first panel's discussions;
- Our morning panelists: Professor David Michaels of George Washington University, Hon. Roland L. Belsome of the Louisiana 4th Circuit Court of Appeal, R. Jeffrey Lowe of DRI–Lawyers Representing Business, and Michelle A. Parfitt of Ashcraft & Gerel, Washington, D.C.;
- Professor Anne Bloom, who wrote and presented the afternoon's academic paper that initiated the second panel's discussions;

- Our afternoon panelists: Professor Mary Rose of the University of Texas at Austin, Hon. Terry Fox of the Colorado Court of Appeals, Dean David Faigman of UC College of the Law, San Francisco, and Deepak Gupta of Gupta Wessler; and
- Jason and Joyce Daubert and journalist Peter Andrey Smith, who delivered our lunch presentation. Mr. Smith is a veteran journalist and researcher who explores many scientific subjects, including the use of expert testimony in litigation. Joyce Daubert was a plaintiff in the U.S. Supreme Court's landmark case, *Daubert v. Merrell Dow Pharmaceuticals, Inc.*, 509 U.S. 579 (1993). In that case, she sought to hold the defendant, Merrell Dow, accountable for injuries to her son, Jason, that she alleged were caused by his exposure to the medication Bendectin, a product of Merrell Dow. (On a personal note, the Dauberts' participation was particularly gratifying to me, as my late father, Barry J. Nace, represented the Daubert family.)

We appreciate the considerable assistance we received from the following attorneys who moderated our small-group discussions: Carla Aikens, Charles Becker, Jennifer Bennett, Kathryn Clarke, Gary DiMuzio, Deborah Elman, Misty Farris, Celene Humphries, Lucy Noble Inman, Michelle Kranz, Roger Mandel, Andre Mura, Peggy Wedgworth, and Davied Wirtes. And, finally, NCJI commends our inimitable dedicated and talented staff—Executive Director Mary Collishaw, and then-Forum Reporter Jim Rooks—who worked tirelessly to make the Forum and this report a reality.

Lastly, and most of all, NCJI needs to say how much we appreciate the participation of the distinguished judges who gave of their time so that we might all learn from each other. We certainly hope you enjoy reviewing this report of the Forum, and that you will find it useful in your consideration of matters relating to civil justice in America.

Christopher T. Nace
President, National Civil Justice Institute, 2022-2023

INTRODUCTION

On July 15, 2023, 81 judges, representing 29 jurisdictions, as well as academics and attorneys, took part in the National Civil Justice Institute's 31st annual Forum for State Appellate Court Judges.

The judges examined the topic "Expert Testimony: Judges, Science, and Trial by Jury." Their deliberations were based on original papers written for the Forum by Professor Michael Saks of Arizona State University's Sandra Day O'Connor College of Law ("Expert Evidence: Evolution of Rules and Practices") and Professor Anne Bloom of University of California at Berkeley School of Law ("Judicial Gatekeeping, Expert Testimony, and the Future of American Courts"). The papers were distributed to participants in advance of the meeting, and the authors made less-formal presentations of their papers to the judges during the general sessions.

The paper presentations were followed by discussion by panels of distinguished commentators. Professor David Michaels of George Washington University, Hon. Roland L. Belsome of the Louisiana 4th Circuit Court of Appeal, R. Jeffrey Lowe of DRI–Lawyers Representing Business, and Michelle A. Parfitt of Ashcraft & Gerel appeared in the morning panel. Professor Mary Rose of the University of Texas at Austin, Hon. Terry Fox of the Colorado Court of Appeals, Dean David Faigman of UC College of the Law, San Francisco, and Deepak Gupta of Gupta Wessler appeared in the afternoon panel.

The judges also heard a lunchtime keynote talk by journalist Peter Andrey Smith, who has written extensively on scientific evidence issues. He was joined by Jason and Joyce Daubert, who were plaintiffs in the Bendectin litigation that led to the U.S. Supreme Court's *Daubert* decision. They spoke of the injuries caused to Jason by Bendectin, and also about their experiences as litigants in a major products liability case.

After each general session, the judges participated in small-group discussions, with Fellows of the Institute serving as group moderators. The paper presenters and commentators joined the groups to share in the discussions and respond to questions. The common ground achieved during the discussion groups, as well as discussion of any new concepts, appear in the "Points of Convergence" sections of this report.

At the concluding general session, all of the Forum faculty members had a final opportunity to make comments and ask questions.

This report is based on the papers written and presented by Professors Saks and Bloom, on reports of discussion group moderators, and on the transcripts of the Forum's general sessions.

James E. Rooks, Jr.
Forum Reporter (ret. July 2024)

Expert Evidence: Evolution of Rules and Practices

Michael J. Saks, Arizona State University Sandra Day O'Connor College of Law

I. Introduction: Expert Evidence is Different

The most fundamental rule of evidence, of course, is that relevant evidence is admissible while evidence that is not relevant is not admissible. Ostensibly relevant expert evidence, however, is required to clear a higher hurdle in order to be admitted. Why?

The standard answer is that, while ordinary witnesses normally may testify only to facts they have observed, experts are permitted to testify to opinions—that is, inferences drawn from the observations they (or others) have made.

Those experts, it has long been feared, are too easily selected and influenced to present the proffering party's view of the matter. While ordinary fact witnesses are limited in number (to those having personal knowledge of the transaction at issue), expert witnesses can be plentiful. If one expert does not see things as counsel wishes them to be seen, another expert might be found who does. After selection, counsel has ample opportunity to subtly influence the expert's views of the case. As far back as 1843, a court observed of experts: "They come with such a bias on their minds to support the cause in which they are embarked, that hardly any weight should be given to their evidence."[1]

Sometimes experts go so far as to offer testimony that points in a direction that they know perfectly well is opposite to where the principles of their expertise actually point.[2] Still other times, expert witnesses offer sincere nonsense. In this circumstance, the entire field of experts believes things that upon later testing turn out to be incorrect. "In the Witches' case, in 1665, Dr. Brown, of Norwich, was desired to state his opinion of the accused persons, and he was clearly of opinion that they were witches, and he elaborated his opinion by a scientific explanation of the fits to which they were subject." We need not, however, look back so far, to find examples of sincere nonsense. Among modern examples is arson investigation, which for decades relied on nearly two dozen "arson indicators" until they were belatedly determined by empirical testing to be incapable of distinguishing set fires from accidental ones.[3]

On the receiving end, lay factfinders, it has long been feared, are prone to over-weighting the testimony of experts.[4]

Before being allowed to testify, therefore, proffered experts must be screened to ensure that they possess sufficient "knowledge, skill, experience, training, or education" ("qualifications") and their proffered testimony must satisfy Rule 702. In earlier times, somewhat different criteria were employed.

The need for such screening (gatekeeping) presumably increases in proportion to the extent of the public's mindless faith in the asserted expertise, the difficulty of evaluating the expert's claims, and the risk of exaggeration

or fraud. Where a type of asserted expertise is systematically more available to one side than the other, the situation is worse while appearing to be better: the absence of disagreement makes it appear there is nothing to disagree about.

All of this is, of course, a dilemma. Judges have been aware of both the benefits and the risks of expert witnesses for as long as there have been adversarial legal proceedings. The worries outlined above are offset by the fact that expert witnesses have the potential to "help the trier of fact to understand the evidence or to determine a fact in issue."[5] "No one will deny that the law should in some way effectively use expert knowledge wherever it will aid in settling disputes."[6]

A central problem is that the specialized knowledge base—which is exactly what the court wishes the factfinder to access—is unknown to laypersons. How, then, can the jury evaluate how much of what they are hearing is accurate? How can they determine which of two conflicting experts is providing the more complete and candid account? And how can the judge, whose job is to help the jury by separating the sound from the unsound, know which is which? Falling back on "credibility" is more of an illusion than a solution. This is the "expert dilemma," most famously articulated by Learned Hand.[7]

The law has a number of procedural tools to help reduce the risk of misleading expert testimony. These include the oath, cross-examination, the possibility of counter-experts proffered by opposing counsel. Further, Rule 706 empowers judges to appoint the court's own experts whenever they choose to do so. The drafters of Rule 706 shared the widespread skepticism concerning whether experts who were chosen by the parties, briefed by them, prepared by them, and paid by them, would provide the education that the judge and jury need. So they enabled judges to appoint their own expert witnesses. But the effectiveness of this appointment power was thought to reside not so much in its use but in its mere existence. "[T]he assumption may be made that the availability of the procedure in itself decreases the need for resorting to it. The ever-present possibility that the judge may appoint an expert in a given case must inevitably exert a sobering effect on the expert witness of a party and upon the person utilizing his services."[8]

II. How Did Courts Screen Expert Evidence in the Centuries Before 1923?

Long before *Frye v. United States* (1923) was decided, physicians were invited to courts and asked about wounds and pregnancies and the cause of death; merchants were asked about the condition of food and drink; engineers about wells and bridges, and so on. Experts were called as early as 1345. In that instance, a court summoned surgeons to aid in determining whether a wound was fresh, though this was for the purpose of deciding a motion.[9] Perhaps the earliest true expert witness—called to present testimony to a jury—was in Alsop *v.* Bowtrell (1620).[10]

How did courts of old screen those proffered experts? One test found in 19th Century America was an implicit one. That is, courts did not announce a formal rule, but their approach can be discerned from discussion in their opinions. Unsurprisingly, courts assessed whether the proffered expert was prepared to offer information that was beyond the ken of the court and the jury, and whether the proposed witness was "qualified." Although courts spoke of the expert's "greater study respecting certain subjects," they seem also to have been attentive to whether the witness had achieved some degree of success in the practice of the occupation or profession claiming that knowledge. The implicit reasoning seems to have been: if a person could prosper selling the knowledge or skill at

issue, then the person was expert enough to testify. In effect, the marketplace determined whether valid knowledge existed by endowing it with commercial value. This has been termed the "marketplace test" of admissibility.[11]

The marketplace test did not directly assess the validity of the claimed knowledge. It allowed consumers (of the services of doctors, food merchants, well-diggers, etc.) to perform the critical evaluation. This was a clever shortcut for judges. Except consumers have been known to be fooled by sellers claiming to have expertise they do not have or asserted skills and products that were of no actual value (e.g., snake oil and other quack cures, dowsing, astrology, and their modern descendants). Also, the marketplace test is unable to evaluate areas of expertise for which there is no consumer market, or which are too new to have gained a clientele.

III. *Frye v. United States* (1923): The General Acceptance Test

Frye v. United States (1923)[12] can be better understood against the background of the marketplace test that preceded it. In *Frye*, the defense proffered an expert using an early form of lie detector. At that time, no market existed for the services of polygraph examiners. At trial, the proffered expert testimony was rejected. On appeal, Judge Van Orsdel solved the problem that no marketplace yet existed to which courts could turn for an assessment of the claimed expertise by substituting a scientific or intellectual market for the commercial one, thereby creating the *Frye* test of general acceptance—and affirmed the district court's exclusion. A novel scientific principle "must be sufficiently established to have gained general acceptance in the particular field in which it belongs." In the particular instance, "the systolic blood pressure deception test has not yet gained such standing and scientific recognition among physiological and psychological authorities as would justify the courts in admitting expert testimony deduced from the discovery…."

A. Shortcomings of the *Frye* Test

Significantly, however, the *Frye* test replaced consumers with producers as the crucial assessors of validity. Control over the assessment of validity was transferred to the people who produced the asserted knowledge and offered it (and themselves) to the courts. Consumers might not be perfect in their assessments, but at least their interests aligned better with those of the courts.

Another problem with *Frye* is the malleability of "the particular field in which [proffered expert evidence] belongs." The "particular field" has sometimes been interpreted to mean the narrow circle of purported experts who conduct the technique at issue. Other times it has been understood more broadly to include relevant fields that have meaningful knowledge about the concepts or techniques. Let's call those the narrow versus the broad versions of *Frye*.

For example, when voice spectrography was proffered, purporting to identify the individual whose voice was recorded (e.g., making a threatening phone call), some judges limited the experts on the expertise (who would say whether it was generally accepted or not) to practicing voiceprint examiners.[13] Other judges were interested in hearing from additional knowledgeable experts—acoustical engineers, linguists, statisticians. In every instance when the *narrow* version of *Frye* was employed, the court found voiceprints to be admissible. In every instance when the *broad* version of the *Frye* test was employed, the court excluded the voiceprint evidence.[14] Thus, if a judge applying *Frye* wanted to maximize the probability that the evidentiary hearing would support admission, the judge could choose the narrow form of the test. To increase the probability that flaws in the proffered technique's

theory or data or practice would emerge, the broad version could be employed. By choosing one flavor of *Frye* over the other, the judge has gone a long way towards determining the outcome.

For a long time, *Frye* was taken to apply to criminal cases but not civil. And, because *Frye* referred to "novel scientific evidence," many later courts thought the test applicable only when "novel" science was being proffered.[15] Numerous other difficulties with *Frye's* logic and its application have been discussed in the legal literature.[16]

B. *Frye* Not So Dominant as Commonly Believed

The U.S. Supreme Court offered a simple history of expert evidence admissibility rules. First there was *Frye*; then came *Daubert*. "In the 70 years since its formulation in the *Frye* case, the 'general acceptance' test has been the dominant standard for determining the admissibility of novel scientific evidence at trial," said *Daubert*.[17]

Historically, however, *Frye* was not so top-of-mind as that picture suggests. To begin, the *Frye* variant went unnoticed for quite some time. It was not cited by any other court, federal or state, for a decade. Judge Van Orsdel himself did not so much as mention *Frye* or any requirement of general acceptance when he reviewed the novel technique of firearms identification—also untested, "experimental," not yet generally accepted, and which had recently been found inadmissible by a prominent state supreme court[18]—and held the technique to be admissible.[19] During the first quarter century of its existence, *Frye* was cited in only eight federal cases and five state cases. That amounts to one case every other year in the entire country. During its second quarter century, citations increased to 54 times in federal cases and 29 times in state cases.

The *Frye* test was not truly "discovered" until the drafting of the Federal Rules of Evidence was under way and those discussions awakened interest in a rule for judicial gatekeeping of expert evidence. Then, ironically, *after* the adoption of the Federal Rules of Evidence (which we now know, and should always have known, did not incorporate *Frye*), *Frye* started to be employed as much each year as it had been in all of its first 50 years added together. *Frye's* sun rose just as it had been ordered to set.

IV. Other Tests and No Test

When they did not employ the general acceptance test, what were courts using to guide their evaluation of expert evidence between *Frye* (1923) and *Daubert* (1993)? Some used a "relevancy" test, best articulated by Professor McCormick, which treats the validity of the underlying principle and the validity of the technique as matters of relevancy. In addition, of course, the information must be testified to by an expert qualified to present that subject matter, and exclusion could be based on other considerations:

> "General scientific acceptance" is a proper condition upon the court's taking judicial notice of scientific facts, but not a criterion for the admissibility of scientific evidence. Any relevant conclusions which are supported by a qualified expert witness should be received unless there are other reasons for exclusion. Particularly, its probative value may be overborne by the familiar dangers of prejudicing or misleading the jury, unfair surprise and undue consumption of time.[20]

Empirical demonstration was another way to try to establish the reliability of a new technique. On this basis, a number of forensic sciences were admitted, but the demonstrations were often surprisingly flimsy.[21] Questions

that were not squarely faced were how sound the methodological quality of the empirical demonstration (or testing) has to be and how much testing is required to establish validity.[22]

Some courts employed a balancing test, weighing the probative value of the proffered scientific evidence against other factors, among them the significance of the issue to which the evidence is directed, the availability of other evidence, and the utility of limiting instructions.[23]

Florida, Iowa, New York, and Utah required only that the expert vouch for the theory and technique. In Ohio, New Mexico, and at least one federal jurisdiction, courts held that the defendant had a constitutional right to present critical scientific evidence regardless of whether it satisfied *Frye* or not.

Some courts, claiming to apply *Frye's* general acceptance test, were plainly doing something else. See, for example, United States v. Stifel (1970), which used the McCormick "relevancy" test while purporting to be relying on the *Frye* test.[24]

No Test at All

Another popular option was no test at all. Numerous kinds of purportedly scientific evidence were admitted without anything that looked like formal scrutiny.

As mentioned earlier, the author of *Frye* did not employ it himself in another case decided the same day as *Frye*. Instead, his analysis came only to this: "The testimony given by the expert witnesses, tending to establish that the bullet, extracted from the head of the deceased, was shot from the pistol found in the defendant's possession, was competent, and the examination in this particular was conducted without prejudicial error…."[25]

In another example—actually, five examples—in 1999 the Kentucky Supreme Court, claiming to be employing Kentucky's adoption of *Daubert*, upheld the admission of microscopic hair comparison evidence on the basis of the technique's having been held to be "generally accepted" in five prior Kentucky cases.[26] Yes, five prior decisions did hold microscopic hair comparison expert testimony to be admissible. But, the court noted, there was an "absence in our previous opinions of any in-depth analysis under the 'general acceptance' test." That's too generous. Not one of the cited cases engaged in any analysis of admissibility of any kind. However, said the court, "we must assume that it at least satisfied the *Frye* test of general acceptance; for otherwise, the evidence would never have been admitted in the first place."

The trouble with assuming its prior decisions applied *Frye,* though they said not a word about it, overlooked the fact that Kentucky was one of those states that hadn't discovered *Frye* until far into the 20th Century. The first citation to *Frye's* general acceptance test by a Kentucky court occurred in 1983. The cases that supposedly relied *Frye sub silentio* were decided in the 1950s and 1970s.

The problem is not only that a court in 1999 had to conjure holdings out of the silence of its prior opinions, or that it mistakenly assumed general acceptance was the law in its state when it had not been. The larger problem is that, in case after case, an unvalidated form of expert testimony was admitted on the basis of nothing.

Other forms of expert evidence were grandfathered in. They had been coming to courts before 1923, and *Frye* was taken to apply only to "novel" science. So there was no occasion to reconsider their admissibility under the new standard.

V. *Daubert v. Merrell Dow Pharmaceuticals* (1993): The Scientific Validity Test

In 1993, *Daubert* held that the Federal Rules of Evidence, adopted in 1975, did not incorporate the *Frye* test or any requirement of "general acceptance."[27] Given that neither the Rules, the commentary, drafts of rules and commentary, nor debates leading to the Rules make any mention of that case or its central concept, the Supreme Court's unanimous holding ought to have been unsurprising.[28]

Instead, the Court explained, the "overarching subject" of "[t]he inquiry envisioned by Rule 702" "is the scientific validity and thus the evidentiary relevance and reliability—of the principles that underlie a proposed submission."[29] Validity is the central command of *Daubert*.

A. Comparing *Frye* and *Daubert*

Initially, many judges and lawyers believed that *Daubert* was a less demanding filter. The opinion itself spoke of "the Rules' liberal thrust and their general approach of relaxing the traditional barriers to 'opinion' testimony." But sometimes what an opinion does is more significant than what it says.

The essential distinction between *Frye* and *Daubert*, and therefore the impact of *Daubert* on gatekeeping, is summarized in Figure 1. Any given theory or principle or technique can be based on a strong scientific foundation or a weak one (the *Daubert* inquiry). Or, independently of that, it can enjoy high or low "general acceptance" in the particular field or fields in which it belongs (the *Frye* inquiry). As Figure 1 depicts, proffered knowledge that is based on valid science *and* enjoys general acceptance should be admitted by either test. Conversely, proffered knowledge that is not based on valid science *and* does not enjoy general acceptance should be excluded by either test.

But there are two circumstances in which the two attributes can be discordant for any given type of asserted scientific evidence. Where proffered knowledge is based on a sound scientific foundation but has not (or not yet) gained general acceptance, *Frye* would exclude while *Daubert* would admit. This is the situation that is usually envisioned when the two tests are discussed, leading *Daubert* to be seen as the more liberal test. But where proffered knowledge has only a weak scientific foundation and yet enjoys general acceptance in its field, *Frye* would admit but *Daubert* would exclude. In this situation, the *Frye* test is the more porous filter.

Figure 1. Comparison of *Frye* and *Daubert*

	***Daubert*: Valid Foundation**	
***Frye*: General Acceptance**	**Strong**	**Weak**
High	**Both admit**	***Frye* admits *Daubert* excludes**
Low	***Frye* excludes *Daubert* admits**	**Both exclude**

That fourth situation occurs more frequently than one might expect. Indeed, it is the quadrant into which many forensic sciences fell. Judges were surprised to find that techniques and knowledge claims that had passed muster under *Frye* had a much harder time getting through the *Daubert* filter. For example, the first time fingerprint

identification was challenged under *Daubert*, the government (the proponent of the evidence) was astonished to learn that its experts had *no studies* (no data, no evidence) with which to support their century of claims about uniqueness and the flawless accuracy of fingerprint identification.[30] Fingerprint identification was generally accepted among fingerprint examiners, but lacked a foundation of empirical testing—the *sine qua non* of science and of *Daubert*. This is but one example of expertise that passed the *Frye* test easily but found *Daubert* more formidable.

B. The "*Daubert* Factors"

The *Daubert* opinion offered some "general observations" about how judges might evaluate scientific evidence in carrying out their gatekeeping duties under Rule 702. These included looking for empirical testability (and presumably actual testing), peer review (especially to facilitate evaluation of research design and procedures so that "substantive flaws in methodology will be detected"), error rates (which presumably includes, more broadly, the findings of empirical studies relevant to the validity of the proffered expert evidence), "the existence and maintenance of standards controlling the technique's operation," and, still, a dash of "general acceptance," which "can yet have a bearing on the inquiry."

Though the opinion took care to explain that these are not "a definitive checklist," most lawyers and judges have treated them as if they were exactly that.

C. Other Aspects and Elements

Besides making validity the touchstone of admissibility, in dicta *Daubert* clarified a number of other things. The distinction between validity-of-the-asserted-expertise and qualifications-of-the-expert was sharpened. Thus, if a technique or body of asserted knowledge is not valid, even the most highly qualified expert on that subject should be barred from giving testimony.[31] The test of admissibility applies to non-novel as well as to novel proffers. And the proponent of the expert evidence must establish validity by a preponderance of the evidence.

D. *Daubert* on Remand

When *Daubert* was remanded, the circuit panel was clear-eyed enough to see that the *Daubert* factors were not a definitive checklist, that "[t]he inquiry envisioned by Rule 702 is… a flexible one," and that the key requirement was to effectively assure the validity of admitted expert evidence. So the opinion devised an approach to evaluating admissibility that was thought to accomplish that goal, mixing additional criteria with *Daubert's* suggestions.[32]

Notably, the remand opinion required that expert witnesses must come to their knowledge through pre-existing research not conducted in contemplation of litigation. This reflects familiar concerns about the impact of lawyers and the litigation process on the development of experts' opinions. Also, the experts must publish their work, so that their conclusions are available for their field to evaluate. This criterion makes explicit what in *Daubert* was only implicit: that the reactions of peers that arise after publication are more illuminating than the editorial peer review that takes place before publication.

Recognizing that those criteria, used in this case to evaluate the testimony of experts on toxicology and epidemiology, would apply equally to forensic science, many of which would fare poorly, the author of the opinion added a footnote exempting crime laboratory forensic sciences from the test just constructed.[33] Twenty-

one years later, after serving with scientists on a presidential committee and learning about the weaknesses of forensic science, that same judge did a striking about-face:

> The new study from the President's Council of Advisors on Science and Technology (PCAST) examines the scientific validity of forensic-evidence techniques—DNA, fingerprint, bitemark, firearm, footwear, and hair analysis. It concludes that virtually all of these methods are flawed, some irredeemably so.
>
> Americans have long had an abiding faith in science, including forensic science. Popular TV shows like "CSI" and "Forensic Files" stoke this confidence. Yet the PCAST report will likely upend many people's beliefs, as it should. Why trust a justice system that imprisons and even executes people based on junk science?[34]

VI. Other Members of the *Daubert* Quartet

A. *General Electric v. Joiner* (1997)

In *General Electric v. Joiner*[35] the central issue was the standard of review on appeal of a district court's decision to admit or exclude expert testimony. A unanimous (8-0) Court held that abuse of discretion is the proper standard. The reasoning was simply, "We have held [in past cases] that abuse of discretion is the proper standard of review of a district court's evidentiary rulings."[36]

Though that seems straightforward enough, it is worth considering the havoc deferential review can play when the facts at issue are scientific facts. The typical evidentiary ruling is something like whether or not a hearsay exception applies given the particulars of the case at bar. If the trial judge makes a mistake, the error affects only the parties to the case; the ruling has no trans-case implications.

Rulings about science are different. They inherently implicate other cases in which the same scientific question arises. It is one thing to rule that the requirements of the excited utterance exception have not been met in a particular case. If they are met in the circumstances of another case, the two rulings are not inconsistent. But one cannot plausibly find that chemical X is capable of causing cancer in one case but in another case that it is not capable of causing cancer. Or find that the comparison of trace elements of bullets is an unsound (and therefore inadmissible) identification technique in one case but that it is sound science in another case.

Moreover, appellate affirmances made under clear error have no precedential effect.[37] Parties are therefore entitled to raise the same issue again and again in different courts. (Voice spectrography might be rejected as invalid in the southern district but could be found valid in the northern district.) Parties' briefs often cite appellate decisions they like, but competent judges will recognize that they are not bound by rulings made under deferential review.

Imagine that two district courts within the same circuit reach opposite conclusions with respect to the admissibility under *Daubert* of testimony based on some scientific matter. Both cases go up on appeal together. What is the court of appeals to do? Under *Joiner*, unless one of those trial judges was far off base, both would have to be affirmed.[38]

The chaos described above could be managed most effectively, efficiently (in the long run), and rationally through de novo review. De novo review is the rule for questions of law because rule-making has trans-case impact. Consistency (correctness across cases) in the law is an aspect of the rule of law. In that same sense—because they have trans-case implications—scientific questions are law-like at the same time that they are factual and need to be treated similarly.

Another issue was addressed in *Joiner*. Justice Blackmun's majority opinion in *Daubert* had stated that in evaluating studies, the "focus must be solely on principles and methodology, not on the conclusions that they generate."[39] Joiner argued that in light of the language quoted just above, it was error for the District Court to reject Joiner's expert's conclusions based on a number of studies, and the Court of Appeals therefore properly reversed. Chief Justice Rehnquist responded to that argument:

> 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. That is what the District Court did here, and we hold that it did not abuse its discretion in so doing.

Commentators have discussed and debated which view is correct, Blackmun's or Rehnquist's. But the two concepts are so different that there really is no conflict. Counsel confused the issue. The court could easily have swept it aside, by saying: that is a different issue; *Daubert* was talking about an apple and here we have an orange.

Blackmun's point was that the strengths and weaknesses of a study are determined by the methodological qualities of the study (its design, sampling, measures, etc.), independent of whether a judge (or anyone else) likes the study's results or not.

Rehnquist's point was that where a large gap exists between an expert's opinion and the empirical results on which it purports to stand, the expert's opinion may be excluded.[40] (That sensible point would have been even clearer had it not been introduced by needless entanglement: "conclusions and methodology are not entirely distinct from one another.")

B. *Kumho Tire v. Carmichael* (1999)

Kumho Tire v. Carmichael[41] addressed several noteworthy issues. First and foremost was the question of "how *Daubert* applies to the testimony of engineers and other experts who are not scientists." A unanimous Court held that a federal trial judge's "gatekeeping" obligation applies not only to "scientific" testimony, but to all expert testimony. In his opinion for the Court, Justice Breyer wrote, "We conclude 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."

Any and all proposed expert testimony must be found to rest on valid foundations as a condition of admission. "The objective of [the gatekeeping] requirement is to ensure the reliability and relevancy of expert testimony." Whatever the proffered expertise is, the trial court has to fashion an appropriate test for determining whether or

not it is valid. The particular factors mentioned in *Daubert* might or might not be useful in evaluating proffers of non-science expert testimony. "The trial court must have the same kind of latitude in deciding how to test an expert's reliability, and to decide whether or when special briefing or other proceedings are needed to investigate reliability, as it enjoys when it decides whether that expert's relevant testimony is reliable."[42]

Kumho Tire involved a blowout leading to a serious crash, and the expert testimony proffered by plaintiffs was that of a tire failure analyst. Applying the *Daubert* factors as best it could under the circumstances, the district court rejected the testimony. The Eleventh Circuit reversed, holding that *Daubert* applied only to scientific expert evidence, which this was not. And the Supreme Court reinstated the district court's exclusion.

Lurking in the background were other cases in which *Daubert* was held inapplicable to non-science expert testimony. Proponents of such testimony were beginning to discover that if they framed their experts as non-scientists, some courts would let them in the door without having to survive the rigors of *Daubert*.

In one case, following a *Daubert* hearing the district judge ruled: "[T]he testimony at the *Daubert* hearing firmly established that forensic document examination, despite the existence of a certification program, professional journals and other trappings of science, cannot, after *Daubert*, be regarded as 'scientific ... knowledge.'" Because the witness was not offering anything scientific, however, *Daubert* was inapplicable; because *Daubert* was inapplicable, the proposed testimony could be evaluated against a looser standard; and therefore the testimony was admissible.[43]

Another case in which the problem emerged involved two proffered expert witnesses on the question of fire causation.[44] One expert was a fire scientist whom the district court felt did not make it over the *Daubert* hurdle and was therefore excluded. But the other proffered expert was a fireman who had acquired experience examining fire scenes and reaching opinions on whether the fire had been started accidentally or intentionally. This was clearly not a scientist, thought the court; therefore *Daubert* did not apply; therefore the witness's conclusions were admissible.

Kumho Tire impliedly reversed those kinds of cases and prohibited such reasoning in the future.

Another important issue was the nature of the continuing role of "general acceptance." If the key to *Daubert* is proof of validity of whatever the proponent is proffering, and if the "*Daubert* factors" were guides to establishing validity, could one of those factors alone supply a sufficient basis for a finding of validity, and might that factor be "general acceptance"? The Supreme Court realized that to equate general acceptance with validity would permit *Frye* to swallow *Daubert*. This was not allowed to happen: "*Daubert's* general acceptance factor [does not] help show that an expert's testimony is reliable where the discipline itself lacks reliability...."—giving as examples "any so-called generally accepted principles of astrology or necromancy."[45]

Finally, *Kumho Tire* reiterated the notion that knowledge which is determined to be valid must also be "relevant to the task at hand."[46] The point here is that demonstrating that a body of knowledge or a field of expertise is reliable and relevant with respect to some tasks does not establish that it is valid with respect to the "task at hand" in the case at bench.

C. *Weisgram v. Marley* (2000)

The fourth case in the *Daubert* line is *Weisgram v. Marley*.[47] Damages were sought from the manufacturer of a heater alleged to have been defective, starting a fire, and causing the death of Bonnie Weisgram. Plaintiff offered

three expert witnesses on the question of defect and its causal relationship to the fire. Over defendant Marley's objection, the trial judge admitted the expert testimony. On appeal by defendant, the Eighth Circuit reversed the admission, holding that the experts' testimony was not sufficiently sound and therefore should not have been admitted. The appeals court then considered the remaining evidence in the light most favorable to Weisgram, found it insufficient to support a jury verdict for the plaintiff, and directed judgment as a matter of law for Marley.

The question before the Supreme Court was whether the Court of Appeals, upon deciding that the plaintiff's expert evidence was inadmissible, was required to remand for a new trial rather than direct judgment on its own.

The Supreme Court, in an opinion by Justice Ginsburg, unanimously rejected Weisgram's argument that allowing courts of appeals to direct the entry of judgment for verdict-losing defendants will "punish plaintiffs who could have shored up their cases by other means had they known their expert testimony would be found inadmissible."

> Since *Daubert* … parties relying on expert evidence have had notice of the exacting standards of reliability such evidence must meet. It is implausible to suggest, post-*Daubert,* that parties will initially present less than their best expert evidence in the expectation of a second chance should their first try fail.[48]

Thus, in the space of seven years, *Daubert* had morphed from standing for "the Rules' liberal thrust and their general approach of relaxing the traditional barriers to 'opinion' testimony" to a doctrine that imposed "exacting standards of reliability" on expert evidence.

VII. Amendments to Rule 702

Rule 702 has been amended "in response to *Daubert v. Merrell Dow Pharmaceuticals, Inc.* (1993), and to the many cases applying *Daubert*, including *Kumho Tire Co. v. Carmichael* (1999)."[49] This might seem ironic, since *Daubert* was interpreting Rule 702 as it stood since being promulgated in 1975. Nevertheless, there has been something of a dialogue between judicial interpretations of the rule and the language of the rule itself. Bringing the two into closer alignment added clarity and made some of the Supreme Court's requirements harder to miss.

An Appendix to this paper provides the language of Rule 702 from its origin in 1975 to the most recent amendments, scheduled to take effect on December 1, 2023.

A. 2000 Amendments

The 2000 Amendments served two purposes. One was to have the rule better reflect the Supreme Court's views expressed in *Daubert*. The amended rule begins by preserving the original standard for expert witness qualification and for insuring that the expert's testimony "will assist" the jury. Next, three numbered statements aim to reflect *Daubert's* validity requirement: that the testimony is "based upon sufficient facts or data," "is the product of reliable principles and methods," and that "the witness has applied the principles and methods reliably to the facts of the case." The Rule thus reflected the need for helpfulness, adequate foundation, relevance, and fit.

The second purpose was to provide an extensive Committee Note to assist judges in performing their gatekeeping responsibilities. The Advisory Committee[50] and the Court recognized that *Daubert's* interpretation of Rule 702 created a different test for determining whether expert testimony is admissible, thereby imposing very different demands on trial judges than what some or many had experienced previously.

B. 2011 Restyling

In 2011, Rule 702 was amended as part of the restyling project that had been undertaken for the entirety of the Federal Rules of Evidence in order to make them "more easily understood and to make style and terminology consistent throughout the rules." In keeping with the guiding principle of that project, restyled Rule 702 contains no changes in content or meaning. Its major elements became subparts. Subpart (c), "the testimony is the product of reliable principles and methods," contains the heart of *Daubert's* teaching.

C. 2023 Amendments

Rule 702 has been amended again (effective December 1, 2023), to address two concerns.

First, *Daubert* held that a trial court's expert evidence admissibility decisions are governed by Rule 104(a). Under that rule it is the court's duty to make the admissibility decision and not punt it to the jury. Moreover, citing *Bourjaily v. United States* (1987), the Supreme Court in *Daubert* held that Rule 104(a) requires the proponent to demonstrate that the requirements of admissibility are met by a preponderance of the evidence. In addition, the Advisory Committee's note to the 2000 amendment to Rule 702 reiterated the applicability of that standard of proof. Nevertheless, many federal district court opinions employed an incorrect standard, and handed to the jury some of the issues that were the judge's duty to resolve—incorrectly treating the sufficiency of an expert's basis and the reliability the expert's application as questions of weight for the jury. The 2023 amendment seeks to prevent future such errors by stating the applicable standard of proof in the rule itself.

A second purpose of the amendment is to address a common application problem, namely, experts' overstating the conclusions that can be drawn from application of their discipline's concepts and methods to the data of the case at bar. For example, an FBI study found that microscopic hair comparison experts exaggerated their reports and testimony beyond what their field was capable of—not occasionally, but more than 90 percent of the time.[51]

It is not enough for a gatekeeping judge to find that the expert relied on "sufficient facts or data" and that the expert applied "reliable principles and methods." It is also necessary that expert opinions "stay within the bounds of what can be concluded from a reliable application of the expert's basis and methodology." Accordingly, subpart (d) now states that "the expert's opinion [must reflect] a reliable application of the principles and methods to the facts of the case." The Advisory Committee note to the amendment explains that the problem of experts exaggerating the conclusions that can be drawn from their techniques is "especially pertinent to the testimony of forensic experts in both criminal and civil cases."

VIII. Federal Expert Evidence Admissibility Rules in a Nutshell

We can summarize existing federal expert evidence admissibility doctrine quite briefly.

- A distinction is made between validity-of-the-asserted-expertise and qualifications-of-the-expert. [Rule 702]
- The trial court hears evidence and arguments in a Rule 104(a) hearing, also referred to as a *Daubert* hearing. [*Daubert*]
- At that hearing, the proponent must establish validity by a preponderance. [*Daubert*, *Bourjaily*, Rule 104(a), Rule 702]

- The court shall then admit, exclude, or order limitations on the expert's testimony. [Rule 104(a)]
- The requirement of proving validity applies to non-novel as well as to novel proffers. [*Daubert*]
- The requirement of proving validity applies to all expert evidence, not just "science." [*Kumho Tire*]
- General acceptance alone is insufficient to prove validity. [*Kumho Tire*]
- If the proponent's expert evidence is admitted, the opponent may attack the testimony again at trial—but only with respect to weight and credibility. [Rule 104(e)]
- The standard of review on appeal is abuse of discretion. [*Joiner*]
- The court of appeals may itself enter judgment against proponents of expert evidence if their evidence had been admitted at trial, admission is found on appeal to have been an abuse of discretion, and exclusion leaves proponent without sufficient evidence to prevail at a retrial.[52] [*Weisgram v. Marley*].

IX. Difficulties Applying Rule 702 as Aligned with the Supreme Court's Cases

About any of the tests of admissibility, one could ask several questions. How good is the test theoretically? If the test is conceptually sound, are judges able to apply it effectively? Even if judges are able to perform the gatekeeping function, will they do so faithfully and honor its results even when they do not like where it leads? At the end of the day, does the legal test for admissibility of expert evidence, as applied, contribute to the effective sorting of valid from invalid proffers?

A. Are Judges Unable or Unwilling?

The question of whether *Daubert's* validity requirement places unattainable demands on judges was raised by Chief Justice Rehnquist in his concurrence in *Daubert*. While agreeing "that the *Frye* rule did not survive the enactment of the Federal Rules of Evidence," he voiced doubts about what judges can be expected to do when evaluating expert testimony:

> I defer to no one in my confidence in federal judges; but I am at a loss to know what is meant when it is said that the scientific status of a theory depends on its "falsifiability," and I suspect some of them will be, too.
>
> I do not doubt that Rule 702 confides to the judge some gatekeeping responsibility in deciding questions of the admissibility of proffered expert testimony. But I do not think it imposes on them either the obligation or the authority to become amateur scientists in order to perform that role.[53]

Rehnquist's concern echoes the "expert dilemma" discussed earlier[54] and repeated by others.[55] If experts are needed precisely because laypersons do not understand what the experts understand, how can the non-expert judge evaluate the validity of assertedly expert evidence for the benefit of the non-expert jury?

The Ninth Circuit panel evaluating the plaintiff's expert proffers on remand of *Daubert* saw the paradox clearly, even poignantly:

> As we read the Supreme Court's teaching in *Daubert* … though we are largely untrained in science and certainly no match for any of the witnesses whose testimony we are reviewing, it is our responsibility to determine whether those experts' proposed testimony amounts to "scientific knowledge," constitutes "good science," and was "derived by the scientific method."
>
> The task before us is more daunting still when the dispute concerns matters at the very cutting edge of scientific research, where fact meets theory and certainty dissolves into probability. As the record in this case illustrates, scientists often have vigorous and sincere disagreements as to what research methodology is proper, what should be accepted as sufficient proof for the existence of a "fact," and whether information derived by a particular method can tell us anything useful about the subject under study.
>
> Our responsibility, then, unless we badly misread the Supreme Court's opinion, is to resolve disputes among respected, well-credentialed scientists about matters squarely within their expertise, in areas where there is no scientific consensus as to what is and what is not "good science," and occasionally to reject such expert testimony because it was not "derived by the scientific method." Mindful of our position in the hierarchy of the federal judiciary, we take a deep breath and proceed with this heady task.[56]

Even if judges are capable of carrying out *Daubert's* teachings with aplomb, they might sometimes choose not to. Apparently fearing that some district judges would try to evade their gatekeeping obligations by taking the "flexibility" granted them as license to dilute their testing of proffered expert testimony, Justice Scalia warned that deficient scrutiny justifies reversal:

> Trial-court discretion in choosing the manner of testing expert reliability is not discretion to abandon the gatekeeping function …. it is not discretion to perform the function inadequately. Rather, it is discretion to choose among reasonable means of excluding expertise that is *fausse* and science that is junky. The failure to apply one or another of [the *Daubert* factors] may be unreasonable, and hence an abuse of discretion.[57]

B. Illustrations

Perhaps the clearest illustrations of judicial inability or unwillingness are found in their treatment of numerous forensic sciences. A review by a large interdisciplinary panel of the National Academy of Sciences (NAS) scrutinized those fields and their techniques and concluded: "Much forensic evidence … is introduced in criminal trials without any meaningful scientific validation, determination of error rates, or reliability testing …."[58]

That same panel—co-chaired by a prominent federal appellate judge—found the judges to be as bad at science as forensic scientists have been: "[F]orensic science professionals have yet to establish either the validity of their approach or the accuracy of their conclusions, and the courts have been utterly ineffective in addressing this problem."[59]

Whether gatekeeping judges lacked the necessary understanding of how to evaluate scientific (empirical) claims or refused to apply their acuity to forensic "expertise that is *fausse* and science that is junky," evidence of deficient screening is not hard to find.

A number of forensic sciences that had routinely been admitted into evidence began to disappear from the courts. But their departures came about not because courts recognized their junkiness, but because the fields themselves, or the wider scientific community, discovered that their techniques lacked validation if not validity. These fields include voiceprint identification,[60] comparative bullet lead analysis,[61] and numerous arson indicators.[62] Bitemark identification seems poised to join those others in the cemetery of unsound forensic sciences.[63]

On occasion, judges recognized the weaknesses of some forms of expertise and imposed limitations on what experts could assert in their testimony.[64] More often, however, courts remained oblivious to fatal weaknesses.

Some forensic sciences have achieved such a degree of unthinking cultural acceptance that few judges have been able to rise above their own immersion in that culture.[65] When fingerprint identification was challenged for the first time under *Daubert*, prosecutors learned from their FBI examiners that no research existed testing the validity of their claims or supporting the breathtaking accuracy (zero error, 100 percent certainty) commonly asserted for it.[66]

Apparently realizing that the proponent lacked the scientific evidence needed to survive a proper *Daubert* analysis, many judges found ways to avoid the analysis required by *Daubert* and *Kumho Tire*. As the treatise *Modern Scientific Evidence*, explains:

> With few exceptions… judicial opinions reacting to challenges to asserted fingerprint identification expertise are united by their failure—typically, their refusal—to conduct any thoughtful analysis under *Daubert* and *Kumho Tire*. Some of the opinions contain virtually no *Daubert* analysis at all; others an inquiry that is no more than a parody of *Daubert* analysis; and those empty opinions then become something later cases can cite as justification for ducking their own gatekeeping responsibilities. Judges, like virtually everyone else in our culture, have grown up believing, without evidence or critical thought, that fingerprints are unique and that examiners are extremely accurate in all that they do.
>
> Judges who have had to resolve such challenges appear to have been unable to adopt the necessary posture of skepticism long enough to see whether or not the proponents of the expert testimony can lift their claims over the *Daubert* hurdle. With few exceptions, the opinions all resort to one or another sort of evasion so that they can arrive at what they already "know" to be the "correct" conclusion, namely, that asserted fingerprint identification expertise satisfies the law's admissibility requirements. What they actually do is to refrain from subjecting the proponents' claims to the rigors of *Daubert*.[67]

The treatise then reviews the various stratagems found in the cases. Here is that list:

> Refusal to conduct a *Daubert* hearing
>
> Reversal of the burden of persuasion
>
> Ignoring *Kumho Tire's* task-at-hand requirement
>
> Avoidance of actual *Daubert* analysis[68]
>
> Turning *Kumho Tire* on its head[69]

Reliance on admission by other courts

Reliance on general acceptance[70]

Emphasis on flexibility of criteria[71]

Bringing the standards down to meet the expertise[72]

Relegate to weight, not admissibility[73]

Ironically, such efforts to find ways around the *Daubert/Kumho Tire* gauntlet do not so much shelter the favored expertise from serious scrutiny as they underscore that the proffered evidence failed to meet the law's requirements.

Also ironically, exempting weak expert evidence from the legal test helps ensure it will remain weak. Shortly after the publication of the earthshaking NAS Report on forensic science, Barry Fisher, then director of the Los Angeles County Crime Laboratory and president of the American Academy of Forensic Sciences, addressed judges at a conference: "You have given us a free ride. Unless there's some push to deal with these things [validation studies], there's not going to be any push on the part of any parent agency that runs laboratories to do these kinds of things. We are reactive. And if it turns out that an appellate court or a supreme court decision comes down and says 'you can't say this kind of stuff, you need to do the needed validation,' that will send a message …."

Thus, what the courts do affects what the experts do. This impact is inevitably greatest for fields that have no life outside of courts.[74] Scientific knowledge developed within conventional industry, healthcare, universities, or even the consumer marketplace faces cultural and economic pressures for continued testing and improvement. But a field of asserted expertise that has only one ultimate audience (the courts) is in a far different situation. If its audience insists upon high quality, sound science, the expert field would almost certainly rise to the challenge. Because the courts do not insist, the forensic disciplines do not rise.[75]

X. Evolution of Admissibility Rules, Past and Future

So long as the law believes that expert evidence must cross a higher threshold to gain admission, and so long as existing rules and practices fail to achieve the desired filtering, the rules governing expert evidence admissibility will continue to evolve. As we have seen, expert evidence admissibility rules have been advanced, tweaked, revised and tweaked again in a centuries-long search for the right recipe. Rules of procedure have also been part of that mix.[76]

In any given era, there have been optimists, urging that with another tweak, or the right kind of help, judges will do better what the rules call upon them to do.[77]

Others believe that fundamental flaws in the process of presenting expert evidence to factfinders, with or without judicial gatekeeping, can be mended only through a legal paradigm shift. Learned Hand offered one of the earliest of these proposals.[78] Most recently, a leading evidence scholar, Edward Cheng, has argued that the whole *Daubert* project has proved unworkable. Cheng begins by observing:

> Founded on good intentions but unrealistic expectations, the dominant *Daubert* framework for handling expert and scientific evidence should be scrapped. *Daubert* asks judges and jurors to

> make substantively expert determinations, a task they are epistemically incompetent to perform as laypersons.[79]
>
> Having placed its lay decisionmakers in impossible positions, the *Daubert* regime dooms itself to suboptimal decisions. And while critics are quick to blame the decisionmakers, the fault lies not with them, but with the underlying structure.[80]

Discussion of the substance of these proposals, and others,[81] is a topic for another day. But they are out there. When dissatisfaction with the current rules and procedures grows sufficiently large or loud,[82] we shouldn't be surprised to see more evolution in the future—perhaps tweaks, perhaps changes more fundamental.

Appendix: Changes in Rule 702, Testimony by Experts, from the Original (1975) Rule through Current Amendments (2023)

Original 1975

If scientific, technical, or other specialized knowledge will assist the trier of fact to understand the evidence or to determine a fact in issue, a witness qualified as an expert by knowledge, skill, experience, training, or education, may testify thereto in the form of an opinion or otherwise.

Amended 2000

If scientific, technical, or other specialized knowledge will assist the trier of fact to understand the evidence or to determine a fact in issue, a witness qualified as an expert by knowledge, skill, experience, training, or education, may testify thereto in the form of an opinion or otherwise, if (1) the testimony is based upon sufficient facts or data, (2) the testimony is the product of reliable principles and methods, and (3) the witness has applied the principles and methods reliably to the facts of the case.

Restyled 2011

A witness who is qualified as an expert by knowledge, skill, experience, training, or education may testify in the form of an opinion or otherwise if:

(a) the expert's scientific, technical, or other specialized knowledge will help the trier of fact to understand the evidence or to determine a fact in issue;

(b) the testimony is based on sufficient facts or data;

(c) the testimony is the product of reliable principles and methods; and

(d) the expert has reliably applied the principles and methods to the facts of the case.

Amended 2023 (Effective December 1, 2023)

A witness who is qualified as an expert by knowledge, skill, experience, training, or education may testify in the form of an opinion or otherwise if the proponent demonstrates to the court that it is more likely than not that:

(a) the expert's scientific, technical, or other specialized knowledge will help the trier of fact to understand the evidence or to determine a fact in issue;

(b) the testimony is based on sufficient facts or data;

(c) the testimony is the product of reliable principles and methods; and

(d) the expert's opinion reflects a reliable application of the principles and methods to the facts of the case.

Notes

1 Lord Chancellor Campbell, in the Tracy Peerage, 10 Clark & F. 154 (1839, 1843). See, other illustrations, old and recent:

"[W]e think [expert testimony] should not be much encouraged and should be received only in case of necessity. [Their views] cannot fail to be warped by a desire to promote the cause in which they are enlisted." Ferguson v. Hubbel, 97 N.Y. 507 (1884).

"Many judges have expressed their thorough dissatisfaction with the prevalent method . . . of making use of the services of experts in the conduct of judicial inquiries. . . . [N]o judge has, in recent times, said aught in praise of the system…. Law writers are equally condemnatory of the system and severe in their reflections upon the product of that system—the expert. Experts themselves do not like it." C. Herschel, Services of Experts in the Conduct of Judicial Inquiries, XXI Am. L. Rev. 571 (1887), at 571.

"[T]here is a constant complaining and mistrust on the part of judges, juries and lawyers of the expert witness." L.M. Friedman, *Expert Testimony, Its Abuse and Reformation*, 19 Yale L. J. 247 (1910), at 247.

An experiment in which 108 experts were paid to review the same case files, having been randomly assigned to work for one side of a case or the other, found the experts' views automatically, without prompting, tilted toward the interests of the hiring party. Daniel Murrie et al., *Are Forensic Experts Biased by the Side That Retained Them?*, 24 Psych. Sci. 1889 (2013).

A study by the FBI found greater than 98% of reports and testimony by the government's microscopic hair comparison experts exaggerated their conclusions beyond what the discipline was capable of finding. See, ABS Group, Root and Cultural Cause Analysis of Report and Testimony Errors (August 2018), at https://vault.fbi.gov/root-cause-analysis-of-microscopic-hair-comparison-analysis/root-cause-analysis-of-microscopic-hair-comparison-analysis-part-01-of-01/view.

2 E.g., Gregory v. City of Louisville et al., 444 F.3d 725 (2006). False and misleading testimony by forensic scientists has, overall, been one of the major causes of wrongful conviction. See, National Registry of Exonerations, at https://www.law.umich.edu/special/exoneration/Pages/about.aspx.

3 David L. Faigman et al., *Modern Scientific Evidence: The Law and Science of Expert Testimony* (West, updated annually), Fire and Arson chapter.

4 Some commentators question the assumptions on which differential treatment of expert evidence is based, and offer data to support their doubts. Frederick Schauer and Barbara A. Spellman, *Is Expert Evidence Really Different?*, 89 Notre Dame L. Rev. 1 (2013).

5 Federal Rules of Evidence, Rule 702.

6 Learned Hand, *Historical and Practical Considerations Regarding Expert Testimony*, 15 Harv. L. Rev. 40 (1901).

7 Id., at 48.

[H]ow can the jury judge between two statements each founded upon an experience confessedly foreign in kind to their own? It is just because they are incompetent for such a task that the expert is necessary at all.

Moreover, there can be no competent tribunal, except one composed of those who have possessed themselves of the specialized experience and the trained powers of observation necessary to bring to a valid test the truth of the various propositions offered.

8 Rule 706, Advisory Committee Comments.

9 Anonymous, Lib. Ass. 28, pi. 5 (28 Ed. III).

10 Cro. Jac. 541.

11 David L. Faigman et al., *Check Your Crystal Ball at the Courthouse Door, Please: Exploring the Past, Understanding the Present, and Worrying about the Future of Scientific Evidence*, 15 Cardozo L. Rev. 1799 (1994).

12 293 F.1013 (D.C. Cir 1923).

13 Suppose astrological predictions were relevant to a case. Under *Frye*, astrologers would have to be relied on to tell us whether astrology or one of its techniques is generally accepted by astrologers.

14 Modern Scientific Evidence, supra note 3, Chapter 1.

15 This implies a belief that once a scientific discipline comes to believe in the validity of something, that something becomes true for all time—as if science never corrects its errors.

16 See., e.g., Giannelli. Modern Scientific Evidence, supra note 3; Paul C. Giannelli, T*he Admissibility of Novel Scientific Evidence:* Frye v. United States, *A Half-Century Later*, 80 Colum. L. Rev. 1197 (1980).

17 Daubert v. Merrell Dow Pharmaceuticals, 509 U.S. 579 (1993).

18 People v. Berkman, 307 Ill. 492, 139 N.E. 91 (1923).

19 Laney v. United States, 294 F. 412 (App. D.C. 1923). Signed the same day as *Frye*.

20 McCormick on Evidence, §§ 202, 203 (2d ed. 1972).

21 See, Michael J. Saks, *Merlin and Solomon: Lessons from the Law's Formative Encounters with Forensic Identification Science*, 49 Hastings L.J. 1069 (1998).

22 The parallels to *Daubert* should be obvious.

23 Weinstein & M. Berger, Weinstein's Evidence 1702[03] (1980).

24 433 F.2d 431 (6th Cir. 1970), cert. denied, 401 U.S. 994 (1971). Just as we shall see examples of courts claiming to be applying *Daubert* but plainly doing something else.

25 Laney v. United States, supra note 19.

26 Johnson v. Commonwealth, 12 S.W.3d 258 (Ky. 1999).

27 *Daubert*, which concerned whether the drug Bendectin had teratogenic effects.

28 The Second Circuit and the Maine Supreme Judicial Court promptly construed the new Federal Rules of Evidence to impliedly overrule Frye.

29 *Daubert*. See n. 9 ("In a case involving scientific evidence, *evidentiary reliability* will be based upon *scientific validity*" (italics in original).) The "relevance" in the words quoted in the text reflects the Court's argument that evidence which is not valid cannot be relevant. See also Rule 104(a-c).

30 United States v. Llera-Plaza, 179 F. Supp. 2d 492, 188 F. Supp. 2d 549 (E.D. Pa. 2002). See extensive discussion in Modern Scientific Evidence, supra note 3, Fingerprint Identification chapter.

31 Think: astrologers.

32 Daubert v. Merrell Dow Pharmaceuticals, 43 F.3d 1311 (9th Cir. 1995)

33 Id., at note 5 ("There are, of course, exceptions. Fingerprint analysis, voice recognition, DNA fingerprinting and a variety of other scientific endeavors closely tied to law enforcement may indeed have the courtroom as a principal theatre of operations. As to such disciplines, the fact that the expert has developed an expertise principally for purposes of litigation will obviously not be a substantial consideration."). Whispers leaking from chambers say that Judge Kozinski's panel colleagues debated with him the wisdom of the footnote.

34 Alex Kozinski, "Rejecting Voodoo Science in the Courtroom," Wall St. J. (Sept. 19, 2016), at https://www.wsj.com/articles/rejecting-voodoo-science-in-the-courtroom-1474328199.

35 General Electric Company v. Joiner, 522 U.S. 136 (1997) (another toxic tort case, this involving whether PCBs can promote the kind of cancer suffered by the plaintiff).

36 Id. at 137.

37 On deferential review, an appellate court can believe a trial court made the wrong decision, but had not abused its discretion such that the court above is entitled to reverse it. When a court of appeals overrules, we have a much clearer situation.

38 A decade earlier, confronting the same problem in a different context, Justice Rehnquist, the author of *Joiner*, saw the problem more clearly. See Lockhart v. McCree, 476 U.S. 162 (1986):

> McCree argues that the "factual" findings of the District Court and the Eighth Circuit . . . may be reviewed by this Court only under the "clearly erroneous" standard of Federal Rule of Civil Procedure 52(a) . . . . We are far from persuaded, however, that the "clearly erroneous" standard of Rule 52(a) applies to the kind of "legislative" facts at issue here. See generally Dunagin v. City of Oxford, Mississippi (C.A.5 1983). The difficulty with applying such a standard to "legislative" facts is evidenced here by the fact that at least one other Court of Appeals, reviewing the same social science studies as introduced by McCree, has reached a conclusion contrary to that of the Eighth Circuit (citations omitted).

39 *Daubert* at 580.

40 If a set of (well-designed, well-conducted, well-analyzed) studies suggests with sufficient clarity that X does not cause Y, the expert may not testify that the studies support an opinion that X causes Y.

41 Kumho Tire v. Carmichael, 526 U.S. 137 (1999).

42 Kumho Tire, at 152.

43 United States v. Starzecpyzel. 880 F. Supp. 1027 (S.D.N.Y. 1995). No doubt the testimony would have been admitted if the proponent could have demonstrated the requisite validity. Thus, the testimony would be admissible if it satisfied *Daubert* and also admissible if it failed *Daubert*. The point was not lost on handwriting examiners and other forensic scientists.

44 Michigan Millers Mut. Ins. Corp. v. Benfield, 140 F.3d 915 (11th Cir. 1998).

45 *Kumho Tire.*

46 Id. See, also, D. Michael Risinger, *Defining the Task at Hand: Non-Science Forensic Science after* Kumho Tire Co. v. Carmichael, 57 Wash. & Lee L. Rev. 767 (2000).

47 Weisgram v. Marley Co., 528 U.S. 440 (2000).

48 *Weisgram*, at 455.

49 Advisory Committee Comments to 2000 Amendments (citations omitted).

50 Details about the work of the advisory committees on rules governing the federal judiciary can be found at: https://www.uscourts.gov/rules-policies/about-rulemaking-process. There, information can be found on the Rules Enabling Act (1934) governing the work of the rules committees, the process of rulemaking, how to propose changes to federal court rules, how to offer input on pending proposals, the membership of the various committees, and other information.

51 Supra note 1. This is the sort of problem that led to amending Rule 702 to require policing of expert opinions to prevent exaggeration. Rule 702(d) (requiring that each expert opinion must "stay within the bounds of what can be concluded from a reliable application of the expert's basis and methodology.").

52 Reflecting, in the space of seven years, a shift in the Court's view of Rule 702 from reflecting the "liberal thrust of the Federal Rules" in Daubert to a test of "exacting standards" in *Weisgram*.

53 *Daubert*, Rehnquist concurrence.

54 Supra note 7 and accompanying text.

55 See, e.g., Samuel R. Gross, *Expert Evidence*, 1991 Wis. L. Rev. 1113 (1991) ("We call expert witnesses to testify about matters that are beyond the ordinary understanding of lay people (that is both the major practical justification and a formal legal requirement for expert testimony), and then we ask lay judges and jurors to judge their testimony.").

56 Daubert v. Merrell Dow Pharmaceuticals, 43 F.3d 1311 (9th Cir. 1995) (citations omitted).

57 *Kumho Tire*, Scalia concurrence (joined by O'Connor and Stevens).

58 National Research Council, Strengthening Forensic Science in the United States, A Path Forward (Washington D.C.: National Academies of Science (2009)). See, also, President's Council of Advisors on Sci. & Tech., Exec. Office of the President, Forensic Science in Criminal Courts: Ensuring Scientific Validity if Feature-Comparison Methods (2016).

59 NRC Report, supra note 58.

60 National Research Council, On the Theory and Practice of Voice Identification (1979).

61 National Research Council, Forensic Analysis: Weighing Bullet Lead Evidence (2004).

62 Modern Scientific Evidence, supra note 3, Fire and Arson chapter.

63 Bitemark Analysis: A NIST Scientific Foundation Review (NIST Interagency Report 8352) (March, 2023). Also, see https://www.txcourts.gov/media/1454500/finalbitemarkreport.pdf (Texas Forensic Science Commission recommends moratorium on forensic bitemark identification in Texas courts).

64 United States v. Glynn, 578 F. Supp. 2d 567 (S.D.N.Y. 2008) (firearms identification).

65 One opinion revealed its author's cultural immersion: "The court's decision may strike some as comparable to a breathless announcement that the sky is blue and the sun rose in the east yesterday." United States v. Havvard, 117 F.Supp.2d 848 (S.D.Ind. 2000). Compare with another judge's awareness of the problem: "[F]ingerprint evidence has been afforded a near magical quality in our culture. In essence, we have adopted a cultural assumption that a government representative's assertion that a defendant's fingerprint was found at a crime scene is an infallible fact, and not merely the examiner's opinion." State v. Quintana, 103 P.3d 168 (Utah Ct. App. 2004).

66 Llera-Plaza, supra note 30.

67 Modern Scientific Evidence, supra note 13, Fingerprint Identification chapter.

68 The *Havvard* judge proceeded seriatim through the Daubert "factors," substituting for each one an easier test. For example, scientific testing was replaced with courtroom testing which involved "the highest possible stakes—liberty and sometimes life." Peer review of scientific studies was replaced with review of the examiner's work by a peer. *Havvard* rejected the expert's claim of zero error (based on no data) but substituted the court's own belief that the error rate is "vanishingly small" (still based on no data).

69 The court reviewing *Havvard* noted that, "The standards of Daubert . . . are not limited in application to 'scientific' testimony alone." . . . Therefore, the idea that fingerprint comparison is not sufficiently 'scientific' cannot be the basis for exclusion under *Daubert*." Therefore, admissibility was affirmed. United States v. Havvard, 260 F.3d 597 (7th Cir. 2001). As Modern Scientific Evidence comments: "The Court of Appeals sought to remove fingerprinting from the realm of the empirical in order, apparently, to move it out of Daubert's reach. Bizarrely, it relied on *Kumho Tire* to accomplish that, even though *Kumho Tire* stands for exactly the opposite proposition, namely, that there is to be no escape from appropriate scrutiny." *Kumho Tire* had not reduced the obligation to ensure validity, it reinforced that duty. See, also, Scalia's concurrence in *Kumho Tire*.

70 *See, Kumho Tire* (rejecting general acceptance as a sufficient basis by itself for approving admission). *See, supra* note 41. See, also, Scalia's concurrence in *Kumho Tire*, supra note 57.

71 See, id.

72 On realizing that asserted fingerprint identification expertise was not scientific, had not been well tested, lacked "traditional" scientific testing, and lacked a body of peer reviewed research literature, a court concluded that those shortcomings meant that alternative, less rigorous, criteria needed to be employed (in order to facilitate admission).

U.S. v. Cline, 188 F. Supp. 2d 1287 (D. Kan. 2002). For a similar example involving handwriting identification, see U.S. v. Starzecpyzel, supra note 43. Again, also, Scalia's concurrence in *Kumho Tire*, supra note 57.

73 See Commentary to 2023 Amendments to Rule 702 ("[M]any courts have held that the critical questions of the sufficiency of an expert's basis, and the application of the expert's methodology, are questions of weight and not admissibility. These rulings are an incorrect application of Rules 702 and 104(a)."

74 Fields that have a life outside the courtroom—serving industry, patients, consumer markets, an academic science community—have other pressures driving their continual improvement.

75 We can see the irony in Judge Kozinski's 1993 footnote seeking to protect forensic sciences from *Daubert* scrutiny when he realized they would flunk, and his later castigation of them in the *Wall Street Journal*. He scolded them for being what he helped make them.

76 See, most notably, rules governing pre-trial discovery, permitting advisory juries, permitting judicial advisors, and court-appointed experts (Rule 706—which seems as much a rule of procedure as of evidence). See, Daniel L. Rubinfeld and Joe S. Cecil, *Scientists as Experts Serving the Court*, 147 Daedalus 152 (Fall, 2018).

77 As an example of another amendment, see, David E. Bernstein and Eric G. Lasker, *Defending Daubert: It's Time to Amend Federal Rule of Evidence 702*, 57 Wm. & Mary L. Rev. 1 (2015) (proposing small changes in the language of Rule 702 they believe will produce large improvements in gatekeeping). As an example of educational assistance, the Federal Judicial Center puts on judicial education programs and publishes its Scientific Evidence Reference Manual. Academics try to assist by producing other treatises, e.g., Modern Scientific Evidence, supra note 3; and Paul C. Giannelli et al., Scientific Evidence (2012).

78 Hand, supra note 6.

79 Edward K. Cheng, *The Consensus Rule: A New Approach To Scientific Evidence*, 75 Vand. L. Rev. 407, 407 (2022).

80 Id., at 419-420.

81 See, e.g., Samuel Gross, supra note 55; Arthur Kantrowitz, *Proposal for an Institution for Scientific Judgment*, 156 Science 763(1967); Andrew W. Jurs, *Science Court: Past Proposals, Current Considerations, and a Suggested Structure*, 15 Va. J. L. & Tech. 1 (2010).

82 The legal literature contains many critiques. For a few good examples, see Bernstein & Lasker, supra note 77; *Modern Scientific Evidence*, supra note 3; NRC Report, supra note 58. Another example might be the Commentary to the 2023 Amendments to Rule 702.

MORNING GENERAL SESSION

Chris Nace: Good morning, everyone, and welcome. I am the President of the National Civil Justice Institute. Before we begin, many of you know this, but my father actually represented the Dauberts and I was actually at the Supreme Court argument and I thought to get us started – I came across these things in my dad's office. We were law partners before he passed. This is a compendium of the briefs from the *Daubert* case that was put together. It was all tabbed. It was his working copy. I just thought to get us teed up and going, I want to read what was the statement of the case in the brief to the supreme court.

> *Petitioners Jason Daubert and Eric Schuller are minor children born with severe and permanent limb reduction birth defects. They and their parents brought suits for damages in California State Court against respondent Merrell Dow Pharmaceuticals, Inc, alleging that the birth defects had been caused by the mother's ingestion of Bendectin, a prescription anti-nausea drug marketed by Merrell. The complaints' alleged exclusively state law causes of action, strict liability, negligence, and breach of warranty.*

And with that statement of the case, we were off to 30 years of expert witnesses in *Daubert*.

Oral Remarks of Professor Saks

Let us begin by reminding ourselves of why the law has special rules, which control the filtering of expert testimony. The most frequently heard explanation is that experts can offer opinions. They can draw inferences from facts. They can tell the jury about things that are not observable and difficult to evaluate. That gives experts more latitude than other witnesses. We worry that jurors will over-value what expert witnesses say.

This brings us to a fundamental dilemma. Experts have a lot to offer to help resolve disputes, but judges have for quite a long time feared that experts could bamboozle the fact finders. Consider this one brief quotation from an 1843 case, in which a court observed of experts that "[t]hey come with such a bias on their minds to support the cause in which they are embarked, that hardly any weight should be given to their evidence."[1]

But the law's only method of protecting the jury from experts is the filtering that a judge does. In 1901—most famously, although it was probably noted before that—Learned Hand pointed out the fundamental paradox that we are using nonexpert judges to screen the experts to protect the nonexpert juries.

Today, discussions about filtering experts for admissibility usually begin with *Frye* against the United States. In *Daubert* itself, the Supreme Court commented that, "In the 70 years since its formulation in the *Frye* case, the general acceptance test has been the dominant standard for determining the admissibility of novel scientific evidence at trial."[2]

With all due respect to the Supreme Court, that is not quite right. Experts were coming to court for centuries before *Frye*. The earliest case that I am aware of was a 1345 case in which a physician was asked by a court to give some advice on the freshness of a wound. The first actual expert testimony, where an expert (another physician) testified to a jury, was in 1620. The valuable advice of an expert on witches was provided in 1665. The first appellate affirmance of the admission of experts (in this case engineers) was in 1782. All of which means that for

nearly 600 years before *Frye*, experts were coming to court, and I doubt very much that the judges in those cases were rolling over and playing dead whenever an expert showed up.

In the 19th century in the United States, we can find plenty of cases which seem to indicate what the judges were doing. They were of course looking for an expert who was "qualified," meaning has greater study respecting certain subjects, or greater experience. But in addition, it appears that the judges were looking to see if that expert had a successful career in the commercial marketplace doing what that expert claimed to do. The notion seems to be that if average people in the everyday world would spend their hard-earned money to get the advice or skills of that expert, then that expert is someone who might be worth the court listening to. That's been called the "marketplace" test.

Against that background, *Frye v. United States*[3] makes more sense because there was no market for polygraph experts. The *Frye* court could not have done what earlier courts were doing. Chief Judge Van Orsdel came up with the idea of substituting an *intellectual* market for the commercial market, and that is what has given us the general acceptance test. The trouble with that is that, although it provided some alternative markets, it replaced consumers with producers. It is one thing for people who are purchasing the services to evaluate the expert. But now, under *Frye*, we are asking the experts to evaluate the experts and tell us what they think of themselves.

In the decades after 1923, was *Frye* really dominant? *Frye* was ignored for a very long time, including by Judge Van Orsdel himself, who invented *Frye*! The same day he decided *Frye*, he decided another novel scientific evidence case and he did not bother mentioning general acceptance at all. He liked the evidence, so he let it in.

For the first decade after *Frye*, it was not cited in one single case, federal or state. After 50 years of *Frye*, it was cited in exactly 34 state cases. What were the judges using? They were using other tests. They often were using no test. *Frye* did eventually take off. But it was right around the time that the federal rules were adopted, in 1975.

And in *Daubert*, the Supreme Court tells us what in its view the test stated in Rule 702 is. It tells us that the "overarching subject" of "the inquiry envisioned by Rule 702 is the scientific validity, and thus the evidentiary relevance and reliability, of the principles that underlie a proposed submission." It is validity. It is validity as understood by the judge. Now the *judge* has to be convinced that this proffer is valid—not consumers, and not producers. The *Daubert* factors, which are so much talked about, are really just helpful hints for how to do what is the main job of evaluation.

If we compare *Frye* to *Daubert*, this is somewhat revealing. *Daubert* and *Kumho Tire*[4] say that the court needs to find a valid foundation. *Frye* said all you need is general acceptance among the producers of the knowledge. In a normal, rational world, if you have a strong, valid foundation, the field ought to find general acceptance in that subject matter. If there is a weak foundation, general acceptance should be low. And for those two situations, the two tests will produce the same result. Both should admit or both should exclude. So far, so good.

The *Frye* and *Daubert* decisions have created a paradox in the treatment of scientific evidence. The Supreme Court noted that you could have new, strong, valid knowledge that is simply too new to be accepted generally in its field. In such instances, the *Frye* approach would exclude what *Daubert* would admit. But the Court overlooked the situation in which you have a weak foundation but high general acceptance. Think about astrology. Astrologers generally accept astrology, but it has long been viewed as pseudoscientific. In a situation like that, *Frye* would

admit. *Daubert* would exclude. And it turns out that a number of forensic sciences are similarly positioned: generally accepted by their practitioners, but without research testing their validity. Judges were scratching their heads when they came across that situation, wondering how it could be that *Frye* had been admitting forensic pattern comparison evidence for a long time, but now it appears that *Daubert* required their exclusion.

In the next case in the *Daubert* line, *General Electric v. Joiner*,[5] the Supreme Court confronted the problem of what is the standard of review on appeal. The court concluded that the standard is abuse of discretion. Why abuse of discretion? It is an evidentiary decision and evidentiary decisions have always been reviewed deferentially. But does that really work for science?

Consider the situation where two district courts in the same circuit are confronted by the exact same scientific proposition, and are presented with the same underlying body of research. One district judge says, "I do not think it is good enough. I am excluding." And the other district judge says, "I'll let it in." Both cases go up on appeal. Under an abuse of discretion standard, the court of appeals is almost certainly going to have to say, "You are both right." This makes the courts look stupid. This does not happen with most other evidentiary decisions. But it would happen, *and has happened*, with science.

Kumho Tire v. Carmichael addressed the question of what to do with non-science expert evidence. Not everything that comes in as expert testimony is science. And in *Kumho Tire* the Supreme Court told us that everything must be evaluated for its validity—that even if it is non-science, if it is a non-science proffer, the court will have to devise an appropriate test for whatever that subject matter is.

This closed a back door that forensic sciences started to use. When they started to run into trouble under *Daubert*, some forensic scientists started to claim, "We are science? Where did you judges ever get that idea? We are not science, and therefore we are not subject to the *Daubert* standard, and therefore you should admit us." And some judges were buying that argument and admitting them. *Kumho Tire* ended that stratagem.

Kumho Tire also addressed the question of whether general acceptance alone is sufficient to gain admission. Under the *Daubert* standard, if general acceptance is good enough by itself, then there is no *Daubert* test because *Frye* will have swallowed *Daubert*.

Weisgram v. Marley[6] was the fourth of the *Daubert* cases—all of which were decided unanimously, by the way. The details of the case are much less important to us than just a couple of statements from *Daubert* compared to *Weisgram*. In *Daubert*, the court emphasized the liberal admission thrust of the federal rules. In *Weisgram*, the same Supreme Court, the same unanimous Supreme Court seven years later, spoke of the exacting standards of reliability that evidence must meet to get in under *Daubert*. That is a big flip around in seven years.

Of course, Rule 702 was amended. In the year 2000, the rule was amended to align better with *Daubert*, which is a little odd, considering that the Supreme Court said that it was just interpreting the words in Rule 702. But now 702 is being tweaked to make it fit better with *Daubert*.

2011 was the year of the restyling project. This year, on December 1, 2023, more Rule 702 amendments will go into effect. More amendments! What was the Rules Committee concerned about? The Rules Committee tells us they were concerned that too many federal judges were not doing their gatekeeping job. They were letting too much expert evidence go to the jury and calling it a matter of weight, not admissibility. And their second

concern was they were seeing too many experts giving testimony in which they were exaggerating what their field could do.

I will give you some examples of poor policing of expert witnesses that the Rules Committee was thinking about. There was a study by the FBI, which looked at microscopic hair comparison experts, and concluded that 98 percent of their reports and testimony exaggerated what their field could do. They were claiming the ability to pinpoint—identify—the perpetrator of a crime based on hair found at the crime scene when the field is actually incapable of doing that. 98 percent!

In 2009, at the behest of Congress, the National Academy of Sciences formed a committee, paid for by Congress and co-chaired by a Federal Court of Appeals judge. The committee concluded that "much forensic science was introduced in criminal trials without any meaningful scientific validation, determination of error rates, or reliability testing." And the report went further to say that the courts have been "utterly ineffective in addressing that problem."

Barry Fisher, the president of the American Academy of Forensic Sciences and director of the Los Angeles County Crime Lab, speaking to an audience of judges after that report came out, said to the judges, "You have given us a free ride." He said that every time the Supreme Court handed down one of the cases in the *Daubert* line, he "expected us to get slammed in the courts. And I am still waiting."

Most remarkable of all, there are a number of forensic sciences that can be considered deceased: Voiceprints, Comparative Bullet Lead Analysis, numerous Arson Indicators, and Bitemarks (which has one foot in the grave). But these are disciplines that used to be admitted quite routinely. But they've stopped coming to court—not because judges applying *Daubert* determined that they were invalid, but because other institutions, or the fields themselves, determined that what they were offering was not valid, and therefore, they should stop offering their services.

Where does this take us for the future? I already talked about Learned Hand, who had his doubts about the way we were doing things and made suggestions for change. In *Daubert*, Chief Justice Rehnquist himself expressed concern about whether *Daubert*'s validity requirements placed unattainable demands on judges. In *Kumho Tire*, Justice Scalia said in a concurrence that he was not worried so much about whether judges could do it—he was worried about whether judges were *willing* to do it!

Ed Cheng, a prominent evidence scholar who hosts the "Excited Utterance" podcast,[7] has recently published an article saying that, in his view,

> Founded on good intentions but unrealistic expectations, the dominant *Daubert* framework for handling expert and scientific evidence should be scrapped. *Daubert* asks judges and jurors to make substantively expert determinations, a task they are epistemically incompetent to perform as laypersons. . . . Having placed its lay decisionmakers in impossible positions, the *Daubert* regime dooms itself to suboptimal decisions. And while critics are quick to blame the decisionmakers, the fault lies not with them, but with the underlying structure.[8]

All of this is to say that the rules will continue to evolve. Maybe there will be more tweaks after this year's tweaks? Maybe more fundamental changes? We will see.

Comments by Panelists

Professor David Michaels, Milken Institute of Public Health, George Washington University

What an honor it is to be following Professor Saks, who has really driven and shaped the discussion of *Daubert* for at least the last couple of decades. I am an epidemiologist, not a legal scholar, and I am the lone academic on the panel. But my comments here are not just as a producer of science but as a consumer of science. I have been in and out of very high-level government public health regulatory posts where I have had to make decisions based on the accumulated scientific evidence—how much evidence is necessary to issue regulations protecting workers from silica, for example, or to protect nuclear weapons workers from beryllium. I have also served as an expert witness in a few court cases.

In the scientific community, we generally ask researchers to provide funding disclosures. I think this is a very useful development, since when you go to a scientific meeting on any topic, there could be conflicts of interest. The speaker puts up a couple of slides first to say who funded their research. Disclosures are also present when you read reports in the scientific or medical literature. The disclosure says, "These are my conflict disclosures, because they are relevant to understanding the paper and what has driven that paper. These are my current potential conflicts. Or you could say they are actual conflicts."

Professor Saks has outlined the challenges facing you—facing jurists. I do not plan to make it any easier for you. When we talk about the basic issues around causality and causation, which is what we need to think about, absolute certainly is rarely an option. There is always uncertainty.

We base our judgments on the weight of the evidence, not on any one particular study. When we go back and we think about a lot of the forensic work, is it really saying is this one methodology, for this one study, valid? Bite marks or fingerprints, or even *Daubert*, as far as I understand, was really hinged on one particular study and whether or not that study was valid. But that is rare when we're thinking about environmental exposures.

What we need to do to make a judgement about causation is to examine the weight of the evidence overall, rather than declaring one study is good science or bad science. It is a judgment, looking at the overall evidence. And, in my view, *Daubert* does not provide any philosophical tools to help judges identify the studies that are "good science." There is not just one philosophy of science. There are no absolute criteria for assessing the validity of scientific evidence. We see a lot of checklists—and, certainly, *Daubert* factors that certain people look at. Within epidemiology (or, you could say, within public health), you will sometimes see the "Bradford Hill criteria."[9] Those are useful to understand some but not all causal relationships—rote application of checklists I think is the opposite of what we need.

On one level, *Daubert* is about specific tests and falsifiability. But what we have to think about is the overall literature in order to make a causal inference. That is what epidemiologists would do. We talk about the science of inference. That is not deductive. You cannot put together a formula and say, "If you have this, this, and this, therefore, X." Epidemiologists do not have empirical testability. We do not have error rates.

We would love to do randomized clinical trials, because for the most part (though it is not always true) randomized trials are a test of a specific relationship. However, in most of the issues we look at in court cases, you could never do a randomized clinical trial. You cannot decide whether a certain exposure can cause illness 20 years down the line and have a randomized trial to help answer that question. Instead, you must do probabilistic inference.

We think about probability very differently in science from the way we think about it in courts. In the sciences, as you probably know, we have conventions of statistical significance and we will look for statistical significance (typically, less than .05 means that there is less than 1 chance out of 20 that something is caused by mere random variation). If the p value is less than .05, we say the relationship is statistically significant—not that it is causal, but that it is statistically significant. But there are actually a lot of causal relationships that do *not* reach statistical significance, and there are lots of ways to do studies of non-causal relationships that *do* give you statistical significance. And that is the case in every single individual study. Of course, when we talk about inference, you are generally basing it on many studies. Of course, in legal terms, "more likely than not" is 50.1 percent, so there is a very different set of thinking about this in law and science.

Finally, I think this is a really important point, and I think it's one that is obvious to everybody in the room, but often is not discussed. There is a financial incentive, a motivation for experts to find the results they find. That is true in scientific journals, not just in the experts. You can expect what experts say based on who hired them. That is unfortunately the reality of the world. I have written extensively about this, most recently in my book, The Triumph of Doubt: Dark Money and the Science of Deception.[10]

What I write about is that there is an industry that has arisen to create uncertainty, to manufacture uncertainty. You could call it corporate disinformation about harms. Think about what the tobacco industry did—if you want to avoid addressing the harms of your product is, you raise questions about the science. And many of the leading scientists currently manufacturing uncertainty about products at one time actually worked for the tobacco companies, and they now work for industries making asbestos, benzenes, pesticides, etc. The list is long.

The business model of these companies (and they are very successful firms) is to produce reports or products that their client needs. If these scientists produce a report saying that their client's products are harmful, they are going to go out of business. Their job is to create the report with the conclusion that their client needs.

These are unfortunate standard operating procedures for these products. If you are concerned about allegations of harm, you hire someone to say it is not really so dangerous. Sometimes it is called "doubt science," or "product defense." These experts apply an inappropriate legal concept – underlying their work is the principle that exposures are innocent until they are proven guilty, rather than asking how we can understand what is going on, and look at the probabilities of that the product is causing harm.

From a regulatory point of view (and I say this as a former regulator), when you look at the reports, their sponsors advocate for the position that "You cannot regulate this product until it is conclusively shown to be dangerous." Of course, that is not very useful for protecting the public.

I want to give you some brief examples of how this works, using as an example a product that is in the news all the time: these "forever chemicals," like Teflon. These chemicals are called PFAS (per-and polyfluoroalkyl substances). There are huge concerns about their toxic effects. There are thousands of studies, a few on people and lots and lots on animals, showing their danger. The manufacturing doubt about PFAS is depicted in the movie

"Dark Waters," which featured first farm animals and then individuals getting sick after exposure to PFAS in the drinking water outside a DuPont plant where they made Teflon material.

DuPont hired ChemRisk, which is a very big consulting firm. They produced a modeling study that concluded the exposure levels were so low there was no way anyone was getting sick from exposure. A really interesting development was that the DuPont attorneys and the plaintiff's attorney came to an agreement that they would fund three independent scientists, scientists chosen by the two parties together, to do studies. DuPont would fund them. I had not seen this before, and I do not know that we will see it again. But they hired three very well-known epidemiologists—two of whom I had worked with for many years—to do these studies. They performed one of the largest environmental studies I think we will ever see. There were 60,000 people involved who gave blood and all sorts of other information. They found what they said was a "probable" link with several disease outcomes. Probable, because with a single study, it would be difficult to say they found proven relationships. They think it is much more likely than not that these conditions are associated with drinking pretty low levels of PFAS in their water supply.

These results were used in several lawsuits against 3M, a major manufacturer of PFAS. In response 3M then commissioned several of what I call "strategic literature reviews." The reports concluded that, even though there are all these positive studies, the epidemiologic evidence does not support the hypothesis of a causal relationship. These reports are published in peer-reviewed journals. This says something about peer review, because you could get almost any reasonably good-looking study published in peer review journals.

Now, we can go back and you look at these papers. The most well-conducted studies have shown there is a probable link with PFAS exposure. But the product defense papers claim that the evidence does not support this conclusion. These scientists did this by pulling apart and criticizing each study, in order to claim the evidence for a relationship is not there.

Later, the National Toxicology Program reviewed the evidence and concluded that PFAS poses an immune hazard. Industry's consultants responded by claiming the human and animal evidence does not support the conclusions and downgrade the rating. "It is really not that dangerous."

Finally, this was from a large case in Minnesota where the State of Minnesota sued 3M for water pollution. And again, you get this report. It looks very impressive. It says, "The overall weight of the evidence is not sufficient to demonstrate a causal association." That is obviously thinking about it until you are absolutely sure it is not a causal relationship.

I would have said this is true some time ago. But 3M has just agreed to pay a $10 billion fine damages for just water pollution. They settled the Minnesota case soon after commissioning that report for $850 million because there is so much evidence on the other side. But that does not mean you are not going to see reports exactly like that.

The EPA has issued interim health advisories for what is a safe level. Now, one part per trillion is a drop of the chemical in an Olympic size swimming pool. At 3M they announced they stopped making this stuff all together. It is too dangerous to make. There is no question about that.

But what you can see here is, 3M and DuPont were being sued. They will produce studies that look good, and certainly they will look better than a lot of other studies, because there is so much money behind them, using these

criteria that look like they fit into *Daubert*. But it is easy to fool people. Fortunately, I think we are done fooling people around PFAS.

Where does that leave us? First, there's an important question people ask me. "These scientists—what do they think? Are they lying? Are they naive?" I cannot believe they are lying. I think there is something called—you read about it in Professor Bloom's excellent paper—"confirmation bias." Another way to think about it is "motivational reasoning." The tendency to find arguments in favor of conclusions we want that we want to believe in. Consider thinking those are stronger than the ones we do not want to believe. Obviously, money drives that. I like to capture it this way. I think it is a much better way to think about it.

As you might infer, I agree with Professor Cheng. I am very sympathetic to Professor Bloom's recommendations. I think it is going to be hard to get there, but Professor Cheng says *Daubert* should be scrapped. But in the meantime, I think the best advice I can give you is to let attorneys and experts on both sides interrogate the science. There is no easy way out. There is no obvious way to decide what is good science and bad science. I think you have to let jurors decide for themselves.

Thank you for taking on this challenge. I look forward to spending the day with you.

Honorable Roland Belsome, Louisiana 4th Circuit Court of Appeals

I am supposed to tell you folks what my perspective is as a judge on what we are supposed to be doing or what we think our obligations are inside the courtroom. I am coming up on 20 years on the appellate court in Louisiana. I had served seven and a half years as a trial court judge, hearing only civil matters in the parish of New Orleans.

I started realizing that we all go to the bench with a certain bias, with a certain set of experiences. I have always seen myself as just a guy who works in the legal system. Early on, I was an advocate, because I was a trial attorney. As a trial judge, I was trying to make sure that there was a good record that was prepared and each side had an opportunity to speak (but only one side at a time). And then on the appellate level, I have tried to apply what I think the law is. I think I would be surprised if someone had one of my opinions 30 years later and was still trying to figure out what I said. I am sure at the time of writing the *Daubert* opinion, they thought they wrote an opinion that gave us certain parameters for how to evaluate evidence and how to approve people to testify. But obviously, given the amount of discussion, these areas keep evolving. Just as our courts keep evolving, the way we produce information inside the court room evolves.

I presided over a number of class certification hearings as a trial judge. Many of you probably remember how it was done early on. It was done almost in the form of a summary judgment. Maybe there was a little bit of oral argument. Now, we go weeks, maybe months to determine whether class certification is appropriate. That is how everything has begun to evolve over time.

I look at the expert testimony that comes in front of us and how we try to make sure it is the best evidence, given the code of evidence, and how we are able to permit or disallow information from coming into the record.

It is mentioned briefly in Professor Saks's paper, and I think maybe more so in the afternoon paper, about judges appointing experts in connection with a hearing. We know that in the federal system, which many of our codes of evidence are based upon, they have a great deal broader discretion in terms of appointing experts in the courtroom. Many of my friends on the federal bench chose not to appoint their experts. I would be very hesitant even though we have some limited parameters inside the trial.

Anecdotally, this is what I will leave you with. We had this very affable federal judge in the Eastern District of Louisiana. I love this guy. He was great to go fishing with, to grab a beer with. If you were just having a conversation, you were going to have a great time. If you were a plaintiff lawyer trying a case in his courtroom and you had your expert on the stand, he would throw his pen up in the air. He would throw his hands up in the air. He would turn his back on the expert. And then when the defense expert would get on the stand, he would just sit there mesmerized and shake his head "yes." We all come with our predispositions to the bench. As hard as we try to be as fair as we think we are being, I do not think I would feel comfortable, as much as I like that judge and respected him, if he was appointing his expert to testify in my case.

Likewise, I am sure there are some that probably would have other predispositions, and lawyers would not want us appointing the expert, because this is an adversarial system. My perspective on the adversarial system is that we judges are supposed to call the balls and strikes to the best of our ability.

I just want to thank the Civil Justice Institute for having these programs for us. I have been coming to these for almost as long as I have been on the bench. I find every year the papers that are presented, the thought that goes into it, the fact that as a judge, we get perspectives from the defense and from the plaintiff and from academia. I think it helps us all to become better judges. Thank you.

Jeffrey Lowe, DRI—Lawyers Representing Business

One of the things I want to start off with is a quote from Justice Breyer's concurrence in the *Joiner* case, which I think is important in light of some of the things that Professor Saks has said in his presentation and that are in the materials regarding the judge's ability to handle scientific questions. Specifically Justice Breyer said,

> . . . of course, neither the difficulty of the task nor any comparative lack of experience can excuse the judge from exercising the gatekeeper duties that the Federal Rules of Evidence impose, determining, for example, whether a particular expert testimony is reliable and will assist the trier of fact under Federal Rule of Evidence 702 or whether the probative value of testimony is substantially outweighed by the risk of prejudice, confusion, or waste of time from Federal Rule of Evidence 403. To the contrary, when law and science intersect, those duties often must be exercised with special care.

That is from Justice Breyer's concurrence in Joiner.

Professor Saks wants to make sure that what ultimately gets to a jury to help them make their decision in the case is both reliable and helpful. That is the standard that Rule 702 imposes: the standard of reliability and helpfulness.

What we think we have seen in the cases since *Daubert* was some courts either shrinking from that role or using the improper standard to determine those issues under the rule. Post-*Daubert* and post-*Kumho Tire*, we see the Rules Committee adopting the amendments in 2000. And what those amendments make clear is that they were in response to *Daubert* and *Kumho Tire*, and they explicitly stated that the rule was meant to address admissible questions for all expert testimony to help ensure that evidence was reliable and helpful.

It also established that Federal Rule of Evidence 104(a) governed the admissibility of all expert testimony, and therefore the proponent of that testimony had the burden of establishing admissibility by the preponderance of the evidence standard.

The committee notes also stated that the factors created by *Daubert*, and factors from cases subsequent to *Daubert*, were factors trial courts would consider in performing their gatekeeping responsibility, but that they do not apply in all cases and no factor was dispositive.

The committee also recognized that the rule does not require proponents to show that their expert's conclusion was correct—only that the opinions are reliable and even though there may be competing conclusions, that as long as the methodology is reliable and the trial court has determined that, then the trial court has satisfied its gatekeeper responsibility.

The committee also recognized that application of principles and methods may render an expert unreliable, and it therefore imposed a requirement that the expert reliably apply the principles and methods to the facts of the case.

The Advisory Committee specifically said, in 2000, that it is the trial judge's obligation to find the expert testimony is properly grounded, well-reasoned, and not speculative, before it can be admitted. Further, the expert testimony must be grounded in an accepted body of learning or experience in that expert's field, and the expert must explain how the conclusion is so grounded.

The committee also stressed that the court's analysis under Rule 702.1, which is now 702A, was a quantitative, not qualitative analysis. But by its comments, the committee signaled the trial court's obligation to determine whether the proponent of the expert testimony was basing the opinion on a sufficient factual basis. Even as early as 2000, the committee had stated that it is the court's burden to determine that the expert testimony had a sufficient factual basis.

The 2023 amendments attempt to reinforce the analysis created by the 2000 amendments, but they do not substantially change them. First, they reinforce that it is the proffering party's burden to show the court that, more likely than not, each of the four factors listed in Rule 702A through D are met. So the requirements, for example, of 702B that the testimony is based on sufficient facts or data, or of 702D that the expert has reliably applied the principles and methods to the facts of the case, were required to be shown by the proponent and found by the court to be so more likely than not.

The reason for the clarification was that the committee found misapplications of the rule by various courts. The amendment was also intended by the committee to address some statements by some courts that there was some presumption of admissibility of expert testimony.

The committee made clear in 2023 that there is no presumption of admissibility of expert testimony. The committee also made clear that the factors to be considered in Sections A through D are not issues that go to the weight of testimony but are determinative on the admissibility of the testimony. The committee also made clear that challenges to the factual basis of an expert's opinion are not an issue for weight of the testimony. It is an issue of admissibility.

The committee was trying to resolve a significant issue that showed that courts were not properly applying Rule 702. In more than 150 federal court opinions issued between January 1, 2015, and February 1, 2021, a version of the following statement was used: "As a general rule, the factual basis of an expert opinion goes to the credibility of the testimony, not the admissibility, and it is up to the opposing party to examine the factual basis for the opinion in cross examination."

In over 150 federal cases between the same time period, a version of the following statement was used. "Questions relating to the basis and sources of expert's opinion affect the weight to be assigned to that opinion rather than its admissibility."

Finally, in over 100 federal cases in that same time period previously referenced, they used some form of the following statement: "Soundness of the factual underpinnings of the expert's analysis and the correctness of the expert's conclusion based on that analysis are factual matters to be determined by the trier of fact." Period.

What those statements show is that over 400 trial court decisions and published decisions in federal cases were applying the improper standard under Rule 702. It is the judge's responsibility under 702 to make those determinations of whether the factual basis is sufficient.

The committee found that trial judges were punting the issue. They clarified the rule to make it clear that the trial court must decide the adequacy of the factual foundation and the methodological application of the matter as a matter of admissibility.

The conflict that also arose, and that the committee was attempting to address, was that the courts were using deferential approaches to making admissibility decisions on expert testimony that assumed admissibility rather than evaluating admissibility. Some courts referenced a presumption of admissibility, while others said exclusion of expert testimony was the exception rather than the rule. Others referred to Rule 702's requirements as "minimal." In doing so, however, the court shifted the burden from the proponent of the testimony to the opponent of the testimony to show that the proponent had not met the rule's requirements.

The 2000 amendments and the 2023 Rule 702 amendments make it clear that there is no presumption of admissibility, nor is admissibility to be assumed. It clarifies that the proponent must establish, and the court must conclude, that the rule's requirements are met.

Finally, the 2023 amendment attempts to minimize experts' opinions that speak too highly about the confidence of the expert's opinion when the methodology does not provide such certainty, as Professor Saks stated earlier.

The committee noted that research showed that the greater certainty or confidence with which an expert expressed his or her opinions, the greater weight it was given by the jury. But the committee also realized that methodologies typically do not permit such statements of certainty or overstated expressions of confidence. Therefore, those types of statements can be squared with a requirement that all experts' opinions be the product of reliable principles and methods reliably applying to the facts of the case. Therefore, the committee recommended the amendment to 702D, which required that the proponent prove, and the trial court find, that it is more likely than not that experts' opinions reflect a reliable application of the principles and methods to the facts of the case. When an expert overstates his or her opinion, or offers an example, or, for example, a forensic expert testifies to a "match" that cannot be tied to a methodology, the trial court has discretion to determine that that opinion is admissible.

Ultimately, what the 2000 amendments and the 2023 amendment show and stress, and what I believe, and DRI believes the cases interpreting Rule 702 stress, is the trial courts' function as a gatekeeper and the importance of it in determining whether evidence ultimately will be reliable and helpful.

Michelle Parfitt, Ashcraft & Gerel, Washington, D.C.

It is my actual delight and privilege to be before all of you today. You are my mentors as a practicing trial lawyer. I want to give a special shout out to Justice Jim Kitchens, of the Mississippi Supreme Court, who has been a mentor for years. I am very grateful for that experience.

I also want to thank Professors Saks and Bloom for their wonderful papers. I think it is insightful and gives us much to think about during the course of today and, frankly, going forward. These issues are critical, certainly very critical to someone like myself who has spent the last four decades of her career in a courtroom before many of you.

Professor Saks' paper certainly talks about the tension that exists between the institutional shift we have from evidence going from jury to judge and perhaps even judge back to jury. Society is becoming, as we know, confused with much technology and science advances. It is hard to swallow it each day. Necessarily, our court rooms are also seeing the introduction of new, perhaps novel, perhaps even advanced areas of science and technology, which all of us have to grapple with as lay people, as jurists, as academics. What do we do with it? What do we keep and what do we reform?

I work and have practiced most of my career in the District of Columbia. And this topic is also of great importance to me because the District of Columbia advanced the *Frye* decision back in 1923. We've lived with it for about 100 years.

Fast forward, I also had the opportunity to litigate a case called *Motorola v. Murray*.[11] It's a piece of litigation involving exposure to radio-frequency radiation, namely your cell phones, and specific types of brain cancer. The litigation had been going on for frankly decades in other jurisdictions when our firm became involved.

Importantly, at that time we were under the *Frye* standard—general acceptance. We had appearances and opinions from experts all over the world. Europe is a bit more advanced in the RF radiation world than perhaps the United States is. We had a multi-week *Frye* hearing before Judge Weisberg. At the conclusion of that hearing, Judge Weisberg wrote an elegant opinion, holding that the general causation testimony of those experts and scientists would be admitted.

Fast forward again. The judge did note in his opinion that, based on the record, as he heard it, most if not all plaintiff experts would probably have been excluded under *Daubert*. It gives us great context as to the world that we are living in now, what with the federal rules, *Daubert*, *Frye*, whatever evidentiary standards we have.

The cell phone industry at that time decided that, "Maybe it is time now, before our case moves any further, that we revisit the *Frye* standard in the District of Columbia. Perhaps the District of Columbia should become more consistent and get in step, lockstep with the rest of the country."

The cell phone industry asked that the issue be certified to the DC Court of Appeals. It was. And our DC Court of Appeals, after much briefing and hearing and argument determined indeed that we would now become a *Daubert* jurisdiction.[12] And they indicated that the reason for doing so is that *Frye* was out of step with modern science and was avoiding the critical questions of what is reliable, what is valid.

They also said that *Frye* could be unduly permissive, and frankly liberal—the contours that were discussed frankly by Professor Saks where he talked to us a bit about the discord between reliable, not generally accepted,

generally accepted but not reliable. At the end of the day, the DC Court of Appeals discarded *Frye* and accepted the *Daubert* standard, or actually Federal Rules 702. We are not a codified jurisdiction.

Where does that take us today? Well, it gives me, I think, some insight as to the critical need for discussion about this issue. It is imperative. Those of us who appear in your courts want you to understand the science, but we also want the juries to understand it. Let us not understate the value of jurors and the wisdom of jurors. They are processing information at the same rate that those of you who are judges are processing information. The proposed amendments to Federal Rule 702, and frankly the *Daubert* analysis we use, does indeed usurp the province of the jury.

I urge all of you, throughout the course of today and moving forward, to appreciate the value of *Daubert* as a longstanding foundational requirement that perhaps should not be used to unduly polarize, politicize, or monetize the issues.

What David and Michael shared with you about industry and science is certainly something that we have seen from tobacco, to asbestos, to cell phones, to sophisticated science issues. Industry can control because there is great money there and influence, science. We have to be very careful that we understand, as jurists and judges – we understand what is doubt and what is bad science and what is real. I could not agree more with David Michaels when he says that, when you have a product or a device or an issue that perhaps is creating quite a fuss in our community because it is something that corporate America is making a good living on, perhaps the science can be tainted.

As a plaintiff's lawyer, and as someone who represents consumers, I too have a responsibility and my bar has a responsibility—the plaintiff bar, which Chris Nace represents. We have a responsibility to bring to you, and to the jurors, science that can be questioned, science for which we can delve into and have the opportunity as jurors and as judges to really try to understand. I think this transparency has to exist on both sides, so I agree with David Michaels with regard to the need to make clear what it is that we are asking be presented to our jurors and upon you. This is not a time for gamesmanship. These are important and critical issues of our times, and they must be decided in the best way we can.

I suggest this: We spend much time talking about the rules of evidence, and perhaps it should be more of a multi-disciplinary process. We have many judges who participate in that. We bring people in from both sides, but perhaps we should introduce other scientists, other people from other disciplines, who can give insight as to the importance and what the science is.

I think the jury is a great system. And I do not think that we should suddenly decide that they are incapable, or not smart enough, to understand these issues. With proper presentation and guidance by judges, guidance as to what the guardrails are from which one must work, I think we can get there. I think we can ultimately get there. The courts have told us, "Use a delicate touch, use discretion, be careful with your inquiry." I think if we do that, we will get there in the end.

But I do think this is our problem, and it is a very important problem that is only going to get more important. Thankfully, as a society, we are going to see further advances in technology, and medicine, and science. Let us make sure we have figured out how we can best handle the problem. Do not throw the baby out with the bathwater. We need good guidance.

Response by Professor Saks

I have just a couple of quick, hopefully profound, points. One is there is no presumption of admissibility of *any* evidence. *All* evidence has to get over some hurdle. But expert evidence has to get over a bigger hurdle, at least as has been practiced for a few hundred years.

I think the debate all goes back to the balance between trying to get the most useful, the most accurate knowledge you can from fields of expertise. If they did not have something valuable to offer, we would not be bringing them to court as we have been for the last 600 or 700 years.

But the balance is between gaining that knowledge versus being misled. And that is what the law, in fashioning rules, is trying to accomplish—finding that best balance, and what you try to do on a case-by-case basis. And think about all the different options that have been proposed, starting from the idea of having a minimal hurdle for experts. Why don't we just treat experts as we treat other witnesses? And if they are qualified and their testimony is relevant to the issue, let them testify, and let the experts and the lawyers argue it out in front of the jury, and let the jury figure it out. That has some advantages and some disadvantages.

We have *Frye* for those states that have that, and *Daubert*. That is a different balance of who will decide which pieces of what gets in. And the most extreme other one, actually proposed by Learned Hand, is to take that factual decision entirely out of the hands of the judge and the jury and have a separate body decide that issue, which the judge then shares with the jury. The parties can still bring in all the experts they want, do all the cross-examination they want, but the jury will be told what this separate body has said on the subject. That has some attractions, but obviously it never caught on, and it is hard to imagine something like that catching on.

The bottom line is that all of the discussion is about how you get the most accurate information to the fact finder, and how you protect the fact finder from being bamboozled.

Chris Nace: I just want to make two little side notes that I thought of while listening. First, people forget and maybe do not know that Jason Daubert never had a *Daubert* hearing! We have this cottage industry now of hearings at the trial court. After the Supreme Court decision, the case went back to the 9th Circuit, with the 9th Circuit taking it upon itself to rule on the admissibility of the expert evidence. No trial court judge ever made a finding in Jason Daubert's case.

And second, I was happy to hear, at the end there, a little bit about cross examination and I am curious for you all while you are in your discussion groups and talking amongst yourselves today to ask if you have ever had an expert who you let in, and then heard the cross-examination and thought, "Oops. Maybe that was not such a good idea"? Speaking as a trial lawyer, cross examination is everything.

Questions from Particpants

Hon. Herbert Dixon, Superior Court of the District of Columbia: My question is primarily for Dr. Michaels. It is about epistemology. It seems to me that there are a number of differences between legal knowledge and scientific knowledge. Particularly, my question relates to cause-in-fact, which is basically scientific and proximate cause, which is a legal policy choice, and particularly in the context where we run into cumulative exposures, especially asbestos, where there are multiple exposures and sometimes multiple possible causes. I think the question really is proximate cause, rather than scientific or cause-in-fact. I wonder how an expert can protectively

add to that discussion, and I am concerned that the expert's role evolves into reciting magic words that the courts use.

Prof. Michaels: That is a great question. Obviously, I am not an attorney or a jurist. Dealing with general causation, which in some ways is much more straightforward, you could say that it is agreed that X exposure can cause X outcome. I assume that in the legal world that would be called "more likely than not." We understand that asbestos causes certain diseases in general. But once you get to the individual, and the specific causation, that is the concern. How do you say "this person has been exposed to all these things?"

You can model, but modeling is not great. An early administrator of the Environmental Protection Agency, Bill Ruckelshaus, said that modeling is like "the captured spy: If you torture it long enough, it will tell you anything you want to know." You will have different experts come in and say, "Based on this exposure, did this contribute in some way?" I think it is the ground rules that you set. No matter what they say, the experts should not claim to being absolutely positive that this exposure caused this outcome, because how do they know? There are some rare diseases like mesothelioma, which is caused by asbestos. But did *this* asbestos cause *that* mesothelioma? You cannot answer that question definitively. But you can say that, based on what we know, it made a contribution. And you can say that we think it is more likely than not that, but for this exposure, they would not have gotten it. But that is really the best you can do. And then you have to ask (or really, the jury has to ask), can we go with that? Is that enough? Because you cannot really get better answers.

It may be that, 20 years from now, we will have a better understanding of different biological relationships in the impact of genes on individuals. You will be able to test things more. But right now, we cannot do that. You all have a great challenge in front of you, and good luck with it.

Professor Saks: In defense of Ed Cheng, he is saying that the problem is with the tools that have been given to the judge and the jury. Judges know a lot about a lot, but they do not know what the experts know. I am happy to hear you say that you greeted the news with trepidation that you were going to have to inject yourself more into making that filtering decision. The judges who scare me are the ones who say, "This is easy."

I was having a conversation once with a federal trial judge about his gatekeeping responsibilities. I cannot imagine myself doing it, except in the particular areas that I am knowledgeable about. There is a whole other world out there. And the judge said, "Oh no, it is no problem." He can do it. He enjoys doing it. He is the one who scares me. I think realizing it is a difficult challenge is the way to go.

Michelle Parfitt: Judge Dixon, very nice to see you coming from the District of Columbia. I think judges are all trying to do their best. What we are saying is that perhaps this evaluation of scientific evidence is becoming, frankly, dismissal of experts. It is becoming a discretionary measure by courts to get summary judgment. We do not want that either. There is a right for jurors to hear evidence, contradictory evidence. And I do not think we can lose sight of that. Judges have to be careful that, while you exercise your wisdom and your guidance, you also recognize the importance of many of these issues landing in the hands of jurors so they can evaluate weight. And what we have seen, I believe, is perhaps a movement to use *Daubert*, use Rule 702, as a means for a judge to grant summary judgment. There could be a political reason. It could be a personal belief. I have my biases. We all have our biases and our likes and dislikes. We need to separate those opinions and become more independent, and allow those issues, I think, to funnel through because they are difficult issues to wrangle with.

Again, I would just caution us not to use *any* rule of evidence to abandon the right to trial by jury, and jurors listening to evidence, and suddenly excluding all experts from even being able to testify, just because their opinions may be more novel, may be more difficult to understand, more challenging for all of us. That is exactly what our job is.

Notes

1 Lord Chancellor Campbell, in the Tracy Peerage, 10 Clark & F. 154 (1839, 1843).

2 Daubert v. Merrell Dow Pharmaceuticals, Inc., 509 U.S. 579, 113 S.Ct. 2786, 2792.

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

4 Kumho Tire v. Carmichael, 526 U.S. 137, 119 S.Ct. 1167 (1999).

5 General Electric Company v. Joiner, 522 U.S. 136, 118 S.Ct. 512 (1997).

6 Weisgram v. Marley Co., 528 U.S. 440, 120 S.Ct. 1011 (2000).

7 https://excitedutterance.com/

8 Edward K. Cheng, *The Consensus Rule: A New Approach To Scientific Evidence*, 75 Vand. L. Rev. 407, 407 (2022).

9 https://en.wikipedia.org/wiki/Bradford_Hill_criteria

10 David Michaels, *The Triumph of Doubt: Dark Money and the Science of Deception* (New York: Oxford University Press, 2020).

11 Motorola, Inc., v. Murray, 147 A.3d 751 (D.C. 2016).

Jason and Joyce Daubert speak with journalist Peter Andrey Smith

Chris Nace: In 2022, Peter Smith reported an hour-long episode on the award-winning podcast "WNYC Radiolab" about the *Daubert* standard.[1] And while researching the project, he became acquainted with two members of the Daubert family, Joyce and Jason Daubert, who were plaintiffs in the litigation that led to the Supreme Court's *Daubert* decision, and who attended the Forum.

If I may take a personal point of privilege here, my dad represented Joyce Daubert and her son, Jason. When Peter recorded the podcast, he interviewed my dad. After the podcast came out, I was listening to it and in the middle of the podcast. In the middle of the podcast, you can hear the voice of our young office receptionist answer the phone, saying, "Paulson and Nace," and then my dad speaking. It was very eerie to hear this interview with him. I am sure that he would love to be here today. It is a wonderful podcast. You should listen to it. It really was just enthralling to listen to, and you are going to get a little bit of it today,

Joyce and Jason, one of the many things I learned from Barry Nace was about keeping up with the clients we represent *after* we represent them. Unfortunately, we lose touch sometimes. Life happens. Life goes on. But I know he would love to be here today to see you both, see how you are doing. Thank you.

Peter Smith: In 2014, I took a trip to a government laboratory and learned that the U.S. had put three men behind bars for illegally importing rice syrup. And the government suspected that these men were making a false claim to get around paying the tax to import Chinese honey. You can look it up. It is called "honey laundering"—seriously!

I later learned after visiting the lab that a federal judge in Florida had essentially said that the lab had made up the methods. The men were, essentially, wrongfully incarcerated, using junk science. The judge said basically that the government science did not meet the *Daubert* standard.

I am not a lawyer. I never went to law school. I had never heard of *Daubert* before. But in this case, it seemed that *Daubert* was a big deal, and it also seemed like a very righteous way to invoke a ruling, a way to show that the government science was not up to snuff. I sent some alerts. I began, basically, seeing the name Daubert everywhere. You see it in the Roundup, Vioxx, BPA cases.

I did a story about a truck crash, and there was a *Daubert* hearing in that case. I interviewed some slip-and-fall experts who are well-versed in getting around *Daubert*. I heard the name Daubert during the oral arguments in *Dobbs*, the big Supreme Court abortion case last year.[2] This name is everywhere but the story of what *Daubert* is was basically nowhere.

Maybe we can have a quick travelog through the case. This started when Jason was born. Jason, you are obviously different. Jason's birth was different from what was expected. Could you talk a little bit about how this affected your lives in terms of raising a child? And Jason, if you want to, talk a little bit about growing up.

Joyce Daubert: It was very difficult raising a deformed child. It came up all the time. I had to deal with it a lot. Dealing with such a sensitive topic was just crushing for me. I have to tell you that. And my husband, whom I love dearly – we had been married for six years when Jason was born— was a combat Marine. Being my partner in this was very difficult for him. He was used to death and dying. But he knew how important it was to me. He was very supportive.

We had to decide to put it all on the line for two reasons. First of all, our family fortune. You can guess as a school teacher, I did not contribute very much to the family fortune. When it is your livelihood and your plan to raise your children, it becomes everything. I felt like Bill and I had to really be committed to the lawsuit to do that.

Also, I am the third daughter in my family. And my oldest sister was married to a gentleman who was an important executive in Dow Chemical. I tried to discuss Bendectin with them at one time and understandably they shut down for that. I got no support whatever from them.

In order for me to go forward with this, I really felt like I needed permission from my father, whom I have always worshipped and adored. My dad looks like Harrison Ford, and he put himself through college by prize fighting. I really felt like I needed his permission. Daddy said to me, "Joyce, it is not about you. It is not about your big sister. This is about Jason, and you have to do this." I couldn't have gotten any better permission to go forward.

Bill and I had friends who were attorneys, and we talked to them about it and asked them if they had any recommendations for how we would proceed. I did not know what it entailed. The world of jurisprudence is very much different from the world of academia.

My husband's approach is, "You go in and kill everybody, and then the ground is yours." We needed advice. We hooked up with a large law firm in the in the San Diego area. I felt we had people who were good listeners, which was really essential to me. I would ask them, "Do you have the fire in the belly to move forward with this?" And they always said, "Yes." Although as a schoolteacher, you can tell a lot about people. I could not really tell. But I had to content myself with the conclusion that it did not matter if they had the fire in the belly or not. *They just had to act like they did.*

I know with my students, my little kids, my little 14-year-old, freckly, skinny boys who had to present oral presentations in class, they would just be sweating bullets to get up there and do it. I said to them, "Of course you are nervous. Do you think I am not nervous every time I get up here every single day for every single class? I am terrified. I understand your terror. But here is the secret. You just have to *act* like you are not terrified. If you can convince them that you are not terrified, you've got it."

Peter Smith: Jason, do you want to talk a little bit about growing up?

Jason Daubert: Strangely enough, I do not remember a lot of it. Growing up different is very tough, especially in the public-school systems. Everybody just sort of gloms on to the different kid. When you see movies, you will see everybody picks on the fat kid or everybody picks on the weird kid or whatever. And I was very obviously the weird kid. That tended to make things pretty tough growing up, especially elementary school years.

By middle school, my height had kicked in, and I was usually taller than most everybody else, and that really helped. In fact, I had a friend at the end of sixth grade. He was like, "I was terrified of you because you were so tall, and you wore this big, bulky jacket." Evidently, I kind of aged out of that sort of thing.

After that, it was really just more of getting used to the fact that sometimes I have to take more time doing things than other people. In the podcast, I talked about the stupidest thing: tying shoelaces. Everybody takes tying their shoes for granted. That is just something you learn. It is a milestone. It is a normal thing to do. That took a lot longer for me than most because I had to come up with a system that could actually work with one and a half hands. I do it a particular way now and it still works. But man, that was a pain in the butt in the beginning and just think about that times a thousand and probably 700 other things you cannot even think of that did not even occur to me. I just started doing it that way because that is what worked.

Peter Smith: Just to keep everybody abreast of this story, Joyce first learned about Bendectin ***in 1983****, from a* newspaper article. Bendectin is made by Merrell Dow Pharmaceuticals. The article was about one of Barry Nace's clients who had won a case. Joyce contacted Barry. Joyce, you asked Jason, "Do you want to move forward with this? Is this a good idea?"

Jason Daubert: And I am assuming this is post-hoc talking to Grandpa.

Peter Smith: Once she got permission from Grandpa, what did you say?

Jason Daubert: Mom was pointing out that this will not be easy, but it is the right thing to do. That kind of already made the decision. Regardless of the outcome, even trying is the important thing. That is what we did.

Peter Smith: For you, Joyce, you seemed to really want to tell your side of the story to a jury. That was really – you were getting ready for the jury trial.

Joyce Daubert: Absolutely.

Peter Smith: But then on the eve of the trial, what happened?

Joyce Daubert: We had scheduled a meeting with Barry Nace's lawyers for the morning preceding when we were supposed to all appear in court. They informed us at that meeting that there was not going to be a trial.

Peter Smith: Merrell Dow had filed a motion for summary judgment. They essentially said, "We are going to dismiss the court case."

Joyce Daubert: Merrell Dow said, "We are not going to trial." I had a lot of teacher clothes, but I had to add jackets for my judicial appearances and so on. Being dressed right is important always. I had arranged for all of the substitute teachers that I would need. It determined what I was going to teach that year because I had taught the little babies, the little pimply 14-year-old boys all the way up through AP Spanish, which is really college Spanish literature and grammar and so on. It was very hard to get a substitute teacher to take my kids who had that amount of expertise. I had to do a lot of prep to go there. It was crushing to hear the attorney say, sorry, we are not going to be—you are not going to have your day in court.

Jason Daubert: This was 12 years of work too. This was a lot of stuff and a lot of things that happened over time, not so much for me. I have to say my mom is the rock star here. I was just along for the ride for the most part. Again, I was a kid. That is kind of understandable. But that was a lot of work and time and energy and blood and sweat and tears and then to have it cut off at the last second was kind of . . . .

Joyce Daubert: And I do want to say there were some bastards involved in this.

Peter Smith: But they were all federal judges. Is that correct?

Joyce Daubert: They were all federal judges. Yes.

Peter Smith: Then you appealed your case to the 9th Circuit in California. Hopefully, I am getting this right. The 9th Circuit essentially uses the *Frye* standard, which is uncommon, as I understood from this morning's presentation. It is an uncommon ruling from 1923 that keeps experts out of court. They are essentially saying, "your experts are not generally accepted. You are not going to go forward."

As I understand it, this was one of the biggest cases of the Supreme Court's 1993 session. It must have felt really good. But at the same time, if you really wanted to tell your story, this is the last court you would want to end up in because this is the one court that . . .

Jason Daubert: That was definitely like, "Here is our last shot." That said, it was pretty cool because my grandfather (my mother's father) was able to be there with us. We were actually able to sit there and watch all the arguments be made. It is pretty impressive to see how much thought and attention most of the justices were paying to it and the questions they asked. It was really pretty amazing. And also, by then I was 20 years old. I at least had some concepts of how important this is and how big that court is compared to everything else. From my perspective, it was pretty amazing. It is definitely a great thing to be able to pull out at parties. "I have a case that went to the US Supreme Court" and everybody was like, "Are you kidding me? That is kind of cool." That part was amazing. As you say, it was a last-ditch effort just to get to trial.

[A recording of part of the oral argument was played.]

Peter Smith: They said your name wrong so that must have also been –

Jason Daubert: We were used to it by then.

Peter Smith: Joyce, we have talked in the past and you have a photo of you and Jason outside of the Supreme Court I believe after the oral argument. You are both beaming ear to ear. This was a big day for you, and you were obviously happy. The argument went well.

Joyce Daubert: Yes. It absolutely did. We felt very protected under the wing of Barry Nace. He was wonderful to us. I do not want to say we felt like we got our money's worth, but we felt like he was really a righteous man. He was really a good attorney. We were just hugely grateful.

Peter Smith: Getting back to this photo, you are beaming. In the decision was unanimous 9-0. It essentially sided with you. Your case moves forward. I have talked to a lot of people and I think because your name is associated with this case, they assume that you won. In fact, your story does not have a Hollywood ending. Tell me a little bit about what happened next.

Jason Daubert: I do not remember the timing too well just because that was 30 years ago. But we find out that we win a few months after the case was heard. That was obviously really good news but then you probably know this better than me. A couple of months later, we find out that it was kicked back out of the circuit court again by the Judge Kosinsk. That was frustrating to say the least. You feel like we went all the way up to the top. We won. But then we lost.

Peter Smith: As I understand it, the case got kicked back to the 9th Circuit, and Judge Kozinski as was explained to Michael Gottesman, who argued the case, invoked a non-existent California law to dismiss your

case and essentially write his own personal essay about what the case meant. As Chris was pointing out rightfully earlier today, the case never went to trial. This was the final word, and the final word was no. "Your case is not going forward." In the end, the courts deny you your day in court. Is that how you feel?

Joyce Daubert: We never got our day in court. Those of you who are parents know of what I speak when I say you have to be fair to kids. If you do not, they will find a way to assassinate you in the parking lot. Being fair is essential and this was so unfair. We had really good evidence. We had really good attorneys. We had put our time in. It took us 12 years to get to that point. Twelve years.

Our whole life at had to be contingent on where we were with the court, as far as vacations, parties, all that kind of stuff was concerned. We had to know how we were going to be needing to devote time to the case. That was misery. It was heartbreaking for me, because my son's arm did not get better after they said no.

Jason Daubert: My parents were very stand-up about all of this until a bunch of Merrell Dow attorneys showed up at my parents' farm and wanted to get them to convince me to not go forward and they wanted to pay my parents off to do this. They did not know who they were talking to. My father is the most ethical person who ever walked the earth, I have to tell you. That is how I was raised. It was so offensive to me. I wanted to take time off from school and go hunt them down. They were terrible. I cannot believe that they did such a thing. They took up my dad's time with this. They were very calm about it, explaining to me. They were not angry. But they said to me, "This is jurisprudence, honey." That's what they said to me. "This is how it works." If you cannot win because of what is right, you go visit the parents at the farm. You do these devious, unkind, nasty things. I just thought that was so nasty.

Peter Smith: And for you, Jason, I think I remember you saying something like you felt like victory was snatched away.

Jason Daubert: Victory was snatched from the jaws of defeat—or the other way around. I am dyslexic, and I get those flipped a lot.

Peter Smith: But it was also the judges were not neutral. Judge Kozinski sort of pulled this trump card that you did not even know existed. He is not necessarily being the umpire in the game—he is *throwing* the game. It was not so much that you were mad because you lost. It was that the game was not played fairly.

Jason Daubert: Again, if we had gone to trial and lost, okay—we did our best. And to be fair, honestly, I still feel like we did our best. We did what we could. Honestly, it wound up with a pretty impressive change in how the law is practiced. That is pretty awesome. But it is also frustrating that I did not get to benefit from that, if that makes sense.

Peter Smith: Now, you sort of recognize that Daubert is this name that is not just spoken of by nine Supreme Court Justices. This is a standard that everybody talks about. Numerous law review articles have been written about this. Do you generally feel like it is a standard worth standing behind? How do you feel about it?

Jason Daubert: Honestly, to be fair, that whole decision turned me off from anything related to the law. I really did not pay attention to it for a really long time afterwards. Probably not until you reached out for your original article. Honestly, sitting at the opening remarks and papers this morning was really informative and really interesting. I can only imagine how hard it must be as a non-expert in science to suddenly be told, "You need to vet this science and decide whether someone is trying to get something in through the side door or whether it is actually real science that matters, especially when you are trying to help figure out the truth of a case. I can only

imagine how hard that must be. I am hoping that the *Daubert* case helped in some way with that. Even if it did not help me, if it helped other people and made the world a better place, I am going to take that as a win. That is my sincere hope.

I have to say it is really heartening to see so many people thinking so hard about this, and trying to do the right thing, and trying to do things better, even if that means *Daubert* is a point on a line that moves towards a better way to handle evidence in the future. That is great. I'm honored to have been a part of that journey or that line being created. That is pretty awesome.

Peter Smith: Should we say anything else? Essentially, how the decision by judges affected justice for the two of you is also playing out for countless other plaintiffs. Hopefully the rest of today's sessions can help you answer whether that shift in power is a good thing and whether or not judges are well equipped to decide or to be gatekeepers of science in the courts. I wish you all the best of luck figuring that out in the next six hours.

Jason Daubert: I just want to say that the Radiolab podcast that Peter put together is amazing. He interviewed both my mom and me and Mr. Nace, and put a lot of thought and energy into it. And when you read or listen to it, you get the benefit of all of the editing, rather than us just being here kind of pulling things off the cuff. It is called "The Gatekeeper," from Radiolab. and I highly recommend a listen. It is worth an hour of your time.[3]

Question from a judge: I have one question. When the Supreme Court sent the case back to the district court, was a substitution of judge motion filed to get away from Judge Kozinski?

Peter Smith: I remember Michael Gottesman, who did the *Daubert* oral argument, saying that there were three judges at the 9th Circuit argument. He said that Kozinski was really the only one interested in the case—he was toying with it like a cat does with a mouse or something. He was just trying to drag the arguments out. All the other judges wanted to go to lunch, and he was still saying, "This is the funnest case I can play with." That is just one person's recollection. I am not aware of any motion to change the judge.

Chris Nace: Thank you very much for telling your story. As I said, I think it is incredibly interesting and important to understand the people behind the names and faces. Hearing that was just fascinating. Joyce and Jason, thank you, both for being here. And Peter, thank you for the unbelievable reporting you have done on this.

Notes

1 The program transcript may be read, or the audio heard, on the internet: https://radiolab.org/podcast/gatekeeper/transcript.

2 Dobbs v. Jackson Women's Health Organization, 597 U.S. 215 (2022)

3 See Note 1.

Judicial Gatekeeping, Expert Testimony, and the Future of American Courts

Anne Bloom, Civil Justice Research Initiative

> "The strongest argument [in favor of the trial by jury in civil cases] is that it is a security against corruption. As there is always more time and better opportunity to tamper with a standing body of magistrates than with a jury summoned for the occasion, there is room to suppose that a corrupt influence would more easily find its way to the former than to the latter."
>
> –Alexander Hamilton, Federalist No. 83[1]

> "The life of the law has not been logic; it has been experience."
>
> –Oliver Wendell Holmes, Jr., The Common Law[2]

Introduction

Public confidence in U.S. courts is careening downhill.[3] Multiple polls indicate that perceptions of the U.S. Supreme Court, in particular, are at historic lows.[4] While initially the negative perceptions focused primarily on the U.S. Supreme Court, it is clear that the perception crisis now extends far beyond the U.S. Supreme Court and is impacting perceptions of local courts as well. While state courts fare somewhat better than lower federal courts, the overall picture is bleak.[5]

Confidence in state courts declined significantly in the past year—from 64 to 60 percent, as compared to 57 percent expressing confidence in federal courts generally and 53 percent expressing confidence in the U.S. Supreme Court.[6] Perhaps even more worrisome, a recent survey found that *less than half* of the individuals surveyed believe that judges "make rulings based on the Constitution, the law and the facts of each individual case."[7] As the National Center on State Courts (NCSC) has concluded, "[i]f courts wish to remain the most trusted branch of government, this slide must be halted."[8]

The growing evidence of this loss of public confidence in the courts is now so overwhelming that I doubt many would argue with these numbers. But what do these statistics have to do with judicial gatekeeping and expert testimony? The two are linked, I will argue, by the decline in civil jury trials and growing concerns about the politicization of science.

As the quote from Alexander Hamilton from Federalist No. 83 cited above makes clear, Americans have always been concerned about the potential for corruption in the courts. From the very earliest days, civil juries were seen as the antidote.[9] Notably, results from the recent NCSC survey tracking the growing discontent with state courts express a similar sentiment. When asked about practices that help to ensure the legitimacy of courts, survey

respondents cited *jury trials* as one of the most important.[10] In light of recent events, it is particularly remarkable that jury trials were ranked as even more important than a "code of conduct/discipline" for judicial officers.[11] For many Americans, at the time of our founding and today, juries – in civil cases as well as criminal—are key to ensuring the legitimacy of our courts. As we contemplate the role of judicial gatekeeping in evaluating expert testimony, this consistent expression of public faith in juries, as compared to courts, is worthy of our attention.

As is well known, civil jury trials have all but disappeared in this country.[12] In the most recent year for which full, pre-pandemic data is available (2019), juries decided less than one percent of all civil cases in both federal and state courts.[13] In Alaska, there were no civil jury trials at all.[14] During colonial times, in contrast, civil juries "retained the ultimate power to decide the great majority of cases."[15] In light of the public faith in juries as a check on corruption, it is perhaps not surprising that Americans have grown more skeptical of courts as civil juries fade further and further from view.

At the same time, Americans have also grown increasingly distrustful of expert opinions in general.[16] Indeed, Americans' trust in scientific experts is now even lower than their trust in the courts. This, too, presents a problem for perceptions of courts, which have become increasingly reliant on experts to resolve cases. Indeed, in many cases, a lawsuit cannot survive summary judgment without testimony from court-approved, *Daubert*-qualified experts. If these experts are also perceived negatively, courts may suffer from the decline in the perceived legitimacy of experts as well.

In light of the changing perceptions of both courts and scientific experts, my goal in this essay is to encourage a discussion about whether moderating the role of judges as gatekeepers in the context of expert testimony would be beneficial for courts and, more broadly, for the American legal and political system as a whole. I will argue that some rethinking of the role of judges in the expert testimony context *would* be beneficial, as current practices regarding the admissibility of expert testimony may be contributing to negative perceptions of courts. I will also try to encourage a discussion of potential paths forward by making some suggestions of practices that may help courts to be perceived more favorably. In particular, I will argue that it is possible for judges to take some steps toward defusing the current crisis in perceptions of U.S. courts by acknowledging and protecting the historic and politically important role of juries in weighing expert testimony.

I will begin with a revisiting of the history of the gatekeeping role of judges in the context of expert testimony (Part I). I will then turn to a discussion of some of the politics of how we arrived at this point (Part II), which I will argue is highly relevant to the current crisis in perceptions of U.S. courts. In Part III, I will explain why the current practices may be contributing to negative perceptions of courts, particularly at a time when scientific experts are themselves under fire. In Part IV, I will propose some ideas for more inclusive practices that courts might consider in the assessment of expert testimony which may, in turn, help to improve perceptions of courts more generally.

I. The History of Judicial Gatekeeping in the Context of Expert Testimony

It has become commonplace for legal elites[17] to assume that judges are more competent than juries in understanding both the rule of law and complex scientific evidence.[18] But long before the advent of judicial gatekeeping of expert witnesses, and indeed, well before the founding of the United States, courts relied, at least in part, upon jurors for expert knowledge.[19] Much of what we know about these early practices comes from the research of a young Learned Hand.[20]

In an article entitled "Historical and Practical Considerations regarding Expert Testimony" that was published in the *Harvard Law Review*, Hand reports that while courts in an earlier time, like judges today, sometimes relied upon what Hand referred to as "skilled witnesses," *jurors* with expertise were also called upon to assist with cases.[21] For example, a jury of butchers might be selected "when the accused was charged with selling putrid meat."[22] This reliance on jurors as a valued source of scientific expertise is an interesting contrast to attitudes about the competence of jurors today.

Thanks to Hand and other historians of early expert testimony practices, we also know that, even from the earliest days, the testimony of expert or "skilled" witnesses was considered suspect. An Evidence treatise from the 1800s, for example, identifies "skilled witnesses" as the *most untrustworthy* kind of witness in a list of "suspect witnesses" which also included women and "enslaved people."[23] While it seems obvious from this grouping that our longstanding distrust of expert witness testimony is likely tainted at least somewhat by bias, the deeply rooted suspicion of expert testimony remains firmly entrenched, among both the general public and legal elites.

Many of us are familiar with the well-known quote from Roscoe Pound about the legal system turning experts into advocates.[24] Today's emphasis on judicial gatekeeping of expert testimony appears to have arisen as a direct response to Pound's critique. In a 1906 speech titled "The Causes of Popular Dissatisfaction with the Administration of Justice," Pound decried the "sporting theory" of justice practiced in U.S. courts, which he claimed was increasingly prompting judges to act like referees, instead of independent seekers of truth and justice, and was turning witnesses, "especially expert witnesses, into partisans pure and simple."[25] These critiques resonated with the practicing bar, particularly the critique of expert witnesses, who had long been viewed suspiciously.

In the years that followed, the Federal Rules of Evidence and various court decisions began to set parameters around admissibility of expert testimony. Professor Saks's essay provides a helpful overview of how these parameters have undergone change over time. It is worth revisiting the various tests that have been utilized over the years as a way of excavating what is problematic about current judicial practices in the assessment of expert testimony.

As Professor Saks notes, early on, many judges adopted a "marketplace test" of admissibility, by which expert testimony would be admitted if the proffered expert had achieved some degree of financial success though their expertise.[26] Notably, the focus of the "marketplace test" of admissibility was not on the relevance or quality of the evidence itself but rather on *the perceived value of the individual offering the testimony* in the marketplace. This emphasis on *who* was testifying, rather than on the reliability of the evidence itself, was clearly problematic. Worse, it placed courts in the position of appearing to privilege the testimony of scientific elites, solely on the basis of the experts' acceptance by other elites—those with the financial means to control the marketplace.

Following the "marketplace test" was the *Frye* or "general acceptance" test of admissibility, by which expert testimony is admitted if the expert testimony is generally accepted in the relevant scientific or intellectual field of study.[27] At first glance, the *Frye* standard appears to move away from the judicial practice of assessing expert testimony on the basis of *who* was speaking, rather than the reliability of the evidence itself. But, as Professor Saks explains, *Frye* essentially swapped the commercial marketplace test of earlier times for a "scientific or intellectual" marketplace test of admissibility.[28] As a practical matter, this means that, instead of deferring to the judgments of actors in the economic marketplace in the evaluation of expert testimony, under *Frye,* judges were now instructed to defer to the judgment of other scientists.

While the judgment of other scientists seems like a more appropriate touchstone for the assessment of reliability than the judgment of the marketplace, it is worth emphasizing that neither of these tests involves judges actually evaluating the reliability of the evidence itself. Instead, under both tests, judges look to other elites to make the assessment for them. Under the marketplace test, courts relied on the perceived commercial value of the expert in the marketplace to inform judicial assessments of the reliability of the proposed expert testimony. With *Frye*, courts switched to relying on what other *producers* of expertise—academics and the like—thought about the quality of the evidence that the proposed experts would present. In both instances, judges essentially turned over the question of the reliability of the expert testimony to someone else.

Although *Frye* continues to be employed in some jurisdictions today, there have been many critiques of *Frye* and its reliance on other scientists to determine the reliability of evidence that is to be offered in a courtroom. The most prominent of theses critiques stems from concerns about the potential corruption of those who produce knowledge – a concern that is very much alive today.[29] In response to these concerns, the Supreme Court announced the *Daubert* or so-called "scientific validity" test, which makes another attempt to move the focus of the court's assessment away from the question of *who* is speaking or producing the expert opinion and focusing the inquiry instead on *how* the opinion was reached. [30]

Under *Daubert*, courts are directed to determine the reliability – and therefore admissibility – of the proposed expert testimony, through an assessment of *the reliability of the methods and principles that underlie the proposed evidence*. In other words, instead of focusing on the opinions of the *producers* of knowledge, courts would now focus on evaluating the *process* of knowledge production itself. As a practical matter, this means that, under *Daubert*, if a court concludes that the *process* by which the expert's knowledge was produced was flawed, even expert testimony that is widely accepted by other scientists (in other words, testimony that is admissible under *Frye*) can be excluded.[31] In practice, however, the *Daubert* test still relies heavily on others to determine the admissibility of expert testimony.

The problem is that judges are no better trained to evaluate the knowledge production process than they are the knowledge that results. Recognizing this, the Court in *Daubert* attempted to set forth a non-exclusive checklist for trial courts to use in assessing the validity of the experts' methods. The specific factors identified by the U.S. Supreme Court in *Daubert* are:

(1) whether a "theory or technique … can be (and has been) tested";

(2) whether the method "has been subjected to peer review and publication";

(3) whether there is a "known or potential rate of error" and whether there are "standards controlling the technique's operation"; and

(4) whether the method enjoys "general acceptance" within the "relevant scientific community."[32]

Although these factors were ostensibly drawn from the practices that scientists themselves engage in to determine the reliability of scientific findings, *Daubert* has been criticized from the start for asking judges to engage in an exercise for which they are plainly not trained.[33] It is also evident that only the first and third of the *Daubert* factors – whether a "theory or technique… can be (and has been tested)" and whether there is a "known or potential rate of error" hint at the actual methods employed by scientists to determine the reliability of a study's results (falsifiability and estimations of error, respectively). The other factors simply direct judges back to the

opinions of other knowledge producers by way of "peer review and publication" and "general acceptance" within the relevant scientific community. Thus, to ascertain whether the expert testimony is based on sound methodology, as *Daubert* requires, judges seemingly must again rely upon knowledge producers to tell them.

On remand, the Ninth Circuit in *Daubert* emphasized some additional considerations, including whether the knowledge production process occurred before the litigation was initiated and whether the research was published.[34] The relevance of the first of these factors to an assessment of "scientific validity" is a mystery. As the Ninth Circuit acknowledged, a vast amount of scientific inquiry takes place in the context of a specific inquiry for which someone in the marketplace needs or wants an answer. Does this make the researchers hired guns? Absolutely. The only question is who is paying. While the answer to this question is certainly worth knowing, the fact that the research is funded by someone with an interest in a particular outcome does not render the study scientifically invalid *per se* (just potentially biased, as all studies are).

The requirement of publication is even further afield. Unpublished scientific research is not like an unpublished legal opinion, which cannot be relied upon for precedent. Indeed, people rely upon unpublished scientific research every day to make important decisions in industry and beyond. The purpose of publication in the two fields is quite different. When courts publish a legal opinion, they are seeking to create some stability and finality in a particular rule of law that may be followed by others. Scientific publication, in contrast, aims to do the opposite. The goal is not to end discussion but to invite further testing and evaluation of the scientific conclusion proposed. Sometimes this is something the scientist conducting the research is interested in encouraging; sometimes it is not.[35]

While publication is one indicator of the reliability of a scientific opinion, primarily because it has undergone peer review, it does not follow that unpublished scientific conclusions are inherently unreliable. They are simply unpublished. Here, an analogy to law and the use of legal expert opinions is perhaps helpful. Many legal experts bring value to a case, even when the opinion that they express is unpublished. In reaching conclusions on matters of civil procedure, for example, it is not uncommon for the Supreme Court to cite from *amicus* briefs by prominent law professors on the history or meaning of the rule. In determining whether to give weight to the opinions expressed in these briefs, the courts do not ask whether the opinions expressed in them have been published in advance of the litigation. This is true even when the judges themselves have little to no experience or expertise on the particular legal question at hand. While the expert legal opinions of law professors are also commonly ignored, the fact of publication seemingly has no bearing on the court's assessment of the reliability of the opinion when citing it.

Similarly, the fact that the opinions expressed in most law review publications do not undergo peer review before publication does not render them legally invalid. Indeed, courts also routinely cite law review articles to support their own opinions even though only a handful of law reviews condition publication on anything resembling peer review. It is tempting to respond that this is a mistake too and that a scientist would never do this. But this is not true. Much like judges considering legal opinions, a "court" of scientific experts might rely upon the unpublished opinions of other scientific experts to reach a scientific conclusion or, perhaps more commonly, in determining the research design of a future study. The fact of publication (or the failure to publish) does not determine its reliability.

For all of these reasons, publication is not always a reliable indicator of scientific validity. As the Supreme Court emphasized in *Daubert,* whether the work has been published or not is something to consider but it is a mistake to rely solely on publication—peer reviewed or not—as an indicium of reliability. It is also important to recognize

that peer review processes vary and rely heavily on the opinions of intellectual elites, who are often quick to recommend publication of those who support their views.[36] In other words, reliance on peer review publication to assess the validity of a scientific study is just another example of deference to the views of intellectual elites rather than an actual assessment of the scientific validity of the proffered research.

To sum up, since the earliest days, the primary approach to judicial gatekeeping in the context of expert testimony has entailed deference to the opinions of others, who are perceived to be more expert than judges, to determine the reliability of the evidence that the expert seeks to present. Initially, the definitive imprimatur was the perceived value of the expert in the marketplace. If others were willing to pay the expert a lot of money for their opinion, then that was considered to be solid evidence of the opinion's reliability. Once that approach was dismissed as insufficiently rigorous, courts turned to the opinions of the knowledge producers themselves and then attempts to engage in independent judicial assessments of how well the knowledge producers followed their own rules, which ultimately led the courts back to scientific elites to inform their assessments. This is where we are today.

Although Federal Rule 702 was subsequently amended in response to *Daubert* and other Supreme Court opinions interpreting Rule 702, none of the *Daubert* factors currently appear in Rule 702, nor did they exist at the time of *Daubert.*[37] Nevertheless, these factors were widely adopted and followed by courts in interpreting FRE 702, *Daubert* and its progeny. And, as already noted, courts' reliance on these factors has been widely criticized by the scientific community.

Perhaps in response to this criticism, the Federal Rules Committee recently proposed, and the Supreme Court approved, changes to FRE 702 that will supplant the *Daubert* standard.[38] If not disapproved by Congress, the amendments will take effect on December 1, 2023. Because the pending changes are relevant to the question of the appropriate gatekeeping role of judges, the changes approved by the Committee are shown below. The new language is in italics. The old language is struck-through.

Rule 702. Testimony by Expert Witnesses

A witness who is qualified as an expert by knowledge, skill, experience, training, or education may testify in the form of an opinion or otherwise if *the proponent demonstrates to the court that it is more likely than not that*:

(a) the expert's scientific, technical, or other specialized knowledge will help the trier of fact to understand the evidence or to determine a fact in issue;

(b) the testimony is based on sufficient facts or data;

(c) the testimony is the product of reliable principles and methods; and

(d) the ~~expert has reliably applied~~ *expert's opinion reflects a reliable application of* the principles and methods to the facts of the case.[39]

There is little doubt that these changes are intended to further enhance the role of the judge as gatekeeper. Specifically, according to the Rules Committee, the amendments are intended to make clear that the court is empowered to determine whether the expert's *ultimate opinion* is "within the bounds of what can be concluded from a reliable application of the expert's basis and methodology."[40] In other words, the new rule appears to more

expressly empower judges to not simply assess the validity of the methods and data that the expert utilized but also to weigh the evidence, which many judges have been reluctant to do, in light of the historic role of the jury.

Legal commentators are divided on whether the changes represent a new approach to the admissibility of expert testimony or simply yet another clarification of *Daubert* and its progeny.[41] In a nod to the confusion, one law firm headlined an article on the changes "Don't Say *Daubert*—Reviving Rule 702"—a characterization which almost suggests that *Daubert* itself was a misinterpretation of the Rule.[42] What seems clear is that the Rules Committee did not intend a significant change, simply to clarify the judicial role.

That said, it is worth taking a moment to reflect on how differently the *Daubert* Supreme Court viewed the court's gatekeeping role from the role that is contemplated by the approved changes. As noted above, *Daubert*'s focus was on the scientific validity of the knowledge production process. This is because, in the view of the *Daubert* court, the gatekeeping role of the court was appropriately limited to evaluating the "principles and methodology, not on the conclusions they generate."[43] To be sure, subsequent decisions muddied the waters a bit.[44] But there is little doubt that the Supreme Court did not intend for the judicial gatekeeping authorized in *Daubert* to extend beyond an assessment of the scientific validity of the knowledge production *process*.

The new language in FRE 702 (d), however, seems to encourage judges to take things a step further and suggests that judges may exclude testimony when, in the judge's view, the expert's opinion does not sufficiently reflect "*a reliable application of* the principles and methods to the facts of the case."[45] Although the Rules Committee insists that they intended no substantive change[46]—just a clarification of the existing rule—some might read this language as opening the door for judges to exclude testimony based on how persuasive they find the expert's testimony.

I believe this would be a mistake, legally and otherwise. As I will explain in the sections that follow, the politics of judicial gatekeeping and federal rulemaking generally favors those who are perceived as political or intellectual elites and is increasingly exclusionary. In this context, judicial gatekeeping practices are easily read as elitist and biased, contributing to negative perceptions of courts. Instead of acting to further expand judicial gatekeeping, it is more prudent for courts to work within Rule 702 to embrace more diverse perspectives, even while taking steps, consistent with *Daubert*, to ensure the scientific validity of the expert evidence that is presented to a jury.

II. The Politics of Judicial Gatekeeping

In the preceding section, we traced the evolution of judicial gatekeeping in the context of expert testimony to suspicions about the validity of expert testimony. But that is not the only factor at play. The expansion of judicial gatekeeping in all contexts, including in the context of expert testimony, has taken place in an environment in which civil litigation, and civil juries, in particular, have been increasingly disparaged in popular and legal discourse.[47] This broader context is highly relevant to the current crisis in perceptions of U.S. courts. While scholars have pointed out for years that these attacks on the civil justice system are wholly unfounded, these distorted understandings of what is going on have taken deep root in our culture, even among legal actors who know that the narratives are false.[48]

Social scientists have tracked these developments closely, tracing the origins of the distorted views to the campaigns of corporate actors and trade associations seeking to influence legal processes to minimize their liability.[49] Scholars have also shown how these corporate campaigns have prompted the media to characterize civil

litigation in ways that benefit corporate elites at the expense of ordinary Americans and the civil justice system as a whole.[50] In light of this broader context of sustained assault on the civil justice system, it is hardly surprising that perceptions of courts have begun to suffer as well.

Of particular note is the persistent portrayal of civil juries in a bad light.[51] As noted above, empirical research provides no support for the disparagement of civil juries. In fact, "judges and jurors reach very similar conclusions about liability, compensatory damages, and punitive damages."[52] Empirical research also "do[es] not bear out the inaccurate caricature of juries completely befuddled by scientific evidence."[53] Nevertheless, many of the narratives propagated by the campaigns push the view that civil juries lack the capacity to understand scientific and technical evidence – a claim that has absolutely no basis in fact.

More recently, social scientists have tracked the impacts of these political campaigns on the rules of evidence and procedure. As many scholars have now documented, since the early 1970s, changing procedural rules have steadily made it more difficult for people to sue.[54] The expansion of judicial gatekeeping has been one of the key ways in which this has been accomplished. Under *Iqbal/Twombley*, for example, federal judges are now making decisions about the merits of a case at the very earliest stages of pleading.[55] This represents a significant change from the past. While it used to be that civil juries played an active role in determining legal outcomes, today's rules of evidence and procedure emphasize judicial management techniques aimed at minimizing trials.

What social scientists have also noticed is that judges have begun to dominate the Advisory Committee on Civil Rules in much greater numbers.[56] Following the 1971 reconstitution of the Civil Rules Committee under Chief Justice Burger, judges quickly became a majority on the Committee, rising from 19 percent to an astonishing 69 percent.[57] Meanwhile, practitioners and academics almost disappeared from the Committee entirely. [58] As the social scientists further noted, this ascent of judges was followed by a flurry of proposed rule changes with a distinctly anti-plaintiff bias. [59] As judges dominated the Rules Committee in larger numbers, the changes proposed by the new Committee moved measurably in the direction of making it more difficult for plaintiffs to sue.

With the ascent of judges in both case law and the Rules Committees, it is perhaps not surprising that it has become commonplace for legal elites to express the view that judges are more competent decision-makers than juries in *all* respects.[60] Some scholars even claimed that judges are likely better at moral reasoning.[61] Remarkably, these views have persisted even though social scientists have repeatedly pointed out that they have no basis in fact.[62]

This disparagement of the capacities of civil juries has had particular salience in the debates around judicial gatekeeping and expert testimony. A recent example can be found in the discussions around the newly approved amendments to Federal Rule of Evidence 702. A Committee Report accompanying the proposed change claimed, in the face of readily available empirical evidence to the contrary, that:

> "Judicial gatekeeping is essential because …. jurors may be unable to evaluate meaningfully the reliability of scientific and other methods underlying expert opinion … [and] unable to assess the conclusions of an expert that go beyond what the expert's basis and methodology may reliably support."[63]

After the Committee Report was made public, two law professors (one of whom is trained as a sociologist and widely considered one of the world's leading empirical scholars on juries) submitted a letter to the Rules Committee pointing out that the Committee's "critique of jurors' capabilities [was] empirically unsupported."[64]

As the professors noted in their letter, contrary to what the Committee Report claimed, "studies have shown that 'generalist judges may be no more able to master the intricacies of complex, expert scientific testimony than a representative jury,' and in fact, 'judges may lack strengths jurors have in evaluating scientific evidence'" (citations omitted).[65]

Of course, the research presented by the professors to refute the Committee's disparagement of juries was hardly new information. Legal and scientific experts alike have been expressing concerns about judicial competence to evaluate scientific evidence since the earliest days in which experts began to be utilized to assist in civil cases.[66] And the studies demonstrating that judges are no better equipped than juries to decide these matters have been around for decades.[67] What is remarkable is that the Committee continued to cite these false narratives as justification for the proposed rule change, despite all this.

Apart from the irony of the Committee ignoring well-vetted empirical evidence in the context of shaping a rule governing the admissibility of expert testimony, the Committee Report's attempt to justify an expansion of judicial gatekeeping on the basis of unsupported assumptions about juror capacity hints at what might lie just beneath the surface of the public's growing distrust of the courts. There is a sense conveyed in these types of comments and the near disappearance of civil jury trials over the last several decades that laypeople are no longer welcome in court. Worse, some of the comments by legal (intellectual) elites about civil juries have the stench of, well, elitism.[68] It is not unreasonable to think that this is, at least in part, a source of the people's growing discontent with courts.

III. Why Current Gatekeeping Practices May Be Read Negatively by Laypeople

At a recent family gathering, I asked my extended family (none of whom are lawyers) whether they thought judges were more qualified to evaluate scientific evidence than ordinary people on a jury. They laughed their heads off.

I offer this story not to suggest that judges are perceived by non-lawyers as less scientifically literate than the general public. To my knowledge, they are not. What my family members found laughable was that *anyone* would think that judges generally are more qualified than members of a jury of ordinary people, many of whom have worked for years in technical or scientific fields, to understand scientific evidence. And, yet, this is precisely what our current judicial gatekeeping practices with regard to expert testimony presume.

As my family members pointed out, the assumption of greater judicial competence is particularly problematic in today's climate of rapid scientific and technological changes. From their perspective, it was more likely than someone operating "in the real world" would understand scientific and technical matters better than judges, many of whom have simply not had the same level of training or exposure to advancements in science and technology than many American workers have had. In this context, the expansion of judicial gatekeeping in the assessment of expert testimony seems especially vulnerable to being scoffed at, by laypeople as well as scientists.

From the NCSC survey data, it is also clear that many Americans are concerned about judicial bias.[69] These concerns, as well, suggest the wisdom of a more cautious approach to the expansion of judicial gatekeeping. It is truly troubling to contemplate on the fact that the single largest net drop in the recent survey of perceptions of state courts was in response in questions about whether courts are fair and impartial.[70] While judges who strive every day for impartiality may find this difficult to hear, the public's concerns about judicial bias are not wholly without empirical support.

Studies have consistently found links between judicial outcomes and the previous legal experience of judges,[71] campaign contributions,[72] and personal attributes, such as race or gender.[73] Worse, some social science research suggests that judges may be uniquely susceptible—that is, more susceptible than others—to certain kinds of biases. For example, judges are thought to be potentially more vulnerable to "confirmation" bias — the unconscious psychological process in which people interpret evidence in ways that are consistent with their already existing views—particularly when judges are hearing lawyers or experts who have appeared before them before.[74] Some legal commentators have also speculated that judges may be more susceptible than others to racial and gender stereotypes, in part because of the relative lack of diversity of the bench.[75]

While in most cases judges and juries seem to reach strikingly similar outcomes despite these biases,[76] the growing dominance of judges in legal outcome determinations may make judges particularly susceptible to the criticism of being unrepresentative and "out of touch" with the realities of the world around them. Research on perceptions of a police car chase video that was included in the Supreme Court's decision in *Scott v. Harris* provides a somewhat disturbing illustration of the problem.[77] The Court included the video in its opinion because it was convinced that anyone who saw the video would, like them, conclude that no "reasonable jury" could conclude that the police chase posed a risk of deadly harm.[78] But when social scientists showed the video to a sample of 1,350 Americans, large numbers of people concluded otherwise.[79]

Apart from casting doubts on the Court's conclusion, the study suggested that the Court was remarkably out of touch with community sentiments. It was not only flat out wrong in its assumptions about others' perceptions; it did not even seriously consider the possibility that others – large numbers of others – could have a different view. Thus, the Court was seemingly oblivious to its own biases, even though a lone dissenter tried to draw their attention to them.[80] Opinions like these contribute to a sense that courts are out of touch with their communities and, as a result, "detract from the law's legitimacy."[81]

Meanwhile, scientific experts are struggling with their own perception crisis. In addition to losing confidence in the Courts, the public is also becoming increasingly skeptical of the assessments of those who hold themselves out as scientific experts.[82] As others have noted, public perceptions of experts were declining even before Covid and the politics of Covid did them no favors.[83] While some in the scientific community find this growing skepticism problematic, others have noted that it is appropriate for the public to be concerned about the political or otherwise partisan biases of those who hold themselves out as experts.[84]

In the legal world, experts are treated with *both* skepticism and reverence. Even as *Daubert* arose in part out of concerns about the scientific validity and party partisanship of some experts' testimonies, experts continue to receive a great deal of deference in courtrooms.[85] As noted above, *Daubert* itself largely turns the question of scientific validity back to the experts, by assessing the admissibility of expert testimony on the basis of criteria like whether the method has been subjected to peer review and publication and enjoys "general acceptance" within the "relevant scientific community."[86]

This heavy reliance on the judgements of experts ignores that they, too, may be biased or out of touch with community practices and sensibilities, with real implications for the reliability of expert conclusions.[87] It has long been recognized within the scientific community that the healthcare field, in particular, suffers from professional biases, such that differences in training give rise to very different assessments and medical recommendations.[88] This is particularly apparent in the historical schisms between Western and Eastern medicine and the turf battles between doctors and nurse practitioners, which include profound disagreements over the standard of care. But these biases are not limited to the health sciences.

Like everyone else, scientific experts are prone to what psychologists refer to as a "normality bias."[89] As with judges, the normality bias can cause experts to assess scientific information in light of what they have been trained to see.[90] For some experts, this makes it almost impossible to discuss scientific findings in the language of legal discourse. For example, it has been noted that it is fundamentally inaccurate, from a scientific point of view, to discuss causation in the way that law demands.[91] When this is considered, it is a bit odd that courts pay such deference to expert opinions on causation.

Scientific research suffers from many other types of biases that skew outcomes as well. For example, many studies now decry the structural biases of science and the implicit biases of scientists and health experts that have given rise to racist, sexist, and ableist practices and conclusions.[92] Concern has also been expressed about scientific research that is designed to reach a particular outcome, through data fishing[93] or other practices that are clearly intended to skew the result.

Along similar lines, the influence of industry sponsorship on academic research is also well documented.[94] While such sponsorship does not of itself render the research invalid, it does raise questions about what data might be missing and whether the researchers might have employed different methods or reached different conclusions if alternative funding sources had been available. Indeed, the concern about this is so great that some educational institutions have begun to regulate the funding of academic research more closely to minimize excessive donor interference.

Apart from the biases that accompany how scientific conclusions are produced, it is also important to consider how rapidly changing scientific and technological developments may impact assessments of the validity of scientific opinions, particularly opinions published in peer review journals for which there is often an extended period of delay due to the time-consuming peer review process. In this regard, it is worth reflecting for a moment on the fact that, when *Daubert* was argued, the World Wide Web was not yet available to the general public.[95] In the years since then, expert information is being produced and reproduced at a pace that may be quickly rendering the *Daubert* criteria potentially meaningless. Indeed, in the not-too-distant future, we may well be asking whether a Chatbot can qualify as a witness under revised Rule 702.[96] And these opinions may change daily as more and more information is produced and processed, more and more rapidly.

As the Supreme Court acknowledged in *Daubert*, it is much more appropriate to think about scientific research in terms of an ongoing process.[97] On one level, the *Daubert* decision acknowledges this by emphasizing consideration of the methodologies employed by particular experts. But these methodologies can also rapidly become obsolete or irrelevant for the particular question at hand. Moreover, the latest revisions to Federal Rule 702 seem to encourage judges to make assessments about not just the methodology employed but also about the appropriateness of the conclusions that experts draw in light of the methodologies that they relied upon. But since judges are not experts, and information is snowballing at unprecedented rates, it seems unlikely that judges could possibly keep touch with all the latest information and conclusions that are being generated in any *one* field, much less have sufficient expertise to assess the appropriateness of the conclusions in the large variety of cases in which courts rely upon expert testimony.

I fear that these new revisions to Rule 702 place judges at great risk of reaching conclusions on the basis of scientific methodologies and conclusions that may already be obsolete, without the court's knowledge. Even other scientists exercise caution when evaluating interpretation of data. While it is not uncommon to question others' conclusions that have been drawn, they typically do so only after careful review of the same data and then

subjecting their second-guessing to peer review. It is truly astonishing that the Rules Committee is inviting judges to engage in this type of second-guessing, without any sort of check or other cautionary note about the limitations of their own training.

A popular misconception of first-year law students is the idea that the law exists somewhere, in a book or electronic database perhaps, and what law professors do is hide the book from you.[98] One can only surmise that the Rules Committee suffers from a similar misconception about science.[99] In fact, science does not offer definitive truths on which judges may unquestionably rely. Rather, science—much like law—is a better understood as a process, in which the methodologies and the conclusions are undergoing constant change.

The story of the drug at issue in the *Daubert* case illustrates this point well. The plaintiffs in *Daubert* were the parents of two children born with serious medical conditions.[100] Their lawsuit against Merrell Dow Pharmaceuticals alleged the medical conditions of their children were caused by the consumption of Bendectin, a prescription anti-nausea drug produced by the defendants.[101] In support of their case, plaintiffs offered the testimony of an expert who, after re-analyzing published studies on Bendectin, found a statistically significant association between the drug and birth defect.[102] The study was unpublished, however, and at the time the case was argued, the general consensus of the scientific community was that there was no evidence strong enough to tie Bendectin to birth defects.[103] Ultimately, under both *Frye* and *Daubert* (after remand), the testimony was deemed inadmissible. Today, there continues to be significant concern about Bendectin but the drug is no longer prescribed, both because of concerns about its toxicity and because, probably more importantly, *subsequent research uncovered that the initial recommendations for prescribing the drug were based on faulty science*.[104] Notably, this conclusion was reached after a subsequent re-analysis of the published (but, notably, not peer reviewed) research that supported prescribing the drug revealed problems with the initial conclusion that the drug was effective.

The point here is not that the study that plaintiffs attempted to introduce in *Daubert* provided definitive proof of the adverse effects claimed by the plaintiffs in that case. The point is that the court's approach to determining what constitutes scientifically reliable results is quite different from that of the scientific community itself. As the medical community's response to Bendectin illustrates, the scientific and medical conclusions evolve over time and do not turn on publication or peer review. In the case of Bendectin, the medical community relied upon research that had not been peer reviewed to *prescribe* Bendectin for pregnancy-related nausea. The courts, on the other hand, rejected the well-vetted and falsifiable but nevertheless unpublished research that the plaintiffs offered in *Daubert* to avoid summary judgment. Importantly, the two sets of studies were not necessarily at odds with each other from a scientific point of view. The different studies were simply different assessments of the drug at different points in time, utilizing different methods – both of which were widely considered scientifically valid.

As many in the scientific field now emphasize, many scientific conclusions are best understood as socially constructed or, put differently, as products of a particular place and time, and even of the epistemic views of the researchers at a particular place of time.[105] *Daubert* actually accepts this premise and, indeed, the enhanced gatekeeping role of judges that is prescribed by *Daubert* is, in many ways, a response to it.[106] The criteria set out in *Daubert* and the proposed revisions to Rule 702 direct judges to "become sufficiently knowledgeable about scientific methods so that they can fairly assess the validity" of expert testimony in light of these limitations.[107] But, unfortunately, judges are ill-equipped to perform this role. Indeed, research suggests that judicial understanding of scientific methods is relatively weak.[108]

But even if a judge is well-trained in science, there is no reason to think that judges are somehow exempt from the cognitive biases that color the perceptions of experts themselves or, for that matter, the general public. As is the case with everyone else, judicial views of science are products of a particular place and time and of particular assumptions about the nature of expert knowledge.[109] For all of these reasons, laypeople may view the expanding gatekeeping role of judges in the context of expert testimony with some skepticism.

IV. A Path Forward

Daubert purports to "make the judge, not the expert community, the final arbitrator of what constitutes acceptable expertise."[110] The pending amendments to FRE 702 seek to expand this role further. While many judges seemingly welcome this gate-keeping role, they would do well to be attentive to how their own assumptions may color their assessment of the testimony.[111] What seems like "common sense" to a judge today may look quite differently tomorrow.[112] Moreover, some might perceive the "common sense" of judges to be at odds with the "common sense" of others in the community, as was seen in the case of the police chase in *Scott v. Harris*.

Although some commentators have called for scrapping *Daubert* in its entirety,[113] that project strikes me as unrealistic at this point. Instead, in this section, I want to suggest some potential strategies that judges might pursue, within the existing legal framework, for enhancing public engagement with civil legal proceedings and perhaps helping to improve perceptions at the same time. As a starting point, I think it is helpful to remember that, although perceptions of the courts are now at a crisis point, the fundamental challenge that is posed by *Daubert* and the assessment of expert testimony is not a new one. Courts in earlier times also struggled to develop tools for legal decision-making that incorporated both the uncertainty of scientific conclusions and an awareness of how their own biases might be influencing their view of the evidence.

One of the leading legal scholars (and judges) to consider how to conduct legal decision making in light of scientific uncertainties and cognitive biases was Oliver Wendell Holmes. Like most scientists today, he recognized that perceptions are a product of both the physical world and how the mind has been trained to see it.[114] Put another way, Holmes recognized that there are no "neutral" experts on which courts might rely.

As a result of his beliefs, Holmes was dedicated to hearing a variety of viewpoints and was especially interested in hearing what "legal outsiders" and those with direct experience on an issue had to say.[115] In addition, Holmes's jurisprudence teaches the importance of continuously revisiting and interrogating what we think to be true, in light of current and past biases. It is worth quoting from *The Common Law* (1881) at length on this point:

> The life of the law has not been logic: it has been experience. The felt necessities of the time, the prevalent moral and political theories, intuitions of public policy, avowed or unconscious, even the prejudices which judges share with their fellow-men, have had a good deal more to do than the syllogism in determining the rules by which men should be governed. The law embodies the story of a nation's development through many centuries, and it cannot be dealt with as if it contained only the axioms and corollaries of a book of mathematics.

Legal practices which place excessive deference on the generally accepted expert opinions of the moment—or which attempt to tie legal conclusions to scientific conclusions at a particular point in time—ignore these realities and, in doing so, may raise questions about the impartiality and fairness of legal processes, both for the reasons Holmes cites (legal decision-making is plainly influenced by the perceived exigencies and prejudices of

the moment) and because an over-reliance on elite perspectives (of scientific experts and judges alike) is not likely to bring us closer to "truth" or justice.

One oft-mentioned solution to the problem of potentially biased expert witnesses is to make them "neutral" or court-appointed. As far back as 1901, Learned Hand proposed the creation of a system of neutral, court-appointed experts, not unlike those used in countries such as France, that are not based on an adversarial system of justice.[116] I have already discussed some of the reasons why this is problematic. From a scientific perspective, "neutral" expert witnesses are a fantasy. Like all of us, experts carry the baggage of their training and own implicit biases. But it is also true that relatively few disputes, and especially those that eventually find their way to trial, involve a question around which there is a clear scientific consensus. Indeed, it is not uncommon for the relevant science to be changing as the case proceeds. Under these circumstances, a panel of so-called "neutral" experts is unlikely to provide courts with more meaningful assessments or to be the best evaluators of the relevant evidence.

Another proposed solution is to restrict the juror pool to those with scientific competence.[117] As was the case in an earlier time, special juries, "in which individuals are selected for specific education, training or experience to serve as civil jurors, remain an option in the United States."[118] Sometimes this idea is posed as a jury of professional scientists. [119] As this idea is typically deemed impractical, the idea is quickly dismissed. [120]

That said, there is nothing preventing a judge from inquiring into the scientific competence of prospective jurors, if that is a concern. Of course, this also threatens to introduce bias, as the jurors with the most significant scientific training are likely to suffer from the same sorts of biases as expert witnesses, whose views are shaped by the field in which they are trained and the personal biases that they bring to the case from their own backgrounds. More importantly, we have no reason to believe that jurors with scientific expertise are, as an empirical matter, more competent to sort through scientific testimony.

If these oft-proposed potential solutions are not the answer, what other steps might courts take in the context of assessing the admissibility of expert testimony, to minimize perceptions of illegitimacy and bias? The most important thing to consider is this: *research suggests that including laypeople in the decision-making process improves perceptions of fairness and legitimacy*.[121] What follows then, are some proposals that take this research seriously by helping to restore and protect the important role of laypeople in civil legal processes.

Proposal #1: Thoughtful Moderation of the Judicial Gatekeeping Role in the Expert Testimony Context

As we have discussed, the rationale for the enhanced gatekeeping role of judges in *Daubert* and the revised rules regarding the admissibility is empirically dubious. As an empirical matter, there is no reason to believe that judges are more qualified than juries to evaluate scientific evidence. As explained in Part II, the expansion of judicial gatekeeping is better explained by political strategies that sought to elevate judges and other elites over laypeople in the legal decision-making process. In light of this, a prudent—and empirically informed—approach might be to engage in judicial gatekeeping in ways that recognize the value of juries in assessing scientific evidence.

With this in mind, it is important to recognize that the criteria that *Daubert* presents for consideration in determining whether to admit expert testimony were intended to be flexible and not necessarily applicable in every case.[122] While some judges treat the criteria as if they were rigorous tests, this is not what *Daubert* itself or the rules require. Moreover, in *Kumho Tire v. Carmichael*, the Supreme Court expressly recognized that the *Daubert*

factors do not fit all cases.[123] The publication and peer review criteria, for example, may not provide helpful information in every case. [124] In other words, in some circumstances, these criteria might not take precedence.

Going further, Courts might seek additional input from others whose perspectives are relevant, even if they are not recognized in the relatively exclusive and elite world of academic publication. Here, it is worth noting that the Advisory Committee has recognized that experience alone may provide a sufficient basis for admitting expert testimony.[125] This opens up all sorts of possibilities for the inclusion of diverse and non-elite perspectives, as Holmes advised.

To give a few examples—people with disabilities may have highly relevant experience to consider in cases involving disabling injuries, particularly with regard to the experience of pain and suffering that accompanies the transition to life as a disabled person.[126] Public health experts, environmental activists, and other members of the community with uniquely relevant experience on the issues may also have relevant testimony to share, particularly on what scientists call the "external validity" or relevance to the real world of the scientific findings. To be sure, some lawyers and judges may object to the admissibility of experiential testimony on the ground of prejudice.[127] But, from another perspective, testimony from people with direct experience is no more prejudicial, and perhaps less prejudicial, than that of experts drawing conclusions on the basis of their particular trainings or biases. And, as Holmes also emphasized, the life of the law has not been logic, but experience. Since it is not possible to eliminate cognitive biases entirely, incorporating diverse experiences into the decision-making process can be helpful.

One way of incorporating the views of lay people into the process of judicial gatekeeping might be to experiment with special expert evaluation panels made up of both "experts" and laypeople. Courts in other countries routinely employ "mixed-court" practices in which laypeople and professionally trained judges serve side by side to decide cases.[128] Recent research on these practices have found them to be extraordinarily efficient, effective, and well received.[129]

While the practices in other countries involve judges and jurors working together to decide all aspects of the case, U.S. courts might experiment with mixed court advisory panels on scientific issues, with the parties' consent. The dialogue that might take place has the potential to be helpful to everyone involved and might even help to facilitate settlement. More importantly, it sends a message that the court considers the quality of the evidence, vetted by those with experience in the field, to be as important as the social, educational, or economic status of the messenger (the elite scientific experts). The point is not to abandon expert testimony, but to find ways to create more space for the testimony to be considered in light of human experience, both to minimize the prejudicial effects of implicit and other biases and to ensure that courts are considering a fuller range of perspectives in their quest to provide equal justice to all.

Proposal # 2: Encourage Thoughtful Discourse About Civil Juries and How to Revive Them

It should now be obvious that the empirically insupportable badmouthing of civil juries and the civil justice system needs to stop. Individual judges can take steps in both their personal and professional lives to check the proliferation of this misinformation and to provide more accurate information about how the civil justice system works and the important role of civil juries in it.

Members of the judicial branch might also consider actively supporting other proposals to restore the jury, including adopting a jury-trial default rule, removing damage caps which inhibit jury trials, and experimenting with procedures that permit both speedier trials and greater engagement by laypeople, such as remote trials.[130] As some scholars note, it is also important to ensure representative juries and perhaps consider a return to 12-person juries. [131] The motivating consideration in all of these proposals is *greater engagement by laypeople with court processes* as research suggests that public engagement with courts is critical to perceptions of courts' legitimacy.[132]

Proposal #3: Support Efforts to Diversify the Bench

The American judiciary is overwhelmingly white and male. Despite significant efforts to diversify it, it has actually grown *less* representative of American demographics in recent years.[133] Unfortunately, President Trump's overwhelmingly white and male judicial appointees exacerbated the imbalance.[134] While President Biden's appointments have made significant strides in the direction of greater diversity for the federal bench, it is still the case that what most people see when they look at U.S. courts is white men with disproportionate control of a branch of government that has historically been viewed as an important venue for political participation by under-represented minorities.[135] This is another problem for perceptions of court legitimacy.

Research has also tracked the imbalanced representation on rules committees, including the near absence of non-white judges on the Federal Civil Rules Advisory Committee in recent years.[136] This, too, presents a threat to the legitimacy of courts, particularly since social science research has identified a link between the ascent of judges on the Rules Committee and increased restrictions on access to justice.[137] While it may be that non-white judges would reach the same conclusions as white judges, the optics are problematic for courts in the face of public perceptions that courts do not provide equal justice for all.

While it's clearly not possible to address the history of imbalance in the making of federal rules all at once (rule-making is a slow process), courts can be more attentive to perceptions of exclusivity and bias, in light of the somewhat exclusionary history of the Rules Committee and current imbalances. And individual judges can and should support efforts to diversify the bench.

Conclusion

Courts (and civil courts, in particular) play an important role in American Democracy. Historically, they have served as a significant site of political participation.[138] Civil courts are also a critically important venue for confronting the misuse of power.[139] Judicial gatekeeping practices which exclude laypeople from some of the key decisions that take place in civil courts are at odds with this important history and likely to lead to questions about the legitimacy of the courts themselves.

The political assessments that gave rise to the expansion of judicial gatekeeping did not consider this part of the political equation. Instead, their focus was on false narratives about the limitations of juries and perhaps on the interests of courts in increasing judicial efficiency and some of the parties appearing before courts in which expert testimony plays a role. What the rule-makers apparently did not consider is how these practices might be perceived outside the courthouse doors.

False and misleading claims about juries have real implications for law and the political system as a whole. In other legal contexts, social scientists have presented extensive empirical research demonstrating how misleading

claims about the law become incorporated into American political culture, in ways that favor corporate interests and stigmatize those who attempt to challenge them.[140] The courts, long heralded as the most trusted branch—particularly among those whose views are largely excluded from majoritarian based legislative processes—should not be party to legal practices that traffic or otherwise rely upon these false narratives. They should also be wary of how the factually inaccurate disparagement of juries and the operation of the civil justice system has implications for the political legitimacy of courts more broadly.

As judges consider the expansion of their roles as judicial gatekeepers, they would do well to keep in mind the jurisprudential values of Oliver Wendell Holmes. Holmes's jurisprudence teaches the importance of hearing from multiple perspectives on the issues raised[141]and for courts to be especially attentive to giving more voice to legal outsiders.[142] These insights seem especially salient today, in this time of rapid scientific and technological change and growing distrust in both legal and scientific elites.

Notes

1 Alexander Hamilton, *Federalist No. 83*, "The Judiciary Continued in Relation to Trial by Jury."

2 Oliver Wendell Holmes, Jr., *The Common Law 1* (1881).

3 *See, e.g.,* National Center For State Courts, *State of the State Courts Presentation*, 2022, at 4, available at https://www.ncsc.org/__data/assets/pdf_file/0019/85204/SSC_2022_Presentation.pdf ("Public trust measures (in the courts) continue to slide").

4 *See, e.g.,* Jeffrey M. Jones, *Supreme Court Trust, Job Approval at Historic Lows*, Gallup (Sept. 29, 2022), https://news.gallup.com/poll/402044/supreme-court-trust-job-approval-historical-lows.aspx (noting a 20-percentage drop in public trust in the judicial branch in the federal government, the lowest on record). Annenberg Civics Knowledge Survey, *Over Half of Americans Disapprove of Supreme Court as Trust Plummets*, Annenberg Public Policy Center (October 10, 2022), https://www.annenbergpublicpolicycenter.org/over-half-of-americans-disapprove-of-supreme-court-as-trust-plummets/; Pew Research Center, *Positive Views of Supreme Court Decline Sharply Following Abortion Ruling*, Pew Research Center (September 1, 2022), https://www.pewresearch.org/politics/2022/09/01/positive-views-of-supreme-court-decline-sharply-following-abortion-ruling/.

5 *See generally* National Center For State Courts, *State of the State Courts*, 2022, at 4, available at https://www.ncsc.org/__data/assets/pdf_file/0019/85204/SSC_2022_Presentation.pdf.

6 *Id.*

7 *Id.* at 12.

8 *Id.* at 4.

9 *See generally* Richard L. Jolly, Valerie P. Hans, & Robert S. Peck, *Democratic Renewal and the Civil Jury*, 57 Ga. L. Rev. 79 (2022). As these authors emphasize, it is worth remembering that attempts to restrain civil juries "motivated not only the First Congress of the American Colonies in 1755, but was also explicitly listed in the Declaration of Independence as a grievance justifying the Revolution." *Id.* at 82 (2022), citing Resolution VII of the Stamp Act Congress (1765) (listing among grievances "[t]hat trial by jury is the inherent and invaluable right of every British subject in these colonies" and "[t]hat the late Act of Parliament . . . by extending the jurisdiction of the courts of Admiralty beyond its ancient limits, have a manifest tendency to subvert the rights and liberties of the colonists") and The Declaration of Independence para. 20 (U.S. 1776) ("For depriving us in many cases of the benefits of Trial by Jury"). A commitment to the preservation of civil juries in the Bill of Rights also helped to secure ratification of the Constitution. *Id.* at 83, *see also* U.S. Const. amend. VII ("In Suits at common law, where the value in controversy shall exceed twenty dollars, the right of trial by jury shall be preserved, and no fact tried by a jury, shall be otherwise re-examined in any Court of the United States, than according to the rules of the common law.").

10 *See* National Center For State Courts, *State of the State Courts*, 2022, at 13, available at https://www.ncsc.org/__data/assets/pdf_file/0019/85204/SSC_2022_Presentation.pdf (noting that 84 percent of respondents identified "trial by jury of peers" as a policy that helps "ensure[s] courts and judges only make decisions based on the Constitution, the law and the facts of each case").

11 *Id.*

12 *See* Jolly, et al., *supra*, at 87-88 (noting that civil juries have come close to being completely "eradicate[ed] as a meaningful component of the American civil justice system").

13 *Id.* at 88 (citing statistics indicating that "juries disposed of just 0.53% of filed federal disputes" with similar numbers in state courts).

14 *Id.*

15 Mark P. Gergen, *The Jury's Role in Deciding Normative Issues in the American Common Law*, 68 Fordham L. Rev. 407, 419 (1999).

16 According to a survey conducted by Pew in late 2021, only 29 percent of American adults said they have "a great deal of confidence in medical scientists to act in the interests of the public." Brian Kennedy, Alec Tyson & Cary Funk, *American's Trust in Scientists, Other Groups Declines*, Pew Research Center, Feb. 15, 2022, https://www.pewresearch.org/science/2022/02/15/americans-trust-in-scientists-other-groups-declines/. For an example of the politicization of expert opinions, *see* Abigail Cartus & Justin Feldman, *Motivated Reasoning: Emily Oster's Covid Narratives and the Attack on Public Education*, Protean Magazine, March 22, 2022, available at https://proteanmag.com/2022/03/22/motivated-reasoning-emily-osters-covid-narratives-and-the-attack-on-public-education/ (critiquing economist Emily Oster and noting the role of politicized donors, think tanks and others in promoting Oster's views).

17 My use of the term "elite" here is intended as sociological description and, in particular, as a reference to those who hold a disproportionate amount of wealth, privilege, or political power in society, not as a political critique. *See*, *e.g.*, Stephen L. Rispoli, *Courting Access to Justice: The Rule of Law, the Rule of the Elite, and Non-Elite Non-Engagement with the Legal System*, 29 Rev. of Law & Soc. Just. 333 (2020) (characterizing judges and lawyers as political elites).

18 *See*, *e.g.,* Hans Zeisel*, The Debate over the Civil Jury in Historical Perspective*, 1990 U. Chi. Legal F. 25, 26, available at https://chicagounbound.uchicago.edu/cgi/viewcontent.cgi?article=1065&context=uclf (providing several examples of how legal elites have elevated judges over juries). As discussed below, it continues to be widely assumed that judges are more competent than juries to assess scientific matters, even though social scientists have repeatedly pointed out that the assumption has no basis in fact.

19 Susan Haack, *An Epistemologist in the Bramble-Bush: At the Supreme Court with Mr. Joiner*, J. of Health Politics, Policy & Law 227, citing Learned Hand, *Historical and Practical Considerations regarding Expert Testimony*, 15 Harv. Law Rev. 40, 40-49 (1901) (describing expert practices from the 1600s).

20 *Id.*

21 *Id*.

22 *Id.*

23 Samuel R. Gross, *Expert Evidence*, Wis. L. Rev. 1113, 1114 (1991), citing John Pitt Taylor, *Treatise on the Law of Evidence* Sections 45-50, at 65-69 (3d ed. 1858).

24 More precisely, Pound wrote that the adversary system "turns witnesses, and especially expert witnesses, into partisans pure and simple." Roscoe Pound, *The Causes of Popular Dissatisfaction with the Administration of Justice*, 14 Am. Law. 445, 447-48 (1906).

25 *Id.; see also* Jennifer L. Mnookin, *Expert Evidence, Partisanship and Epistemic Competenc*e, 73 Brooklyn L. Rev. 587, 593-97 (2008) (tracing the history of current approaches to expert evidence to Pound's critique).

26 *See* Michael J. Saks, *Expert Evolution of Rules and Practices* (on file with the author) at 3, citing David L. Faigman et al., *Check Your Crystal Ball at the Courthouse Door, Please: Exploring the Past, Understanding the Present, and Worrying about the Future of Scientific Evidence*, 15 Cardozo L. Rev. 1799 (1994).

27 *See* Saks, *supra*, at 3; *see also Frye v. United States*, 293 F.1013 (D.C. Cir 1923).

28 *Id*. (explaining how *Frye* replaced "consumers [of expertise] with producers [of expertise] as the crucial assessors of validity").

29 *See, e.g.*, Cartus & Feldman, *supra* (critiquing the role of politicized donors, think tanks and others in shaping expert opinions in the context of the Covid epidemic).

30 *Daubert v. Merrell Dow Pharmaceuticals*, 509 U.S. 579 (1993).

31 For a fuller discussion of how *Daubert* operates in practice, see Saks, *supra*.

32 *Daubert*, 509 U.S. at 593-595.

33 *See Daubert*, at 600-01 (Rehnquist, C.J., dissenting).

34 *Daubert v. Merrell Dow Pharmaceuticals*, 43 F.3d 1311 (9th Cir. 1995).

35 As an example, several years ago, I worked with a team of social scientists to test and evaluate the adoption of new technologies by a local court. At the court's request, we did not publish the results. Nevertheless, the research served as a valuable tool for the court in determining future investments in technology and other policies. These types of unpublished "return on investment" studies are quite common and the fact that they are unpublished does not mean they are unreliable or based on "junk" methodologies.

36 For a discussion of biases in peer review processes and the resulting distortion of research results, *see* Samir Haffar et al., *Peer Review Bias: A Critical Review*, 94 Mayo Clin. Proc. 670-76 (2019), available at https://www.mayoclinicproceedings.org/action/showPdf?pii=S0025-6196%2818%2930707-9.

37 For a complete trajectory of the changes to FRE 702 over time, *see* Saks, *supra*, Appendix.

38 See Letter from John G. Roberts, Jr. to Hon. Kevin McCarthy (April 24, 2023) and attached order, available at https://www.supremecourt.gov/orders/courtorders/frev23_5468.pdf.

39 Committee on Rules of Practice and Procedure, Agenda Book (June 7, 2022), 891–92.

40 *Id.* at 892-94.

41 *See, e.g.,* Tim Kirkman, *Working with Experts after Proposed 702 Rule Changes*, JDSUPRA, January 12, 2023, https://www.jdsupra.com/legalnews/working-with-experts-after-proposed-702-6262399 (initially quoting U.S. District Judge Patrick Schiltz, chair of the Advisory Committee on Evidence Rules for the point that "This does not change the law at all. It simply makes it clearer" and then, a few paragraphs later, noting that the amendment "will supplant the *Daubert* standard").

42 *See* Andrew Tauber & John Hardin, *Don't Say Daubert—Reviving Rule 702*, Winston & Strawn, LLP (June 29, 2022), available at https://www.winston.com/en/product-liability-and-mass-torts-digest/dont-say-daubert-reviving-rule-702.html.

43 *Daubert, supra*, 509 U.S. at 580.

44 The Court noted in *General Electric v. Joiner*, for example, that "conclusions and methodology are not entirely distinct from each other." *General Electric v. Joiner*, 522 U.S. 136, 146 (1997).

45 Committee on Rules of Practice and Procedure, Agenda Book (June 7, 2022), 891–92.

46 *Id.* at 872.

47 Jolly et al., *supra*, at 126 – 136 (summarizing "legal critiques and attacks on the civil jury"); *see also* Hans Zeisel, *The Debate over the Civil Jury in Historical Perspective*, 1990 U. Chi. Legal F. 25 (providing an historical overview of the growing disparagement of civil juries over time).

48 *See generally* William Haltom & Michael McCann, *Distorting the Law: Politics, Media, and the Litigation Crisis* (2004); *see also* Marc Galanter, *An Oil Strike in Hell: Contemporary Legends About the Civil Justice System,* 40 Ariz. L. Rev. 717 (1998) (debunking many of the false narratives through the presentation of empirical evidence disproving them).

49 *See generally* William Haltom & Michael McCann, *Distorting the Law: Politics, Media, and the Litigation Crisis* (2004).

50 *Id.*

51 *Id*.

52 Jolly et al., *supra*, at 130, citing Neil Vidmar & Valerie P. Hans, *American Juries: The Verdict* 148-152 (2007) (presenting research findings that judges and juries agreed on liability "in about four out of five cases"); *id.* at 299–302 (presenting findings that jurors and judges generally award approximately the same amount of compensatory damages); and Theodore Eisenberg, Neil LaFountain, Brian Ostrom, David Rottman & Martin T. Wells, *Juries, Judges, and Punitive Damages: An Empirical Study*, 87 Cornell L. Rev. 743, 779 (2002) ("Juries and judges award punitive damages at about the same rate, and their punitive awards bear about the same relation to their compensatory awards.").

53 Jolly et al., *supra*, at 136, citing Richard O. Lempert, *Civil Juries and Complex Cases: Taking Stock After Twelve Years* 181–247 (Robert E. Litan, ed. 1993) (concluding that "the weight of the evidence indicates that juries can reach rationally defensible verdicts in complex cases").

54 Erwin Chemerinsky, *Closing the Courthouse Door: How Your Constitutional Rights Became Unenforceable* (2017); Stephen Burbank & Sean Farhang, *Rights and Retrenchment: The Counterrevolution Against Federal Litigation* (2017); Sarah Staszak, *No Day in Court: Access to Justice and the Politics of Judicial Retrenchment* (2015).

55 *See generally* Suja A. Thomas, *The New Summary Judgment Motion: The Motion to Dismiss Under* Iqbal *and* Twombly, 14 Lewis & Clark L. Rev. 15, 18-38 (2010) (comparing current practices to summary judgment at the earliest stages of the proceedings).

56 Burbank et al., *supra*; Sarah Staszak, *supra*.

57 Stephen Burbank & Sean Farhang, *Rights and Retrenchment: The Counterrevolution in Federal Rulemaking,* Published by the Civil Justice Research Initiative 4 (2020), available at https://civiljusticeinitiative.org/wp-content/uploads/2020/03/Rights-and-Retrenchment-Whitepaper-FINAL.pdf. Notably, these same studies also track the near absence of non-white judges on the Advisory Committee and the growing anti-plaintiff bias of the Committee during this time. *Id.*

58 *Id*.

59 *Id.*

60 *See* Hans Zeisel, *The Debate over the Civil Jury in Historical Perspective*, 1990 U. Chi. Legal F. 25, 26 (providing several examples of how legal elites have elevated judges over juries).

61 *See, e.g.,* Mark P. Gergen, *The Jury's Role in Deciding Normative Issues in the American Common Law*, 68 Fordham L. Rev. 407, 415 (1999) ("My second assumption is that legal education, experience, and the perspective of a judge make a judge better at some, but not all, forms of moral reasoning . . . .").

62 *See*, *e.g.*, Letter to Judge Schiltz and the Advisory Committee Members from Richard Jolly and Valerie Hans dated February 16, 2022 (stating the Committee's "critique of jurors' capabilities is empirically unsupported"), citing Larry Heuer & Steven Penrod, *Trial Complexity: A Field Investigation of Its Meaning and Its Effects*, 18 Law. & Hum. Behav. 29, 49 (1994); Richard Lempert, *Civil Juries and Complex Cases: Taking Stock after Twelve Years*, 181 (Robert E. Litan, ed. 1993).

63 *See* Committee Report for the proposed changes to Rule 702 (e).

64 *See*, *e.g.*, Letter to Judge Schiltz and the Advisory Committee Members from Richard Jolly and Valerie Hans dated February 16, 2022 (stating the Committee's "critique of jurors' capabilities is empirically unsupported"), citing Larry Heuer & Steven Penrod, *Trial Complexity: A Field Investigation of Its Meaning and Its Effects*, 18 Law. & Hum. Behav. 29, 49 (1994); Richard Lempert, *Civil Juries and Complex Cases: Taking Stock after Twelve Years*, 181 (Robert E. Litan, ed. 1993).

65 *See* Letter to Judge Schiltz and the Advisory Committee Members from Richard Jolly and Valerie Hans dated February 16, 2022, citing Valerie P. Hans & Michael J. Saks, *Improving Judge & Jury Evaluation of Scientific Evidence*, 147 Daedalus 164, 166, 172 (2018).

66 For expressions of concerns on the legal side, *see*, *e.g.*, Learned Hand, *Historical and Practical Considerations regarding Expert Testimony*, 15 Harv. L. Rev. 40-49 (1901) (describing, among other things, how judges in the1600s relied on expert *jurors* to assist judges lacking in technical expertise)..

67 *See*, *e.g.*, Larry Heuer & Steven Penrod, *Trial Complexity: A Field Investigation of Its Meaning and Its Effects*, 18 Law. & Hum. Behav. 29, 49 (1994); Richard Lempert, *Civil Juries and Complex Cases: Taking Stock after Twelve Year*s 181 (Robert E. Litan, ed. 1993).

68 For an enlightening discussion of elitism in law and its implications for access to justice, *see* Stephen L. Rispoli, *Courting Access to Justice: The Rule of Law, the Rule of the Elite, and Non-Elite Non-Engagement with the Legal System*, 29 Rev. Law & Soc. Just. 333 (2020) (using Franz Kafka's *Before the Law* to illustrate the elusiveness of justice for non-elites in the Unites States and the role of political elites, including lawyers and judges, in preventing nonelites from accessing or influencing courts).

69 *Id*.

70 *See* 2022 State of the State Courts – National Survey Analysis, Memo from GBAO to National Center for State Courts (November 21, 2022), available at https://www.ncsc.org/__data/assets/pdf_file/0033/85965/NCSC-State-of-the-State-Courts-Analysis_2022.pdf.

71 *See* Joanna Shepherd, *Jobs, Judges, and Justices: The Relationship between Professional Diversity and Judicial Decisions,* Demand Justice (Mar. 8, 2021), at 12–16, available at https://demandjustice.org/wp-content/uploads/2021/03/Jobs-Judges-and-Justice-Shepherd-3-08-21.pdf (concluding that "certain types of career experiences are associated with judges favoring individuals over corporations, or vice versa").

72 *See* Jeffrey J. Rachlinski & Andrew J. Wistrich, *Judging the Judiciary by the Numbers: Empirical Research on Judges,* 13 Ann. Rev. L & Soc. Sci. 203, 211 (2017).

73 *See, e.g.,* Stephen Burbank & Sean Farhang, *Politics, Identity, and Class Certification on the U.S. Courts of Appeals*, 119 Mich. L. Rev. 231 (2020) (describing how the gender of judges impacts class certification decisions); *see also* Wendy F. Hensel, *The Disabling Impact of Wrongful Birth and Wrongful Life Actions,* 40 Harv. C.R.-C.L. L. Rev. 141, at 185-86 (2005) (describing the biases of legal actors about disability).

74 *See* Jolly et al., *supra* at 100; *see also* Jennifer K. Robbenolt & Valerie P. Hans, The Psychology of Tort Law, 80–81, 212 (2016); *see* Jeffrey J. Rachlinski & Andrew J. Wistrich, *Judging the Judiciary by the Numbers: Empirical Research on Judges*, 13 Ann. Rev. L & Soc. Sci. 203, 216 (2017) ("[E]xperience might induce judges to adopt mental shortcuts that they did not use when they were new judges."); Jordan M. Singer, *Gossiping About Judges*, 42 Fla. St. U. L. Rev. 427, 435, 468 (2015)(noting that judges often recall conduct of attorneys from previous interactions in future interactions).

75 *See, e.g.*, Sherilyn A. Ifill, *Racial Diversity on the Bench: Beyond Role Models and Public Confidence*, 57 Wash. & Lee L. Rev. 405, 444-45 (2000) (noting that judges may be even more susceptible than jurors to stereotypes).

76 Jolly et al., *supra*, at 130, citing Neil Vidmar & Valerie P. Hans, American Juries: The Verdict 148-152 (2007) (presenting research findings that judges and juries agreed on liability "in about four out of five cases"); *id.* at 299–302 (presenting findings that jurors and judges generally award approximately the same amount of compensatory damages); and Theodore Eisenberg, Neil LaFountain, Brian Ostrom, David Rottman & Martin T. Wells, *Juries, Judges, and Punitive Damages: An Empirical Study*, 87 Cornell L. Rev. 743, 779 (2002) ("Juries and judges award punitive damages at about the same rate, and their punitive awards bear about the same relation to their compensatory awards.").

77 *Scott v. Harris*, 127 S. Ct. 1769 (2007).

78 *Scott v. Harris*, 127 S. Ct. 1769 (2007).

79 Dan M. Kahan, David A. Hoffman & Donald Braman, *Whose Eyes Are You Going to Believe?:* Scott v. Harris *and the Perils of Cognitive Illiberalism*, 122 Harv. L. Rev. 837, 841 (2009).

80 Justice Stevens was the dissenter. *See Scott v. Harris*, 550 U.S. 372 (2007).

81 Kahan, et al, *supra,* 122 Harv. L. Rev. at 841.

82 *See, e.g.,* Brian Kennedy et al., *Americans' Trust in Scientists, Other Groups Declines*, Pew Research Center (Feb 15, 2022), https://www.pewresearch.org/science/2022/02/15/americans-trust-in-scientists-other-groups-declines/ (noting that only 29% of U.S. adults report that they have a "great deal of confidence in medical scientists to act in the best interests of the public" down from 40% in 2020); *see also* Cary Funk et al, *Trust and Mistrust in Americans' Views of Scientific Experts*, Pew Research Center (August 2, 2019), available at https://www.pewresearch.org/science/2019/08/02/trust-and-mistrust-in-americans-views-of-scientific-experts/ (noting pre-pandemic that while trust in scientists is generally improving, Americans are divided along party lines in terms of how they view the objectivity of scientists).

83 *Id.*

84 Cartus & Feldman, *supra* (discussing the influence of politics on expert opinions).

85 On the deference to medical experts in civil litigation, see generally Anne Bloom, *Plastic Injuries,* 42 Hofstra L. Rev. 759 (2014).

86 *Daubert,* 509 U.S. at 593-595.

87 *See* Martha Chamallas & Jennifer B. Wriggins, *The Measure of Injury: Race, Gender, and Tort Law* 126-28 (2010) (discussing the biases of experts).

88 *See* Carl B. Meyer, *Science and the Law: The Quest for the Neutral Expert Witness: A View From the Trenches*, 12 J. Nat. Resources & Envtl. L. 35, 46 (1996-1997) (noting that different treatment modalities require specialist training and that specialists tend to recommend the modalities with which they are most familiar and that, due to differences in background and training, medical advice is necessarily "colored by personal bias"); *see also* Joseph P. Simmons et al., *False-Positive Psychology: Undisclosed Flexibility in Data Collection and Analysis Allows Presenting Anything as Significant*, 22 Pscych. Sci. 1359, 1359-60 (noting that "[a] large literature documents that people are self-serving in their interpretation of ambiguous information, and remarkably adept at reaching justifiable conclusions that mesh with their desires" and noting the problematic implications of this for scientific validity).

89 *See* Chamallas & Wriggins, at 127 (providing an overview of the "normality" bias and its implications for expert testimony).

90 *Id.*; *see also* Carol J. Hill, *Health Professionals, Disability, and Assisted Suicide: An Examination of Relevant Empirical Evidence and Reply to Batavia*, 6 Pscyh. Pub. Pol. & L. 526, 530 (2000) (describing the disability biases of medical experts).

91 *See, e.g.,* Maria Cuellar, *Short Fall Arguments in Court: A Probabilistic Analysis,* 50 U. Mich. J. L. Reform 763 (2017) (explaining the distortions that occur when probability statistics are utilized in legal causation decisions).

92 For an overview of the problem, *see* Chloe FitzGerald & Samia Hurst, *Implicit Bias in Healthcare Professionals: A Systematic Review*, 18 BMC Med. Ethics 19 (2017); *see also* Melissa Nobles et al., *Science Must Overcome its Racist Legacy: Nature's,* Nature (June 8, 2022), https://www.nature.com/articles/d41586-022-01527-z.

93 *See* Hillel J. Bavli, *Credibility in Empirical Legal Analysis*, 87 Brooklyn Law Review 502, 509-520 (2022) (describing the practice of data fishing and its problematic implications for discerning scientific validity).

94 *See, e.g.,* Alice Fabbri, Alexandra Lai, Quinn Gundry & Lisa Anne Bero, *The Influence of Industry Sponsorship on the Research Agenda: A Scoping Review*, 108 Amer. J. Pub. Health e9-e16 (November 2018).

95 The World Wide Web became available to the general public in April of 1993. Google was founded five years later.

96 While the knee-jerk response may be that a Chatbot is only as smart at its programming, when you actually run through the *Daubert* criteria, the only real question is likely to be whether the Chatbot's opinion reflects a reliable application of generally accepted scientific principles and methods to the facts of the case (as per 702(d)), as the other three criteria seem easy to meet. Moreover, some might argue that the expert opinion of a machine is far more reliable than that of a human "expert" who has also been "programmed" (by their doctoral advisors) to think about the problem in more limited ways.

97 *See Daubert*, 509 U.S 579, 590 (noting that scientific conclusions are uncertain and undergoing constant change and acknowledging that mainstream science may be wrong).

98 My recollection is that Justice Scalia popularized this misperception.

99 For an excellent discussion of how legal perceptions of science intersect with those of scientific experts, *see* Joseph Sanders, Shari S. Diamond and Neil Vidmar, *Legal Perceptions of Science and Expert Knowledge*, 8 Psych. Pub. Pol. & Law 139 (June 2002).

100 *Daubert*, 579 U.S. at 582.

101 I*d.* at 583

102 *Id*. at 584.

103 I*d.*

104 *See* Navindra Persaud et al., *Doxylamine-pyridoxine for Nausea and Vomiting of Pregnancy Randomized Placebo Xontrolled trial: Prespecified analyses and Reanalysis*, 13 Plos One (2018), available at https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5771578/.

105 *See generally* Sheila Jasanoff, *Science, Common Sense & Judicial Power in U.S. Courts*, 147 Daedalus 15 (2018).

106 *See* Sanders, Diamond and Vidmar, *Legal Perceptions of Science and Expert Knowledge*, 8 Psych. Pub. Pol. & Law 139, 149 (2022).

107 *Id.* at 149-150.

108 See Sophia Gatowski, Shirley Dobbin, James T. Richardson, Gerald Ginsburg, Mara Merlino, and Veronica Dahir, *Asking the Gatekeepers: A National Survey of Judges on Judging Expert Evidence in a Post-Daubert World*, 25 Law & Hum. Behav. 433 (2001). For example, while *Daubert* counsels court to consider "falsifiability" and error rates as part of the reliability assessment, research suggest that very few judges have a clear understanding of what these terms mean, much less the assumptions that underlie them (which are actively debated in the scientific community). *See also id.* (reporting survey results indicating that only about 6 percent of judges had a clear understanding of falsifiability and only 4 percent exhibited a clear understanding of error rates).

109 Sanders et al., *supra*, at 139.

110 *Id.* at 151.

111 *See generally* Gatowski et al., *supra*.

112 Sanders et al., *supra,* at 139.

113 *See, e.g.,* Edward Cheng, *Consensus Rule: A New Approach To Scientific Evidence*, 75 Vand. L. Rev. 407, 407 (2022).

114 *See* Catharine Wells Hantzis, *Legal Innovation Within the Wider Intellectual Tradition: The Pragmatism of Oliver Wendell Holmes*, Jr., 82 Nw. U. L. Rev. 541, 556–557 (1988).

115 *Id.* at 78-79.

116 Learned Hand, *Historical and Practical Considerations Regarding Expert Testimony*, 15 Harv. L. Rev. 40, 55 (1901).

117 Mnookin, *supra*, at 1030. Mnookin refers to this as "epistemic competence." I am using the term "scientific competence" because I think it more accurately reflects what is required, particularly in light of the most recently proposed changes to the Federal Rules of Evidence.

118 Jolly et al, *supra*, at 99, citing James Oldham, *Trial by Jury: The Seventh Amendment and Anglo-American Special Juries* 174–212 (2006) (reviewing the history of special juries in the United States).

119 Mnookin, *supra*, at 1029.

120 *Id.*

121 *See* Tom R. Tyler, *What is Procedural Justice?: Criteria Used by Citizens to Assess the Fairness of Legal Procedure*s, 22 Law & Soc'y Rev. 103, 105 (1988) (presenting evidence that involvement in the decision-making process enhances the participants' perception of fairness).

122 *Daubert*, 579 U.S. at 590.

123 *See Kumho Tire v. Carmichael,* 526 U.S. 137, 153 (1999) ("whether *Daubert's* specific factors are, or are not, reasonable measures of reliability in a particular case is a matter that the law grants the trial judge broad latitude to determine").

124 *See, e.g., Daubert*, 579 U.S. at 590.

125 See Fed. R. Evid 702 Advisory Committee Notes.

126 *See* Daniel Gilbert, *Stumbling on Happiness*, 165- 88 (2006) (summarizing the relevant research and concluding that experience provides uniquely valuable insight into the experience of pain and suffering).

127 *See* Fed. R. Evid. 403 (providing for the exclusion of evidence that poses a danger of unfair prejudice).

128 *See* John H. Langbein, *Mixed Court and Jury Court: Could the Continental Alternative Fill the American Need?*, 6 American Bar Foundation Research Journal 195-219 (1981) (describing the mixed court practices employed in Germany and assessing their potential value for U.S. courts).

129 *See* Jeremy Boulanger-Bonnelly, *Civil Lay Judges Across the Globe*, Presentation at the Annual Meeting of the Law and Society Association, San Juan, Puerto Rico (June 4, 2023) (summarizing research on the efficacy and perceptions of legitimacy of civil lay judges around the world).

130 *See* Jolly, et al., *supra*, at 141-155. *See also* Shari Seidman Diamond & Jessica M. Salerno*, Reasons for the Disappearing Jury Trial: Perspectives from Attorneys and Judges,* 81 La. L. Rev. 120, 144 (2020) (discussing the impacts of damage caps on jury trials).

131 *See* Jolly, et al., *supra*, at 141-155.

132 *See, e.g.,* Tom R. Tyler, *What is Procedural Justice?: Criteria Used by Citizens to Assess the Fairness of Legal Procedure*s, 22 Law & Soc'y Rev. 103, 105 (1988) (presenting evidence that involvement in the decision-making process enhances the participants' perception of fairness).

133 *See Diversity on the Bench*, Brennan Center for Justice, https://www.brennancenter.org/issues/strengthen-our-courts/promote-fair-courts/diversity-bench.

134 *See* Andrew Cohen*, Trump and McConnell's Overwhelmingly White Male Judicial Appointments*, Brennan Center for Justice (July 1, 2020), https://www.brennancenter.org/our-work/analysis-opinion/trump-and-mcconnells-overwhelmingly-white-male-judicial-appointments.

135 Frances Zemans, *Legal Mobilization: The Neglected Role of Law in the Political System,* 77 Am. Pol. Sci. Rev. 690 2003).

136 Burbank and Farhang, *supra*.

137 *Id.*

138 Zemans, *supra,* at 690.

139 Martha Minow, *Making All the Difference: Inclusion, Exclusion and the American Law* 383 (1990).

140 *See generally* William Haltom & Michael McCann, *Distorting the Law: Politics, Media, and the Litigation Crisis* (2004) (documenting how repeat player defendants have invested heavily in misinformation campaigns).

141 *See* Wells, *supra*, at 70-72.

142 *Id.* at 78-79.

Oral Remarks of Professor Bloom

I want to thank the Institute for inviting me. If you have read my paper, you probably know that I am the self-designated provocateur for the day. I am hopeful that there is going to be a lively discussion. Some of the things I am about to say will at least keep you awake, and hopefully will also provoke an interesting discussion.

Before I begin, I wanted to tell you a little bit about the think tank that I direct at Berkeley Law, the Civil Justice Research Initiative/Institute. There is a whole interesting UC story behind whether we are an institute or an initiative, but we will just say CJRI for short. It is an access-to-justice think tank that was founded and continues to be chaired by Dean Erwin Chemerinsky.

Our mission is to systematically identify and produce highly credible, unbiased research on critical issues concerning the civil justice system. You might ask why. At Berkeley Law, we have approximately 30 research centers. You might ask, "Did we really need another one?" Dean Chemerinsky founded the think tank essentially for two reasons. First, he sees—and I think we can all see—that there is a pretty serious access-to-justice crisis. And second, he believes that perhaps practitioners and scholars, working collaboratively, can make a difference at least in terms of providing potentially helpful research on how the civil justice system is working and some of the challenges that we face.

What does the CJRI do? We do independent research. The work of the think tank primarily involves conducting, but also promoting, what we think is outstanding civil justice research. I will be talking about some of that research today. But to be clear, the views I am presenting today are my own views, not the views of the CJRI.

In addition to research, we provide a lot of academic symposia and programming on the civil justice system, including a very popular (as it turns out) short webinar series called "Conversations on Civil Justice" that now goes out to tens of thousands of subscribers around the world—everything from high school teachers to judges in other countries. It is pretty interesting to me how much interest there is out there in the civil justice system.

In the past, we have tackled a variety of topics, including the civil legal aid crisis in housing cases, rural access-to-justice issues, the selection process for leadership roles in MDLs, and bankruptcy issues, just to name a few. Recently, we have engaged in quite a bit of research on the state of civil juries.

In the coming year, we are going to be focusing more on evidentiary issues, including the implications of artificial intelligence for the rules of evidence. I think that is a pretty interesting topic as well. We would love your engagement with our work, and your suggestions for work that we perhaps should be doing.

With that, I am going to turn to my topic, "Judicial Gatekeeping, Expert Testimony, and the Future of American Courts." Last night during the faculty prep meeting for today's session, I was encouraged to provide you with more context for some of the arguments that I make in my paper. I am going to do that.

To begin with, I think I should say that perhaps a better title for the topic I really want to discuss is "judicial gatekeeping and the future of American *democracy*." In that regard, I think it is probably important for you to know that I am not just a lawyer. I am also a political scientist. I practiced law for about 13 years and went back and got my PhD in political science and a lot of my thinking is informed by that.

As a political scientist, I believe that courts are important sites of political participation, particularly for those who are marginalized by other branches of government. As a lawyer, I was trained to think of law somehow

outside of politics. But as a social scientist, I believe it is important to look at how power operates in these legal spaces, including in courts.

I really start from this place of deep faith in the courts and deep interest in the courts as a critical component of American democracy. The French political scientist Alexis de Tocqueville also recognized the political significance of American courts and of juries, in particular. In *Democracy in America*,[1] which you may have read in your undergraduate years (a little bit of it, anyway), Tocqueville argued that what he called the legalistic spirit of Americans was both necessary and desirable for the preservation of democracy. Specifically, Tocqueville praised lawyers and the American jury system for the important roles that they play in preserving the stability of democratic government. I really agree with that sentiment. I find it very troubling that civil jury trials have all but disappeared in this country.

In 2019 (the most recent year for which full pre-pandemic data is available), juries decided less than one percent of all civil cases in both federal and state courts. In Alaska, there were no civil jury trials at all. Meanwhile, public confidence in the courts is careening downhill. It is tempting to blame the decline in confidence on the current unpopularity of the United States Supreme Court, but it is really not that simple. The National Center for State Courts says that confidence in state courts also declined significantly in the past year from 64 to 60 percent.[2] That compares to 57 percent expressing confidence in federal courts generally and about 53 percent expressing confidence in the United States Supreme Court. I have to wonder whether that number would be even lower today. What is perhaps even more troubling is that less than half of the individuals surveyed believe that judges make rulings based on the Constitution, the law, and the facts of each individual case.

Surveys are also capturing widespread concern about bias in the courts. Meanwhile, we have also seen a rise in attacks on the courts, and on judges in particular. The think tank I direct at Berkeley Law is so concerned about this that we recently launched a special project on it in collaboration with the Berkeley Judicial Institute and the National Judicial College, "Democracy's Last Line of Defense." In any event, as I discuss in the paper, surveys also reveal growing distrust and concerns about the politicization of science and concerns about the credibility of experts generally.

All this has been so widely reported that I do not want to spend a lot of time on these points today. Instead, I want to use my remaining time to try to persuade you that these developments have implications for our current approaches to judicial gatekeeping, particularly in the context of expert testimony. Let me begin this attempt to persuade you in this way.

If we accept the conclusions of multiple different research entities, confidence and the fairness and legitimacy of courts is declining rapidly. And if we accept that juries have, at least historically, been an important space for political activity in American democracy, might we also consider a hypothesis that the decline of civil jury trials and the decline in public confidence in courts are linked?

Alexander Hamilton wrote in *Federalist 83* that the strongest argument in favor of civil jury trials was that they provide security against corruption. He was actually responding to people who were concerned that the Constitution would eliminate civil jury trials. There is a whole interesting history to this. If you go to our website, we have a white paper on it.[3]

Corruption is not something I think most people think about when they think about U.S. courts. But our founders were very concerned about the corruption of the courts. I have to say I think we are definitely seeing a revisiting of some of those concerns today. Importantly, as Hamilton suggests, from the very earliest days, civil

juries were seen as the antidote against corruption. It does not mean that they *are* the antidote, but they were perceived that way.

Notably, recent surveys indicate that Americans still feel this way. When asked about practices that help to ensure the legitimacy of courts, survey respondents cite jury trials as one of the most important aspects of courts that help to ensure their legitimacy.

I think it is interesting that, particularly in light of recent events, jury trials were ranked as even more important than a code of conduct for judicial officers. We can see that there is this long history in the United States, at the time of our founding and still today, where juries in civil cases have been viewed as key to ensuring legitimacy of our courts. And I really think this consistent expression of public faith in civil juries is worthy of our attention right now. People are increasingly skeptical about courts. But they still believe in juries even as civil juries have almost completely disappeared.

I cannot prove causation, but, in social science terms, we would say we have correlation, but not causation. My hypothesis is that there may be some link between the decline of juries and growing skepticism about the courts. To be clear, I do not think the decline of civil juries is the sole cause of the declining perception of courts, but perhaps it is a contributing cause.

What does all this have to do with judicial gatekeeping? For one thing, social scientists have traced how the expansion of judicial gatekeeping has taken place in this environment, in which civil juries, in particular, have been increasingly disparaged. Again, we cannot show a causal link, but there is correlation.

I described some of this research in my Forum paper, and also how distorted views of the civil justice system have taken deep root in our culture, even among legal actors who know that the narratives are false.

Empirical research has been showing, for some time, that there is absolutely no support for the disparagement of civil juries. In fact, judges and jurors reach very similar conclusions about causation, liability, compensatory damages, and punitive damages. Empirical research also does not bear out the inaccurate caricature of juries being completely befuddled by scientific evidence. Indeed, some research suggests (with apologies to the room) that juries may actually be better than judges at evaluating scientific evidence because of the collaborative process that they engage in while deliberating. And yet these narratives about juries are continually relied upon to justify expanded judicial gatekeeping, including, most recently, in the Rules Committee's initial comments on the new amendments to Federal Rule 702.

Social scientists have tracked how these changes and other changes in the procedural rules over the last few decades have also made it much more difficult for people to sue. In my Forum paper, I note how these and other developments might be characterized as the ascent of judges over juries. I submit to you that this has not gone unnoticed by the general public even if they do not understand the details of judicial gatekeeping.

In the paper, I mention that I talked about all this with my family members. I asked if they think that judges are better than juries in evaluating scientific evidence; they started laughing. What they found humorous was that anyone would think that judges generally are more qualified than members of a jury of ordinary people, many of whom have worked in scientific and technical fields. And yet, of course, this is precisely what our current judicial gatekeeping practices with regard to expert testimony presume.

At last night's faculty dinner, I was asked, "What is the background of your family members?" I was really talking about my immediate family. There are no lawyers among my siblings besides me. I do have one niece who

is now a lawyer. But my people are really from varying educational backgrounds, not lawyers. Some of them are scientists and engineers, but also a few welders, a small business owner, a prison consultant, a hospice manager, and two cattle ranchers. (Yes, I do have a very large family!)

In recent elections, members of my family voted for everyone from Jill Stein, the far-left Green Party candidate (that vote was not mine, by the way!), to Donald Trump. As you can imagine, we do not agree about much politically. But there was widespread agreement in response to my question about whether judges are more qualified than jurors to evaluate scientific testimony. When the laughter died down, my family members strongly urged me to write the paper that I wrote and specifically to take this opportunity to express to you today their concern about how elites are trying to exclude regular people from the political process, even the courts. As a law professor, I share their concerns. I also increasingly have the sense that lay people are no longer welcome in court.

This leads me to another hypothesis (or perhaps it's just a deeply seated fear), which is that all of this emphasis on judicial gatekeeping, instead on giving people their day in court, and giving lay people a say in civil legal outcomes, is at least in part a source of the people's growing discontent with the courts. To be clear, it is not just that judges are now deciding vast numbers of cases that were once decided by lay people—which, when you think about it, is really a form of political disenfranchisement. A branch of government, which has historically stood as the one place that the otherwise disenfranchised could go, is now closed to them.

It is all happening at a time when technology and science are advancing at such a pace that judges seemed particularly unlikely to be able to play the judicial gatekeeping role that the rules governing the admissibility of expert testimony are asking them to play. I fear the expansion of the judicial gatekeeping rules, particularly the newly-amended Rule 702, asks too much of judges.

What is the path forward? How can we address these concerns and restore confidence in our courts? I do not think the answer lies entirely in our judicial gatekeeping practice. It might not even reside *very much* in our judicial gatekeeping practices. But I do see it as an opportunity to begin to address the issues. I think judges can engage in judicial gatekeeping in ways that make clear that courts welcome participation from everyone—not just corporate, legal, and scientific elites.

In the paper, I also talk about how Oliver Wendell Holmes employed the intellectual practices associated with pragmatic realism as a way of continuously revisiting and interrogating his own views and the views of others. For Holmes, it was the only way to get anywhere close to truth in a rapidly changing world.

I also propose that we might think about experimenting with mixed court advisory panels, comprising both experts and lay people, to facilitate dialogue and perhaps consider a fuller range of perspectives.

Finally, I am urging judges (and, indeed, all legal professionals) to actively encourage more accurate public discourse about the competence of civil juries. I think the way we talk about our legal system matters.

Civil courts and civil juries have played an important role in American democracy. They have provided an important space for political participation for those who struggle to be heard elsewhere. I am concerned that the expansion of judicial gatekeeping practices to exclude lay people from key decisions in civil courts is at odds with the historical importance of the courts as a venue for participation, and also as a venue for confronting the misuse of power.

Thank you for your attention, and I look forward to hearing your thoughts.

Comments by Panelists

Professor Mary Rose, Department of Sociology, University of Texas at Austin

I want to thank you for having me and giving me the opportunity to provide some additional commentary on Professor Bloom's fantastic paper. I want to spend time considering what scholars know about what shapes people's views of legitimacy, since that was such a key part of Professor Bloom's paper, and their support for institutions. I want to elaborate, really, on people's views about the very serious and negative effects of the elimination of the American jury trial.

As I was reading Professor Bloom's paper, I sort of imagined a map to help my thinking with the concepts: the law comes down to the judges, and the judges then make decisions about what kind of experts and the type of testimony are permitted. That shapes jury behavior. If there are a lot of verdicts that are outliers, it can affect the law.

I found Professor Saks's paper fascinating because he suggests that, for many years, that first link in the map was not present: you did not see the connection between the *Frye* standard being on the books and the judges being influenced by it.

The ways in which juries respond to expert testimony has been an active area of research. Professor Bloom's paper says there is no basis in fact for the idea that juries lack the capacity to understand scientific evidence. I think we depend a little bit on the meaning of capacity. Juries absolutely struggle but the data are very clear that judges do as well, and that juries have some other tools that judges may not have that allow them to consult with each other and deliberate on it and try to come up with a conclusion. That gives them an advantage. The question is always not whether juries are perfect, but whether they are at least as good as an alternative, which I think they are.

But a key part of Professor Bloom's paper is that these dynamics are all related to public opinion, and that these intersect with things that people have opinions on: their view of experts and what they see as the meaning of an expert; what they think of judges; what they think of courts more generally; what they think of the law; and, what they think of juries.

Where that comes from is an interesting question. Professor Bloom relates the story of her family laughing at the idea that judges would be better than juries. I think there are lots of other families where the reverse would be humorous—the notion that juries are better than judges. As someone who instructs very talented undergraduates, I can relate that most people do not know so much about the basics of our legal system.

This allowed me to recognize the ways in which people's minds have been poisoned about the jury, so that they are hearing negative stories from the press, from interested parties. So that they are less likely to come before this body.

What that means for me, as someone who thinks about legitimacy and thinks about where those views come from, is that the decline of the jury has an important effect on personal experience. We know from scholars that legitimacy comes from people seeing that authorities behave in ways that are unbiased, that they treat people fairly, that they are ethical and trustworthy and not corrupt, and that they generate and offer respect to citizens. Those are the big ones, together with allowing people a chance to have a voice that allows people to see something as legitimate.

What you do see is that those perceptions themselves stem from personal experience, from having the opportunity to engage with an institution. Sociologists have pointed out time and again that they come from cultural frames and norms that the community provides.

If you are a resident of Philadelphia, and you have never been stopped by a Philadelphia police officer, you may not have had the opportunity to engage and see how that police officer treats you. But you know how your community has been treated. What has happened is that, with juries, we are allowing the imagined view of juries to be more important than the lived experience.

I did some work previously on a survey of Texas adults, asking them about their preference for a jury versus a judge, asking them to imagine different situations—who is the more accurate decision maker; who would you want if you were a criminal defendant; who would you want if you were a civil plaintiff; who would you want if you were a civil defendant—very short snippets of information.

We also looked at whether those perceptions differed across people's experiences in serving on juries themselves. And what you saw was that, for non-Hispanic whites in Texas, being on a jury at least at that time did not seem to change their answers much. But what you saw particularly for African American citizens was that they had much greater support for the jury when they *themselves* had served—particularly in the case of civil juries, which get the worst rap. There were these very stark differences for those who had served on juries compared to those who had not.

What I love about these data, actually, is that first column on accuracy because the effect flips. It is former jurors, African American former jurors, who are less likely to think that the jury is the most accurate. And you could say that potentially their experience poisoned them on the accuracy of juries.

But what I actually think happens is that it gave them an opportunity to interact with judges, and to see how qualified, accurate, and fair judges are in the courts. If you take away that experience—particularly from communities that are the most affected by the law and the most disengaged—they won't have the opportunity to see judges in this way.

I do not have similar data for judges. But I strongly believe that the judges' own personal experiences with juries shape their views of the competency, legitimacy, and ability of juries to handle this. It is the judge's experience with juries that allows them to think about how a jury could or could not handle information. Their experience with having let in experts to testify gives them information about these decisions. As we see trials vanishing, we are losing opportunities, not only citizens to have this experience (which obviously I think is very important), but for judges to oversee jury trials to get the experiences and all the benefits that come from doing that.

For these reasons, in Professor Bloom's paper, her second recommendation was to think about trying to restore the civil jury trial. And of course, for me, that should be the main one and the one I care about the most. Thank you.

Hon. Terry Fox, Colorado Court of Appeals

Good afternoon. I will give you just some brief remarks based on the Colorado experience. Colorado's rules on expert testimony mirror the 1975 version of the federal rule. In my opinion—not those of the entire court—it has stood the test of time and has served my state very well.

Our governing case, interpreting Colorado rule of evidence 702, is *People v. Shreck*,[4] which directs the trial courts to apply that rule, and the focus is on the reliability and relevance of the evidence. The court may, but does not have to, consider the *Daubert* factors.

When federal Rule 702 was amended in 2000 to conform to the *Daubert* decision, the Colorado Rules Advisory Committee recommended that our Colorado Supreme Court adopt the federal language, and our court declined. In fact, our supreme court has been very cautious in allowing the federal rule to lead the way. I think that is fair. That is a good thing for us to do. But from time to time, we may look at those authorities again as persuasive (but not controlling) authority.

Just one recent example is the case called *People v. Campbell*,[5] where the court expressly recognized that we had diverged from *Daubert* but looked at other jurisdictions just to see if they could learn from those.

Of course, Rule 702 does not stand alone. We have to read it in conjunction with Rule 703, which has to do with the basis for the opinion, and then Rule 704, which concerns opinions on ultimate issues. The other rule that goes hand in hand with 702 is Rule 403, which calls for the judge to examine the probative value of the evidence and weigh it against the potential for prejudice.

In particular cases—for example, in medical malpractice cases—we also are guided by statutory authority that calls for the parties to again bring in somebody that is going to opine on the specific issue that is before the court.

In Colorado, most of our expert challenges, as has been alluded to, do come in criminal cases rather than in civil cases. But the type of challenge that we see, at least at the appellate level, goes to whether the testimony is really expert opinion or, instead, lay opinion. And the perfect example of this involves police officers. They obviously may testify to what they saw in an interaction with citizens, but once they start talking about whether the person was drunk, whether the person followed certain roadside maneuvers, then you start getting into the question whether this is something that the normal person would know just in their everyday experience, or should they instead be qualified as an expert?

But overall, I would say that Colorado is very receptive to allowing the expert to testify and allowing the jury to consider the testimony. A very often repeated phrase we hear is, "It goes to the weight, rather than the admissibility, of the evidence."

One of my favorite witnesses, I have no doubt, would be allowed to testify in Colorado. And that favorite expert witness is from the film "My Cousin Vinny." The character Mona Lisa Vito, who was played by Marisa Tomei, was qualified as an automotive expert, and he helped the attorney Vinny Gambini, who was played by Joe Pesci, win his very first case, defending his cousin, who was accused of murder in a small Alabama town. In fact, we have had a similar case in Colorado, and in fact an automotive expert was allowed to testify in that case.

Now, when the question is not about expertise but rather about a legal standard, for example, that is when the expert is going to run into some trouble. Just another example here is *Taylor Morrison*,[6] a case out of my court, where a developer's expert wanted to testify about some geotechnical engineering issues. It was fine. He could testify to the expertise that he had. But when he started going into things that had to do with conduct—for instance "Was that conduct willful or wanton?"—that is a legal determination. That is not for the expert to make. The jury can judge the actions and the conduct and make its own decision on whether the conduct was willful.

As I said, we give substantial deference to the trial court's ruling on admissibility of expert testimony. The review is for an abuse of discretion, which I think is defined in many jurisdictions similarly. In ours, it is that

the decision is manifestly arbitrary and reasonable or unfair or when it misconstrues the law, and that is very consistent with the Supreme Court's *Joiner* decision, which was discussed earlier this morning.

Trial courts can, but do not have to, hold a hearing in Colorado. If there is enough information in the record for the trial court to be able to make its decision, it can make its decision on that record.

I think that, really, the questions are three-fold and focus on 1.) the reliability of the scientific principles; 2.) what are the expert's qualifications; and 3.) will this information be useful to a jury. I submit that there is that fourth inquiry, which is the Rule 403 inquiry: Is the probative value going to be substantially outweighed by the prejudicial effect that is being claimed? Again, that is a judgment call. I think certainly judges who have tried a lot of jury cases are very well equipped to make those decisions. Fortunately, as an appellate judge, I do not have to make that decision in the first instance. I am reviewing the trial court's record.

But I do think that my own decisions are informed by having tried cases. I cannot say anything but good things about juries. I have had very positive experiences, whether my client won or lost. I just had very positive experiences knowing that the jury really took their job seriously. They followed the law. They applied the law.

I just pulled this statement by our supreme court of our liberal standard, because I thought it said it really well: "We can find no compelling reason for the law to single out a particular class of professionals and categorically bar them from expressing opinions on matters that may well be within their expertise. We, therefore, join the majority of states that have resisted the creation of artificial barriers to the admission of expert testimony by drawing lines between the various professions, and we continue to require that such witnesses to be measured under the well-established parameters of Rule 702."[7] I think it all comes down to this question: "On this subject, can the jury, from this person, receive appreciable help?" To me, it is as simple as that.

I guess one of my takeaways is that not every expert is going to be a fit for a case. I really think that our liberal rule on admission of expert testimony has served us well. It allows the trial court road discretion. If that judge thinks this person is just coming to talk about something that has nothing to do with the case, that expert is not going to be allowed to testify. On this subject that expert is not going to give appreciable help to the jury. Thank you.

Dean David Faigman, University of California College of the Law, San Francisco

I want to thank the organizers for inviting me to present. I will say just to give you a little bit of background, I think I was invited to be the fly in the chardonnay. I will offer a somewhat different perspective than I think you have heard. But I just want to give you that heads-up. I will say that I filed, along with a group of law professors, an amicus brief in the *Daubert* case back in 1993. We went in support of neither party. And a group of law professors signed it back then.

We took the position that the court should read Rule 702 to have a scientific validity requirement. That requirement comes from Rule 104(a), the Federal Rules of Evidence, which many states have, which make the admissibility determination a preliminary fact under the rules of evidence. My faith in juries is second to none. I love the "Jury Duty" TV series, by the way. I think juries play an important role, but juries do not make decisions about the admissibility of character evidence. They do not make decisions about the admissibility of hearsay evidence. They do not make decisions about the admissibility of privileged information. The bottom line from where I come, an evidence professor's perspective, is that, as I described earlier to one of the small groups, the

rule of evidence is that all relevant evidence comes in, unless there is a good reason to keep it out. The rules of evidence are all about the good reasons for keeping out evidence, whether it's expert testimony or otherwise.

I also will say I took this assignment seriously. I read Professor Bloom's paper very carefully. Some of my comments are specifically directed at Professor Bloom's piece, but then I do go into a few other issues presented.

Professor Bloom's thesis is that a connection exists between the decline of the standing of courts and the politicalization of the science and the role of gatekeepers under the *Daubert* decision. As Professor Bloom described, and her paper states, the two are linked, in that having judges be gatekeepers to ensure the soundness of proper expert evidence contributes to "the decline in civil jury trials and growing concerns about the politicization of science." She actually believes that listening to *Daubert's* gatekeeping mandate will give a greater voice to juries, and thus to democracy, and lessen the perceived bias in the science that is presented. Hopefully, I described her thesis accurately.

I will say I do not think there is any question. *Daubert* is a part and parcel of the revolution that started back in the mid-1980s where, particularly, federal judges managed cases. That was true under the rules of summary judgment, it was true under the rule of 12(b)(6), in declaratory judgments, and it is true under Rule 702. It is a much broader effort that happened, starting with the federal courts, but, to some extent, with the state courts as well, to manage all cases and to move them either through alternative dispute resolution, mediation, or otherwise through summary judgment to lessen the case load.

I also don't disagree with the assertion that courts today are suffering something of a legitimacy crisis. I do think that it starts primarily at the U.S. Supreme Court. And I think that there is halo or negative halo effect with other courts. I think that there is something of a crisis, but I do not think it has anything to do with *Daubert*. I do not think loosening the gatekeeping standard will save democracy or save our perception of the ethical bases or moral foundations of the U.S. Supreme Court.

What you see on the criminal side, and what Michael Saks described earlier, is giving forensic science a free ride. For literally 100 years, courts asked hardly any questions about forensic science. But the important thing to remember is that the rules of evidence apply the same way in almost all jurisdictions. In most jurisdictions, the same rule applies to civil and criminal cases. What happens on the civil side may end up working out differently on the criminal side.

I do think that, on the criminal side, the decline in jury trials is probably much more attributable to plea bargaining. In fact, I do think judges should be a little bit more rigorous and scrutinize expert testimony, from prosecutors in particular: forensic identification sciences like bite marks, and firearms comparison techniques, as well as areas that have really been developed and criticized more recently, including old arson investigations, shaken baby syndrome, and, again, firearms and tool marks.

As to the politicization of science, I think there are a lot of high-profile examples, although I cannot imagine that people really, seriously, doubt climate change and humanity's contribution to it. And then, of course, Covid ended up getting politicized as well.

I think it is unfortunate that Professor Bloom only looked at the civil side, because I think if she looked at the criminal side, we would see that having a higher gatekeeper standard there would actually lead to more jury trials. For instance, if you allow a firearms expert to testify that a particular bullet, or a particular cartridge case, can be

identified to a particular gun, you do not need any other evidence. All of the other evidence is really just surplus to that expert testimony. I have been an expert witness in a number of these cases. Well, the Maryland Supreme Court just ruled a couple of weeks ago[8] that firearm experts actually *cannot* testify to the identity of the particular gun from which a particular cartridge case or bullet came. The research simply does not support that kind of expert opinion. What they *can* testify to is that the bullet or cartridge case was fired from a *type* of gun. It was fired from a Smith & Wesson. It was fired from a Beretta. It was fired from a Colt. But they cannot testify it came from the defendant's gun.

Now, all of a sudden, if you are a public defender, you have a case, because it will depend on other evidence—eyewitness identification, motive, and all the other things that one would expect to rely on. On the criminal side, having a higher gatekeeping standard should lead, and I think will lead, to more jury trials. So, I think that there are lots of cases where prosecutors, as Michael Saks pointed out, have really been given a free ride with forensic science, over the years.

And on the civil side, I think that Professor Bloom ignored a number of areas. I know judges would prefer to avoid policymaking. We do not want judges to be policymakers. But how do you do that? To move away from Bendectin for a moment, let us take silicone implants. There were 500,000 lawsuits filed involving the claim that silicone implants led to autoimmune disorders—in particular, atypical connective tissue disorder. Those 500,000 lawsuits essentially resulted in silicone implants being removed from the market. Whatever your view of the medical value of silicone implants, they were very important to many people, and they were taken off the market.

In the early late '80s, early '90s, there was some toxicological research that indicated that, indeed, silicone implants that leaked might indeed cause autoimmune deficiencies. In fact, there were several jury verdicts back in the early 1990s, including one for $14 million in Nevada. By the 1990s and 2000s, several epidemiological studies were done, and they indicated that, actually, silicone implants might have a *protective* effect against autoimmune disorders, or at least that they did not raise the relevant risk of developing these autoimmune disorders. Now silicone implants are back on the market.

Bendectin is actually the same story. Merrell Dow at least *claims* that it took Bendectin off the market because of the litigation, but now Bendectin is back on the market. Whatever your decision, whether you allow it to go to a jury if it is thousands of cases, or tens of thousands of cases, or hundreds of thousands of cases, you will have an impact on society. It all comes down to how you understand the risk of making a mistake, because science is uncertain. If you allow the testimony to get to the jury, and thousands of cases go forward, the product goes off the market. Then the product turns out to be safe. A safe drug, or safe substance, has been taken off the market. Similarly, if you do *not* allow the question to go to the jury, and it turns out that the drug is a teratogen (causes birth defects), now, you have allowed a product that is problematic for society to go forward.

Take silicone implants. Was it the correct decision to allow the question of the safety of silicone implants to go to a jury in 1991? Probably so, because all of the cell studies, all of the toxicology, seemed to indicate that that was the right direction. But by the late 1990s, anybody who was admitting that expert testimony would have been going against the lion's share of the research. That is the nature of science. Science changes over time.

The other reason I think judges need to be thinking about the nature of science—and Michael Saks talked about this a little bit—is that scientific evidence is not like other kinds of evidence. Scientific evidence is fundamentally different. If you are deciding the preliminary fact question of whether to allow a statement to come in under the hearsay rule for a dying declaration, you, as a judge, have the responsibility to find the fact of whether the

statement was made under a belief of impending death. That is a factual question. It is a preliminary fact for the judge to decide in applying the rule of evidence.

If the question is whether non-Hodgkins's lymphoma is caused by glyphosate (which is the active ingredient in Monsanto's "Roundup" product), the answer to that question is the same in Philadelphia as it is in San Francisco as it is in Los Angeles. And to allow different jurisdictions to answer that question differently is a different matter than when you are dealing with case-specific facts. My position is, when science involves facts that transcend the individual dispute, that is the reason why judges should be active judicial gatekeepers.

Deepak Gupta, Gupta Wessler, Washington, D.C.

I want to thank the institute for convening all of us and for inviting me to be here. I particularly want to thank the Daubert family for sharing their story with us. That was a real treat. And I think sometimes it shows us we can learn more when we listen to people who are *not* judges, lawyers, or professors, which brings me to Anne's paper. I want to thank Professor Bloom for sharing her paper, which I think is provocative in the best sense of the word—that it provokes us to think.

The paper, as you heard, is about the relationship between American democracy and the judicial gatekeeping of expert evidence. Those are not two topics that are often discussed in the same breath. But perhaps, maybe unlike Dean Faigman, I am convinced by Anne's paper that they *should* be discussed in the same breath.

I am an appellate advocate. That is what I do in my day job. I spend much of my time in state and federal appellate courts in civil cases. I am used to thinking about the respective roles of the judge and the jury when it comes to expert evidence, particularly complex scientific evidence that bears on questions like exposure to a toxic substance or causation.

But I tend to think about these things, as I am sure many of us do, in terms of applying the rules of *Daubert* or *Frye*, in terms of what is necessary to overcome those standards as applied to the facts of a particular case. I do not tend to think of them as tools to heal our democracy or our civic life.

But I am not *just* an appellate advocate. I am also an American citizen in the year 2023. I read the news. I pay attention. I often worry, as I am sure many of you do, about the loss of public confidence in our courts and about the epistemological crisis that we seem to find ourselves in. You all know about this. It is characterized by a growing and pervasive distrust among the American public of scientists and experts of all kinds.

This, I think, is closely connected to a suspicion of elites, which is a big theme of Anne's paper—elitism and the suspicion of elites. It is assumed, I think, that elites look down on ordinary people, talk down to people, and maybe that they collude among themselves to hoard resources and power at the expensive of the average American.

This is exacerbated by divisive national politics, in which we often do not seem to be operating from a common set of facts. People get their news from different sources, and this ends up affecting such things, as you heard earlier, as whether people get vaccinated or whether they take other steps to protect their own health.

All of this is connected to a broader distrust of institutions overall, not just the courts. You judges are not alone. People are suspicious of all of the branches of government. They are suspicious of the sources from which they get their information. They are suspicious of universities. This is enhanced by many things, and it does not appear

to be getting better. We have lost mediating institutions like the network evening news broadcast, which used to hold us together. Social media enhances division, distrust, and disinformation. And technology, like deep fakes and artificial intelligence, is just going to make it increasingly more difficult. Society will be easier to deceive, and it will complicate the process of assessing evidence and arriving at the truth, whether in the public square or in the courtroom.

Anne's thesis is that these two seemingly disparate topics—this loss of public confidence and trust on the one hand, and judicial gatekeeping of expert testimony—are linked. And what links them—Dean Faigman seized on the same language to isolate her thesis—is "the decline in civil jury trials and growing concerns about the politicization of science." I believe, as I said, that she is right to connect these topics and I am kind of embarrassed to say that I had not been thinking much about the connection before reading her paper, even though I spend a lot of time thinking about these two things separately. I certainly have not thought about it as deeply as she has. I suspect I am not going to be able to "unsee" that connection going forward, and I hope that is true of many of you as well.

Her short paper has so many provocative and rich insights that it is not possible to touch on all of them. But I just want to note one piece of maybe friendly criticism and maybe one friendly amendment. She kind of stole my thunder, because, as I think she mentioned earlier today, we are thinking a lot alike.

The paper opens in announcing its thesis that "current practices regarding the admissibility of expert testimony may be contributing to negative perceptions of the courts." This is the argument that she develops in Part 3 of the paper, which is headed, "Why Current Gatekeeping Practices May be Read Negatively by Lay People." She ends that section—sums it up—by saying that lay people may view the expanding gatekeeping role of judges with regard to expert testimony with some skepticism.

I may be misreading what she is saying here, and I think earlier she disclaimed any strong claim of causation. But I just do not think people other than the people in this room think much about this stuff at all. I do not think the average person has any opinion whatsoever on what the admissibility practices of courts are. I am not convinced that even the effects of those practices impact either way the perceptions that people have about the courts.

Now, it could be that there is a weaker claim, that this contributes, along with a lot of other factors, to keeping cases from getting to the jury—like arbitration clauses, damages, caps, all sorts of other doctrines that are contributing to the cases not reaching the jury—and undermining public confidence.

But even if you set all of that aside, even if you set the whole claim aside, I still think—and I think I disagree with Dean Faigman on this—that everything else Professor Bloom is saying can be true. It is still true that there is a deep connection between American democracy and the role of the jury in assessing expert testimony. It is still true that it raises profound questions about elitism and the participatory role of Americans in their justice system. It can be still true that this concern is enhanced by the current moment, and it can still be true that rejiggering the balance in favor of jury participation will both improve truth-seeking and enhance public participation. None of Anne's proposals, I think, depends on there being some kind of causal relationship.

Instead, I think her proposals are best supported by the two rationales that appear in the epigraphs to the paper, one from Holmes and one from Hamilton. Holmes said, "The life of the law has not been logic; it has been experience." And Anne advances a number of pretty common-sense reasons why juries may be better than judges at assessing scientific evidence. It is not just the story from her family; it is also just that juries are a diverse

range of people, and they are people who work in the real world. They are people who, therefore, may encounter changing technological and scientific realities. They may be much more familiar with how people do things with computers, or how people do things with mechanical equipment, or whatever it is that the case is about, than judges are.

Anne also talks about Hamilton's rationale that juries provide security against corruption, which I think you can also read as elitism. She touches on reasons why allowing juries to tackle these issues may help with public perceptions of the courts.

I think there is a final reason—and this is why I was so glad she mentioned de Tocqueville at the beginning—that could contribute to those two other reasons she mentions in the paper. That is the concept that de Tocqueville had of juries as what he called "a school for democracy." He understood that juries are not just a juridical institution, a body that renders verdicts. They are also a political institution. He believed that the jury puts the real control of affairs into the hands of the ruled, rather than the hands of the rulers. This is a way that people could exercise popular sovereignty.

He also thought of them—and this is a really interesting concept—as a free school. He thought that juries, especially civil juries, instilled some of the habits of the judicial mind into every citizen, and that those habits are the very best way of preparing people to be free. They are a form of popular education. I think Professor Rose's data about African Americans and the views on the civil jury system that they hold after jury service shows you that.

I clerked for a federal trial judge who always gave a speech to the jury at the end. He said, "When you hear attacks on the jury system, remember this experience that you had collectively, deliberating with your fellow citizens, and see whether those two things jibe."

At a time of great division and distrust, I think we should remember the good that de Tocqueville saw in America's trust of juries. He saw it as the most direct form of democratic participation. Shifting the balance back towards juries helps not just within enhancing truth seeking, but the power of a collective group through diverse experience. It helps not just with alleviating the perception of elite capture and bias. It also allows people a participatory role in deliberating together through hard factual problems in ways that help us govern ourselves. That is good for democracy.

Response by Professor Bloom

In one of the discussion groups, we got into a discussion about what I guess Dean Faigman said was the Australian practice of "hot tubbing with experts," where they put experts in a room together, open some champagne, and get them to try to find points of agreement. I am going to do a variation of that right now—in the absence of a hot tub and champagne—and try to find areas of agreement here, because I think I mostly agree with what people said, including Dean Faigman.

For example, I agree with Professor Rose about almost everything, and I was fascinated by her data. I was most especially impressed with the research suggesting that it may not be huge, but the contact with the courts does seem to improve perceptions of the courts.

Several years ago, I was working with a court to evaluate an experimentally designed study to look at how people reacted before, during, and after changes to local court practices. In the course of doing this study, we

convinced the court that we should survey people *a lot*. That was because of an interesting National Center for State Courts study showing that, if you simply survey people about their experience with courts, when you ask them at the second iteration of the questioning, "What do you think of courts?", their perception improves. In other words, simply asking for their opinion, or any engagement at all, improves perceptions of the courts. I thought the data that Mary presented was really interesting and brought that out a bit.

I also think this point about personal experience with cultural norms was important, which is that these influence how we think about the legal system and juries, etc. Personal experience matters, yes.

One of my concerns, though, is that the cultural norms have been heavily shaped by the tort reform movement in ways that have been shown empirically, time and time again, to be deeply problematic. That is a whole separate topic. But the social science community is pretty united around the distorting effects this has had on perceptions of the legal system.

I am curious what Professor Saks thinks about Judge Fox's presentation, because it sounded to me like almost a model for how to engage in thoughtful, judicial gatekeeping in light of the rules as they now exist. But I am less expert as far as that goes. I am going to leave that to others, except to say that my favorite expert is also Marisa Tomei from *My Cousin Vinny*.

Dean Faigman raised a number of "flies in the chardonnay," and they are most welcome. Thank you. Maybe I should have said this at the start: I also was part of authoring an amicus brief many years ago in the *Daubert* case. The brief that I co-authored was on behalf of scientists. Did it make the same points as I am making today? No, not exactly. Our brief was more about how science evolved, but still I probably would not have changed it that much.

I also want to make a point in response to both Deepak and Dean Faigman about my thesis, because it was presented by them in different ways. I would say that, in a weird way, this brings up the difference between the way social scientists and legal experts think about things. I think for the purposes of this project, I am thinking in terms of hypotheses more than theses.

But if I had a thesis, it would be this: we should be thinking a lot more about what we are doing with judicial gatekeeping, and how it might be having unexpected effects outside the courthouse doors in terms of how people are thinking about courts. I would present it more as a hypothesis than as a thesis of a hard connection between the two. But I did want to convince you to think about it, and I hope that I did.

I agree 100 percent with Dean Faigman about the criminal side of things. Certainly, there has been a lot of concern about what has happened on the criminal side of things. I would say that the misuse of science there has indeed been deeply problematic. I consider the work that Dean Faigman has done on this to be actually pretty heroic.

Where we might disagree, however, is on the question of whether *Daubert* has made a difference on the criminal side. I am not an expert on criminal cases, but I am aware of several studies finding that *Daubert* did not solve this problem. So, I am not sure *Daubert* is the solution on the criminal side, either. This is part of a larger group of studies about the limited implications of legal rulings on what judges in the lower courts actually do, and how people think about things and how people behave.

I wrote an article several years ago, arguing that breast implants should not be taken off the market. At the same time, I still felt that the evidence should come in to show liability. It is possible to think both things at once. My argument around the implants had to do with other issues, including the need that some people feel to have implants despite the risks of gender construction. That does not mean that they should not be able to bring a claim if they feel that the risks were not fully disclosed to them, or for injuries that might have occurred as a result of the use of implants. So, I agree mostly. I don't agree on the rationale, but I agree with the bottom line of where we would come out.

I would also agree, I think, that the decline of civil jury trials is not the sole, or even a major, cause of declining perceptions of the court system. But I think we do know, however, that public participation in legal proceedings does help to ensure the legitimacy of courts, as is presented in these studies from the National Center for State Courts[9].

As to Deepak's point, Deepak and I talked about this last night at the faculty dinner. He made me think about my remarks, and I modified them. I did steal his thunder a little bit. I am not saying that people are out there thinking about Rule 702 and *Daubert*, and thinking all those judges are using Rule 702 and *Daubert* to keep me out of the courthouse. I do not think that.

But I do think he would be surprised at how much people do know about what is going on. The world has changed, in part because of the internet. As far as science goes, people have been crowd-sourcing information about science for several years now, and we really saw that explode with Covid. I do not see how we are going to ever put that cat back in the bag. And people have interactions with the legal system, like one of my brothers, who was brought in to talk about one of the welding machines he designs. He knows what *Daubert* and 702 are about, because he has been involved in litigation. People, I think, know what it is about if they have had some interaction with it—maybe more people than we might think.

The big picture? I think the real question is, "Who decides?" Do juries decide, or do judges decide? I am concerned that we have tilted the balance too far in the direction of judges. That is kind of my bottom line.

Notes

1 https://www.gutenberg.org/files/815/815-h/815-h.htm.

2 State of the State Courts National Poll, 2022, National Center for State Courts, https://www.ncsc.org/__data/assets/pdf_file/0019/85204/SSC_2022_Presentation.pdf

3 The Civil Jury: Reviving an American Institution, https://civiljusticeinitiative.org/wp-content/uploads/2021/09/CJRI_The-Civil-Jury-Reviving-an-American-Institution.pdf (1921).

4 People v. Shreck**,** 22 P.3d 68 90 A.L.R.5th 765 (En banc 2001).

5 People v. Campbell, 425 P.3d 1163 (Colo. App. 2018).

6 Taylor Morrison of Colorado, Inc. v. Terracon Consultants, Inc., 410 P.3d 767 (Colo. App. 2017).

7 Huntoon v. TCI Cablevision of Colorado, Inc., 969 P.2d 681 (En banc. 1998).

8 Abruquah v. State, 296 A.3d 961 (Md. 2023).

9 National Center for State Courts, "State of State Courts 2022", https://www.ncsc.org/__data/assets/pdf_file/0019/85204/SSC_2022_Presentation.pdf

Professor Saks: It has been a delight to meet people and again restore my faith in the judiciary, which has been suffering a wee little bit, based on what I read about the Supreme Court. But I have heard so many different things and different views todays, and none of them are the least bit crazy. I think that is good and it tells me there is no one solution to the problems that we face. But I do think with expert evidence, and with many other things, we have not solved it yet.

Professor Bloom: I never got a chance to meet Michael Saks before, but I have cited him for 20+ years. He is one of the best scholars we have in this country. I am just really honored to be here next to him. I am very curious to have you answer a question that I think I have been hearing from some of the judges here, which is, what is the best approach for them? I found Judge Fox's comments on our panel to be very compelling. I am wondering if you have more to say about that.

Professor Saks: I think that is kind of like my comment that I have heard many different actual or suggested approaches to solving what I see as the fundamental problem of getting into evidence the best true knowledge that you can and filtering out the overly iffy and the completely not true. I think those forensic sciences that have gone down into their graves are an example of things that were either not true or were not tested. I cannot suggest the perfect rule, and I cannot suggest, under whichever rule we decide is the perfect rule, what litmus test a judge could use to decide, "Do I let it in, do I keep it out?"

Since I have the microphone, I am going to meander a little on this. A number of people pointed out what I guess I could call "systemic imbalances." Just in the group I was most recently with, someone pointed out that, if the plaintiff's expert has to have an opinion, the defense expert can just try to undermine that opinion, kind of like in a criminal case. The defense does not have to prove innocence. They just have to show that the prosecution has failed to prove guilt. But then they talked about the imbalance that creates for the plaintiff.

Another imbalance, which I have not heard mentioned today, which I think also has to be part of the solution is this: If the defendant is a corporation that produces a defective product or produces toxic substances, pollution, the corporation has vastly greater access to data than the plaintiff does. If studies have been done, they have done them. They can fund them. As David Michaels pointed out, they can fund studies that have no purpose other than to muddy the water.

The fact is that the money is often on the defense side of the case, and that affects what the plaintiffs can do. The plaintiffs are rarely in a position to finance studies. They can get experts who can look at the defense data and comment on it, which I think is essentially what the experts in *Daubert* were doing. I do not know why *Daubert* became the case that it became about admissibility of scientific evidence.

The Daubert family's lawyers—Barry Nace and his colleagues—were trying to find the holes in Merrell Dow's data. They did not have their own data. It has been suggested by some scholars—and I have heard it from at least one judge and one state supreme court justice years ago—that in situations like that, the burden ought to shift, so that it is the defendant that has to prove the safety, not the plaintiff who has to prove the defect or the harm.

It is three-dimensional chess. I cannot think of any easy solution to any of the many different problems.

Professor Bloom: It is interesting to think about this burden shifting to prove safety, rather than injury. In the Bendectin litigation, the scientific proof that was used to permit Bendectin to go on the market in the first place met a much lower standard of scrutiny than did the expert testimony that Barry Nace was trying to get into evidence. And it is really pretty interesting that the FDA and the scientists involved in that case used one standard for letting it on the market but then held scientific research to a higher standard when you tried to decide whether or not the drug caused injury. That does not mean that the drug did cause injury or that it did not. It just means there is an inconsistency here in the way that we are talking about science in different levels of government, including regulation and litigation.

In a similar way, one of the things I have heard today is really the differences between criminal and civil cases, applying the same standards sometimes, with the same witnesses, but different outcomes about whether or not they are qualifying as an expert. That gives me the thought, because of what I do, to do an empirical study about really looking at how the same experts may be qualified as an expert for purposes of the prosecution in criminal cases but not for purposes of civil litigation. That is a thought that I am having.

I think the other thing that is coming out for me is that there are real differences between what is going on in federal courts and what is going on in state courts. I think it is worth thinking about. My real field is complex litigation, and over 60 percent of federal cases are getting MDL'd right now. So, a person who files a lawsuit may have their case transferred to the Northern District of California to be handled by a lawyer they did not choose. They are not participating in the jury. They are not participating in their own case. There are all these ways in which people are being excluded from participation, and maybe the experience of federal courts is just very different on this question of public participation in the courts, and the implications that has for perceptions of the courts. I really hope I am wrong.

In the discussion groups, judges considered the issues raised by the paper presenters and the panels. Remarks made by judges during the discussions are excerpted below and arranged according to the discussion subjects. These remarks have been edited for clarity and concision. Conversational exchanges among judges are indicated with dashes (—). These excerpts are individual remarks, not statements of consensus. We have tried to ensure that all viewpoints expressed in the group discussions are represented in the following excerpts.

Difficulties in evaluating scientific and technical evidence

After the National Academy of Sciences came out with its report with respect to forensic sciences, there was a lot of litigation in my court concerning fingerprint analysis, things that have been accepted forever. Fingerprint analysis primarily, and ballistics. . . . Notwithstanding this huge scientific report telling us it has not been validated in a scientific fashion. We're still using it. And for me that's a difficulty because I still think it's an unanswered question and I don't know how we can ever get to it other than continue to do what we're doing and admit that type of evidence that has not been scientifically validated.

I think this tends to be harder than most of what I do. I do not want to say it is intuitive, but it is very familiar territory. Was this suspect in custody for purposes of being entitled to his Miranda rights? I get that. Were these photos so graphic as to potentially prejudice the jury? I am very comfortable with that. Do these studies demonstrate some possible connection between amounts of direct current energy and their effect on the note production of (inaudible), which was the case I alluded to a few minutes ago? Do those have some modicum of reliability? I am way out of my element in trying to gauge that. I can read all about it and stuff. I find that much more intrinsically difficult than most of what I do in my day job.

As a trial judge, what I can tell you is the notion of sending the attorneys back to give you more information and to brief the issues and coming for hearings is not realistic because of the timing. [T]here is not a ton of litigation with regards to experts on summary judgment. They are done in motions in limine that are filed 35 days before. There are some exceptions to it. But the briefing then becomes right on the heels of trial. We are doing these last-minute hearings. . . . I kind of tend to agree that if it is close, chances are it is going to come in. We also have jurors that are allowed to ask questions. It is in our rules of civil procedure. They get to do that and they ask a lot of experts. But we do not have that luxury of getting more educated because time just does not permit.

I think it's particularly difficult when you have experts who are retained who are on the far left for one side and the far right for the other, and then as judges we know that these way extreme opinions really don't fall into the generally accepted area but we don't have the benefit of that on the court of appeals.

I think trial judges get that they're supposed to be gatekeepers, but I don't know that there's good training out there for how they exercise that role. And at the appellate level we see judges who spend a lot of time crafting very detailed orders. They look good, it seems like they have gone through everything, but how do we as appellate judges then evaluate what they did? I don't have a good answer for that.

—I think the only thing we have is the record about the hearings and we have a transcript and we can read the questions that are asked and answered and objections that are raised. Then it comes down to standard of review. Our hands are tied, even though we may make a different decision than the trial judge.

—I agree with that. We are to use our discretion, that's our standard of review. We don't have a motto. I don't have a lot of these come up to our court because we use the discretion standard, so people just don't bring them.

I think it is actually more difficult for appellate judges to deal with this than trial court judges because my impression—I was a trial lawyer but not a trial court judge—is that the trial judge at the trial level can say I want more information. I want a teaching expert. I want something. By the time it gets to us, it is done. We have the record and that is it. I always describe it as I do not know what I do not know especially in a new area that I have never done.

—And part of the problem is that the record you get often is not very good or you might not know that. You might not know that it is not very good.

—You do not know what you do not know.

It is really hard as an appellate judge. You are stuck with the record.

They don't come up on appeal. We don't see them. As an appellate judge, we have not seen any cases in recent years, and it's just sort of remarkable that we haven't.

I had one where defense counsel was going to be filing a motion briefing on polygraphs. So, they are generally excluded or specifically excluded. And his position is with all of this technology why are we still just saying polygraphs are excluded? He wants to now try to find some expert and bring in this question of why do we just automatically exclude polygraphs? Why don't we look for a reason or scientific basis to start including them?

— [W]e have that exact same issue at my court … [a]nd the answer we keep coming up with in our state is you haven't shown anything's changed. You haven't shown any new research conclusion's validity to it. So, that's the state that we're in, may be the same for many of us around this table.

Strategies for judges operating within the existing *Daubert*/Rule 702 regime for evaluating scientific evidence

I want to say this is a state appellate judges conference. These are federal standards. We don't have to adopt them. And we just had a Bruen case and we're not scientists and we're also not historians. Let's stop giving so much weight to the way the federal courts interpret these rules or what they say you should be doing. That's the point that I want to make as a state court judge.

I did learn of a strategy that is used—originated in Australia, I believe—and is used on a limited basis in some federal courts. They call it a conference of experts, where they bring all the experts into court, they are all sworn in. The judge is in the courtroom and then they have a general discussion, and the judge leading the discussion is able to bring the experts to consensus on points, and on those points where they disagree, and then I believe a joint report is prepared by those experts and submitted to the court.

I did just come from a conference of people all around the world. And one thing they were talking about is having the experts themselves sit down and try to identify points of agreement. In other words, instead of asking the court to do that to put the experts in a room and what do you all agree upon and can you write that up please and sort eliminate some of the area of disagreement.

—In Australia, they call it hot tubbing.

I just always relied on the lawyers to do the cross examination of the experts to bring forth either the limitations or the clear expertise.

AMSTRA courts where judges could go to school. They get their certificate that they now understand science. It was designed to have judges that had interest in science and math and all of these things that—they would have statewide jurisdiction. If you had a complex case that involves science, you could ask for an AMSTRA judge. No one ever used that. No one. They spent all this time and all this money and nobody did it.

One rule is the other side has to ask for the *Daubert* hearing, or it's all going to go to the jury by definition. And that's my rule. I'm calling the balls and strikes, if nobody asked me to make a call, it's going to go to the jury.

I do ask questions of experts, and then I invite the attorneys to ask any questions, because I say do any of my questions bring up questions for the attorneys. I'm the one that has to decide the parameters of this person's testimony. So, if neither attorney asks the question that's going to help me get there, then I will ask the question. Or if I feel that the attorneys are asking questions that really are kind of a waste of all of our time, not really relevant and not going to aid and be of assistance in determining the qualifications of the testimony, then I'll kindly redirect the attorneys so that we can have an efficient use of our limited court time.

[I]n the federal court, the judges will send you a list of questions [and] they'll just ask, blah, blah, and you go down the list. And each expert had to comment on whether or not these factors were there, which was very efficient.

But one strategy as we're looking at the cold appellate record that I've noticed is we do require the expert reports kind of like the federal rules. And the more thoughtful expert report—that probably slants us in favor of, if the testimony was admitted, then it probably was okay, and maybe it should have been admitted if it wasn't.

I would suggest in some of these complex cases is allow the extra time. And let me give the war story behind that. I had a case in which there were competing DNA experts. One of them was the international top scientist in the field. And there was another person who was a PhD, and as he was giving his testimony explaining why it was that the answer was not as described by this other witness, I'm thinking to myself, this is bullshit, but meanwhile, that could not be the basis of my ruling. I was saved in this case because after I gave some additional time for more expert witnesses, what happened was one of the accrediting agencies involved with DNA analysis ended up suspending this particular expert. And had I not given that extra—you know, had I been with the press of the case I would've had to make a decision and I could not use the logic of this is BS.

We're a *Daubert* state and if the occasional razz is that it's something over my head, and I haven't had a nuclear physicist or anything like that yet but I have the ability and the discretion to appoint an expert. So that is what I would do in that situation.

How courts failed to exclude what later became "deceased" forensic science disciplines or techniques

One answer would be that no one was asking for a *Daubert* hearing on some of these forensic subjects and now they are. And in [my state], there are fingerprint *Daubert* proceedings underway, and the appellate courts are still going to ultimately confront some of that if they come up with good evidence, good explanation for why the science isn't science or why the information isn't reliable enough to be admissible. So, it was just no one was taking the trouble to litigate those questions. It became sort of accepted conventional wisdom, and no one took the trouble in the criminal world where the money wasn't available it had that same quality.

[B]ecause there was subsequent research. Scientific research that was able to demonstrate the invalidity of what was occurring that allowed judges, from my perspective the courts then to step out and say this is the time to be excluded because we now have proof. . . . And that's why it took the court so long because they needed the scientific community to help out.

I was going to say, with all the things you mentioned, like the bite marks or the arson, I think science has caught up and shown these things to be unsupportable.

I thought it was interesting to hear the observations that the changes come from within the scientific community, not as a court review. I think that standard of review that we all face on appeal, once something is admitted it's likely to keep being admitted. And even if we're supposed to look at reliability of the method instead of whether it is widely accepted within the scientific community, once something is admitted it's being admitted unless and until the scientific community says otherwise. It seems like a national inertia where unless the scientific community itself regulates and other forces like have been mentioned come into play, our court, the appellate review system is ill-equipped to deal with the problem.

About 10 or 15 years ago, there was a federal district court judge here in Pennsylvania that ruled that fingerprint testimony was inherently unreliable and had thrown it out. And the FBI went bananas.

—Was he putting his thumb on the scale?

—He just said—fingerprint testimony did not meet *Daubert* because it is comparison. It is not error rates and it is not—it was just subjective determination. He threw it out. The case went up to third circuit and of course the FBI just got all over it because if they could not use fingerprint testimony nationwide, that was going to be a big problem. That was a trial judge who took his role very seriously and threw it out.

Up until maybe about two and a half years ago, it was not so much what was being testified to. It was who was testifying as an expert without even being qualified as an expert. It was mostly law enforcement until the court said no because if this is based on somebody's either academic or training background, you have to look at Rule 702. For many years, judges were not gatekeeping at all because there was no objection. Nobody was saying this cop if they are going to testify has to be an expert.

Risks and benefits of all expert witnesses being court's witnesses

I see a collection problem. That's my first concern, because if the court pays it, what fund are they going to pay when the experts come? Secondly, they're going to assess the parties but what if the parties don't pay? That might be fine in a med mal case, but in a custody case . . . So those are issues that I see.

For appellate judges it's a utopia, in my mind. But as a trial lawyer I would hate it. So I have I guess two perspectives. As a trial lawyer I guess I'm used to having my own experts who can educate me about the case. A lot of times lawyers have to learn the science. Judges have to learn the science, if I was representing a person. But sitting on the appellate bench, it sounds great to me because then I feel—I guess I would feel it's a fairer situation coming to us that we could look at. So I could kind of see it both ways depending on where I'm sitting.

In [my state] they actually did this. Yeah, it worked pretty good. They did them in certain types of cases, especially worker's compensation cases. You had the dueling doctors, and they were so upset that these doctors were coming in, like one person saying the person had 100 percent disability, one would say zero. It was just really a big spread, but the problem, what they had is that they would get all these medical experts on the list and the legislature wrote the language that the judge shall follow the expert. Why do you need a judge? After they—it came to the point where the—no one was happy. The judges weren't

happy because their hands were tied, the parties weren't happy because they were deposing and cross examining every single expert outside the court. So, it was getting really expensive. And so, they ended up tossing the whole thing. And then we just went back to the old way.

Playing devil's advocate and defending the proposal—put me in minority—would be that experts tend to lean towards the side that is paying their bill and want to continue that. But if the side that is your paying your bill is—they are both essentially paying and it is the judge that is thinking the determination that the expert would develop more—as a neutral expert and perhaps a judge would feel better hiring an expert that testified kind of leaning towards both sides so a neutral pull.

[H]ow do we select them, who is governing them. Where do we find them because as was stated, there are so many different fields and at the appellate—we would not find them at the appellate level. We address so many different areas of law that I think it would be an unnecessary burden or overburden for us to then be charged with finding these experts, qualifying them, deciding who do we appoint to what cases. Maybe I appointed the same expert for the past two cases. Who is next in line to receive this appointment and so on?

One of the fundamental things I do not like about the proposal is it takes the jury out of the whole thing. I am presuming there would be one expert on a particular topic or field and then the judge would be basically saying—this is the accepted opinion here. The whole issue is taken away from the jury, which I think would have a lot of repercussions—particularly in terms of jury service and that kind of thing.

—I agree with you 100 percent. Another thing is you are going to have a judge who in a general area of law is going to find their expert that they are comfortable with. They are not going to get the next case. There is going to be some—trying to figure out where else can I go because I know that in this type of case, this trial judge is going to hire this expert because he or she believes that expert. That is not my side. I need to go find somewhere else to take my case, which once again brings up Pandora's Box.

It is an adversarial system.

—Absolutely.

—End of story.

[W]e have blind experts. We refer to them as teaching experts. It is whichever side is calling them. But again, they do not have access to any of the case files. They are rendering opinion. They are simply educating the jury on whatever that specific expert issue is.

There is a practical problem that I see with all of this. If I proposed this to the trial judges in my district, I would say one more thing you want me to do. I do not have the time to vet all of these experts. Unless I can appoint a special master who maybe knows something about the area and can come in and look at their curriculum vitae and vet them for me, I do not have time to do this. That is the problem that I think you are going to see.

To me, the advantage of it is that they are not having the conversations without the other counsel being able to be present. That could improve the quality of the help you get from experts—not having a sidebar conversation.

—Perhaps a flipside to that, [w]hen you are working with an expert, you want to be able to discuss candidly the weaknesses of your case with an expert to help them help you and help your client. That would, I think, be difficult if not impossible, if you had to have opposing counsel in with you. That could detract from the usefulness of the expert and could end up taking trial time. If you work with an expert and have been able to work through the weaknesses and questions, you come up with a more efficient presentation or trial persuasive as well. It does not quite fit in the adversarial system that we have although it is an interesting idea. It would be a radical reform, I think, in the way we do things now.

Rule and procedural changes that could help factfinders avoid being misled by expert witnesses

I think a strong part of the answer has to do with the mandatory education of judges. Because every little bit helps.

I would just say in regard to the big picture, which is really question five that going forward sort of the culture of the Rules Committee is that they're not going to look at 702 again for another decade. Sort of every other decade. And they're tired of that. They're moving on, and they have quite a big agenda of rule changes in front of them now, but I do think that one thing to keep in mind is that as we look at changes to this, we look to states. I mean, here we are, state constitutions, state rules of evidence, and there were rules about the rule of completeness. There are some changes that have been made to that recently. And we look to, I think, Maine for that. I think the states, if you all and in our states think that there are problems with Rule 702 and you have a state rule that's sort of modeled off of it, I think that the Committee is very receptive to looking at what states have done and what state appellate courts have ruled and views it truly as really a laboratory for changes. So, if the recent changes are a problem or things can be improved, I think that we're the people who have the ability to move that along. And then when this Rule 702 percolates to the top again in a decade, there'll be all of this experience to bring to bear.

I would get back to 702, pure old 702.

—We are at pure old 702 but Professor Saks raised a really good point as to the standard of review. And I think that's something. We have said that it is abuse of discretion and that's something that I would really like to look at. Whether it should be de novo because if it's—the question of whether or not testimony is reliable, how is that discretionary? That should be de novo I think. I think that makes sense.

I can tell you as a trial judge, prior orders from federal judges or anywhere around that had on that one issue was a big help. Trial judges do not want to reinvent the wheel. If there had been litigation on this one issue and another judge had already ruled on things or a federal judge, that is a great start for us on where to go.

It may be something in the afternoon paper where Professor Bloom suggested that actually having some sort of a room 104 hearing and hearing from lay people as well as the experts themselves. That might be one aspect. And then I guess the other is do you lean towards—if it's a close call, do you lean towards letting it in?

—Because some European countries, I think it was mentioned, judges sit alongside lay people in trying cases at the trial court level.

—A lot of Asian countries do that. We are pretty tight with the Japanese and Korean courts while corresponding and that's how they do it. They will have three judges and three to six or so lay people.

—I feel like that would inspire more confidence from the public, to have just members of the community, like jurors, I just feel like the public is more competent when—because we're worried about this elitist, elite concerns that come up and so maybe that would be helpful in some way. I don't know how you would go about determining who they are other than like a jury system. It's random selection.

Does judicial gatekeeping contribute to negative perceptions of courts?

The Daubert family surely thinks so. And people close to them think so. Any time the court does something that's egregiously troubling to people, there's a circle of people that are aware of that and troubled by it.

Maybe part of the issue of whether or not it does have a function or a spillover into democracy depends on the size of the case, and the complexity, and the knowledge about it. I'm sure everybody knows about our Flint water crisis. . . . What if the judge had thrown out the experts? What would have happened to the perception of justice in our state? As bad as it might be, I think it would have plummeted because I know that everybody who knows anything about Flint felt those people were done a horrible, horrible injustice. . . . [S]o if the experts hadn't been allowed to testify and that case had been shut down, there would have been real distrust and pervasive contempt for the court system.

Think about all the times, though, that we hear about, in the media, oh, somebody's crabby they lost on a technicality. Right. And I've never, for all the time I've spent living in appellate world, I never really thought about this question. And I think the answer has to be yes, because even just a story getting out there, oh, I lost on a technicality.

Before today, I would have said the answer to that question is no. And now that I'm actually thinking about it, I mean, how many times have we like in private practice or even on this court, have heard about, okay, well, the case isn't going to trial because their experts got struck at the 11th hour. And that's probably not great for the integrity of the institution and people's kind of like gut of their stomach belief in the system.

The conflicts over experts, legitimate as they are, are rarely reported so it's—if it isn't fear, conflict and drama, which is the diet of the media, nothing else matters. And this transcends everything, but fear, conflict and drama rarely lends itself to questions about expert witnesses.

I don't think the general public has any idea of what we're talking about.

—They don't have a clue about that.

—They don't have a clue.

Specifically, to that question with the general public you start talking about a gatekeeper they think that's somebody at a toll bridge. They don't have any idea judges do that.

I don't think lay people have any concept of that.

—I think it's always the misconception of those of us that are working in the courthouse and are familiar with an issue, assuming that that transfers out to the general public and I don't believe the general public is.

—I agree. I agree.

Additional reasons for public distrust in the courts

I would include, and this is not just expert gatekeeping, but I would include the plausibility of the federal court, 12(b)(6) dismissal motions, as part of gatekeeping too. They are just tossing out claims. To the extent that some state courts have adopted those standards I would think that that—if you were a person that—or your family member filed a lawsuit and was just dumped at the pleading stage, would that foster confidence in the judiciary. I don't think so.

I think the bigger gatekeeping function that may affect a negative perception of the court is where we start the trial and then there is directed verdict. I have actually seen jurors—judge directs a verdict, judge calls the jurors back in, explains why they are doing what they are doing and I have actually seen jurors get up and argue with the judge. Why are you doing this? We understand this case. Why don't we get to decide? Why do you get to decide? That was a real eye-opening experience.

I understood partly Professor Bloom's argument to be that the gatekeeping practice leads to fewer jury trials, fewer people having jury experience leads to less confidence in the system. And that connection seems to be potentially valid although I think there's a lot of reasons why there are fewer jury trials including more arbitration clauses and sort of the money ball thing that people are maybe better able to evaluate cases than they were 50 years ago.

—I think the bigger connection is the expansion of summary judgment motions and shutting it down. If there's a link here it's so infrequent from my perspective. But it's a SMJ that's granted because you kicked an expert out. I just don't see it all in all.

I think that the only criticism I hear sometimes as is reported in the public press are large verdicts for which people can understand the facts. The classic one is the woman who got a large sum of money from the McDonald's coffee in her lap. That grabs public attention.

I do not know that judicial gatekeeping is a problem as far as negative perceptions of courts for the public. It is the politicalization of the courts and that starts with the Supreme Court. I do not think that people look at us on the lower level quite like they look at the United States Supreme Court.

—Every single judge in this room agrees with you.

Relevance of the Founders' belief that juries provide security against corruption to current debates about judicial gatekeeping

[T]rial by jury is one of the few things that is specifically mentioned in Section 1 of—or Section 2, I think of Article 3. And so, clearly it was—and it goes all the way back to hundreds of years in English common law, but I don't know that it was security against corruption. I'm just not—I've never heard that as a justification for it before. I think it was security against the—you could call it corruption. It was security against the sovereign.

—Tyranny.

—Yeah, security against tyranny more than corruption.

Is it fair to read some cynicism into the question? Is the founders' belief that juries provide security against corruption? The cynicism would be governor appoints a judge that would be sympathetic towards his backers or his big business or whatever and therefore if you just leave the judge as the sole conduit and have it be the sole gatekeeper then the corrupt judge could keep out the *Daubert* experts, whoever their medical experts are and tip the field.

The founders did not think about any of the current—they could not ever imagine where we are today.

I think that the perception of corruption certainly impacts how the public views those in power. [W]hen you have the public bombarded with judges who don't follow the law and that the news is fake and they are not telling you the truth and people are ignorant, that's not the word that Judge used, but they are clearly ignorant of civics and how the court functions, that it is easy for the public to think we are political hacks. I truly believe that. That is why, to me, it's important to have jury trials.

I certainly believe the public feels that way but I don't know that they connect the loss or a lack of jury trials with that corruption. Yes, they feel that it's an instrument of the powerful or the rich.

Yes, the monarchy's overreached, that is true. But just a few observations and there may be no theme connecting them. But of course the founders had a particular idea of who could serve on juries and who did serve on juries. And their view of juries is not today's view of juries.

—Right, we couldn't serve as jurors.

—That is for sure, or to be judge or to be counsel. So again, very different view of who would be making these decisions that would be counterweights to corruption also makes the question a little bit challenging for our reality today.

I think there is some justification for putting the decision-making authority in the hands of those who are being governed. And that's what that concept is all about. It's a check on government, not letting government get out of hand. And juries were there to kind of keep the balance. But I don't see a nexus between that gatekeeping function and the judge.

I think big business has the opportunity to retain first class professional witnesses who can really sway a jury regardless of the methodology and the science behind their opinion. And I think that's where that corruption question comes up.

Juror capability vs. the need for gatekeeping

I think the gatekeeping function is very important. And maybe we err on the side of allowing that evidence to go to the jury. And that's been our reversals as well, where we reversed saying, no, you should have let this go to the jury, but the gatekeeping function, I think, is very important. And I would not want to turn it over to lay people.

I believe that jurors are as qualified to assess the credibility as a judge. Jurors are made up of people of commonsense. You have 12 people on the jury sitting there listening to an entire case. And they are better equipped to come to a conclusion as to that evidence that they've heard. We could be a jury. I've just heard many things in here regarding the vanishing jury trials and all that that I disagree with. I try cases all the time. There is no absence of jury trials in my jurisdiction, particularly not in the criminal side. But that's something that we could debate and agree with some of what you said, disagree with most of what you said, and jurors go through that same process in evaluating expert testimony. And I think they get it right, and they'll get it right in more instances than if a judge was trying it without a jury.

I think it depends very much on in a particular case who the judge is and whether the jury is diverse. It depends on who the jurors are. It also depends on the subject matter. There are certainly judges on particular subject matters that would know, I think, far more about a particular subject than the jury would. And there are probably particular jurors who would know far more about a particular subject than a judge. It is possible this is true as a general matter. I just think it is case dependent and subject dependent. The second question sort of leads you. If this were true, then you would not really need a gatekeeping function.

Even if this is true in a large number of cases, it is not true in every case and you do not want issues to get to the jury that are based on junk science. I think there has to be a gatekeeping function because this is not true at all. Not every jury is going to be able to identify bad science. Not every judge is going to be able to either but that is the judge's job if there is going to be a gatekeeper.

It depends upon the case.

—It depends on the panel. Sometimes you have people who are with it and sometimes people who look at you kind of glassy-eyed. Sometimes you have judges who look at you glassy-eyed.

I think the gatekeeper function sometimes is just to limit the number of experts on each side. And once that's done, they are ready. Let the jury decide.

The fact of the matter is that we have our rules, and if the expert not just simply knows more than the average person but is not a whole lot more than that, if the evidence testimony can be helpful to the jury then it should and typically is admitted. But my saving grace, I believe, is always the jury and jurors are, and I give them much more credit than the commentator is saying, that what the jurors can be overly influenced and all that. Jurors, that's what cross examination is all about. Experts are exposed quite often for their biases through cross examination. They are charging $500 per hour or $1000 per hour and jurors typically know that that influences, could influence, their opinion. And then finally, they are instructed that they can give the opinion whatever weight they desire. They are not obligated to accept an expert opinion.

I don't think I as one judge am any more capable of deciding, and that's why I think things should go to the jury. "Let those 12 people decide" is the collective wisdom of 12 people.

I will throw another wrinkle into it. In the military, the jury can call a witness. They will say we want—for example, I am working on a case now where the jury said we want an expert in pharmacology to talk to us about the effects of this drug that was in the victim's system.

How judges can ensure juries play a role in evaluating expert evidence

[Letting jurors ask questions is] a standard practice in Arizona. The trial judge will, after the witness testifies, allow the jurors to pose questions; usually they have to write them out and they're taking them to the judge, and he'll usually read all of them. Once in a while there may be something that he doesn't think is appropriate, or she. . . . And they can ask follow-up questions of the witnesses as well, not just the experts.

I've also seen written in the literature, . . . putting the experts on back-to-back so that one expert gives his talk and the other expert gives her talk and the jurors get to see them in real time on the same day, or the same two days on the theory, that that makes it easier for the jurors to really focus on the differences in the expert opinions as opposed to doing it two weeks apart in the long trials. I haven't tried that, but that's sort of a new thing in the literature now.

[W]hat strategies might judges employ while carrying out gatekeeping responsibilities? Well, I'll put it as bluntly as this, get out of the way. Get out of the way. Let the lawyers litigate their case, let the juries make their decision, get out of the way.

I guess I would say that you cannot waste the jury's time and you would have to look at everything in a case management way too. There would have to be some efficiencies. You cannot have repetitive experts and those kinds of things. I would certainly want to respect the idea of protecting the juror's right to decide the ultimate issues in the case and respect that. I think there is also a danger in permitting experts to testify in areas where no expert is needed like taking out the wrong kidney—that could imbalance the equities there in a juror's mind. If an expert who has testified on a topic that seems obvious and is obvious but you have—is a way of bamboozling the jury in another way.

And I think we are—there's been too much of the movement I think against jury trials and it's too easy to dispatch by just saying, oh, people are just saying weight. And it just goes to the weight. That's not the issue. It's really, I think, trusting your fellow citizens to make the call. And we as judges, it's the jury instructions. When you're talking about objections or other things like that, a judge can kind of put their thumb on the scales with the jury instructions, too, to a certain extent. . . . But I think jury instructions go a long way to nip in the bud some of the problems that we've talked about today.

I think that the gatekeeping function . . . still has a role to be played. And the strategy, I think you need to educate judges and we need to make it a top priority to evaluate and gatekeep appropriately.

One of the speakers today was talking about motivated reasoning or confirmation bias. I just wrote an opinion. I guess I did not understand that there was a term for what I was doing and looking at what the trial judge ruled concerning these experts—tons of experts plus a teaching expert. Just walking through that opinion based on all the expert testimony on each side and realizing that this trial judge was finding arguments that he wanted to believe and totally ignoring—and cherry picking the expert testimony on each side and not even considering the opposing view—my colleagues have agreed. We are sending it back and saying you have to consider both pieces of evidence. You cannot cherry pick. I guess that is one thing that you can do as an appellate judge. If you realize that there are some trial judges that are motivated reasoning.

The future of evaluating admissibility and expert testimony with the rapid expansion of artificial intelligence

Gatekeeping will be totally necessary when you talk about AI. When I welcome juries, I do the welcoming. We all do them on the trial level. I say this is one of the things, the last things that they cannot digitize. We need people. We need people's bodies in these chairs.

You may recall my first question this morning where I was talking about being fearful of gatekeeping and I've become even more fearful with artificial intelligence. The first time I thought about the question was it had to do with deep fakes. That is where you're making these videos and have people looking and saying things that didn't really happen. And I think I can see it happening in trial. You know, one expert witness saying it's a fake. And you got this other person who's saying this is real. The judge is going to

say, let the jury decide. That's what's going to happen. I mean, I think it's going to become more and more difficult to keep evidence out. That's my fear.

—The jury won't be equipped to answer that question. They're going to need expert testimony.

That's the unfortunate feature is reality is going to be in question. I've got a photographer, photojournalist friend, and that whole idea of how you authenticate and rely on this evidence, and ability to testify, that's my photograph. And I can tell you I have not done anything to it because that's where we're going to be. And then do you believe that person or it becomes one labor after another. Admit no evidence and it's not a problem.

[J]udicial malpractice if you use a chat bot to evaluate whether you are going to let an expert in or not.

—How are you defining evaluating?

—The first question that you ask is, who wrote your report and then if you—on the other hand, if you take it and you run that through, you are evaluating that expert based on a search that you did through artificial intelligence. That is judicial malpractice.

I actually could see a world where a judge is using ChatGPT and—let us take fingerprint evidence. And everybody is like well, of course that is fine. It is just known. It is fine. Nobody even questions it. Now, ChatGPT is going to pull in some—articles. There is actually a debate about this. I could actually see it being helpful.

—So maybe two different implications. A judge using it but I thought it was saying a judge using it to understand the science just to get their head around—not do legal research. Maybe that is two implications that both experts might use it and judges might use it.

If it is disclosed. In cross examination, this is not even your report. You did this through artificial intelligence. Then I think . . . depending on what the answer is and depending on the level of skepticism, how skeptical those jurors are—they used AI. I completely agree. They used AI. I am not going to listen to them anymore.

—It would be a credibility issue.

—Credibility issue but subject to the subjective personalities or perceptions of those jurors, which is a gamble.

I think it depends. AI is being used in many places.

—I think that is why some courts now are requiring disclosure of your research sources. If this brief or whatever was researched on Westlaw or Lexis, we are pretty good with that. But if you just signed up for the free version of ChatGPT, then maybe that is going to be a problem. But that is now going to be in court rules. We will see it.

I know people who use AI to pull together a report for work. They do it all the time and it does a really good job and they have to write the last few—it just—puts the first draft together. Do they have to disclose that? I do not know. They are reviewing it.

—What kind of work?

—Like a financial report for the company or the CFO and you have to—it pulls all the numbers. The quarter was profitable. It literally does the written report.

—Do you feed it into it?

—Yes.

—The foundation of the report can be written by ChatGPT or that is how the experts started. But the question becomes that is how it started but this is my research. This is my input. I think it could come in under a *Daubert* standard or under any standard. It can come in subject to cross examination.

How resource disparities impact the use of expert witnesses

You know, when they file [*Daubert* hearing motions] in my state, especially if it's a public defender's case, they have to go and find the money to put forth experts to put forth the hearing. You just can't say well we don't have the money; therefore, we're not going to do anything. And you got someone's freedom at stake here. So, yeah, a lot of problems there when people say, I don't know what the hearing is, one. And two, I don't have the money to put forth the hearing, even if I knew what the hearing was.

I think it's much more of a fair fight between you and the defense side, you know, whereas, in the criminal field you have a speedy trial, it's a very limited amount of time to prepare a defense, and in Iowa you're getting paid $68.00 an hour for a criminal appointment. It's just not a fair fight. The ability and motivation, until things like the Innocence Project came along, are just not there. I do think resources matter.

I wonder if a consideration is whether the defense has the means to hire expert witnesses when the prosecution has under the force of the government behind it a laboratory and a whole host of forensic experts. But it's interesting.

Additional thoughts on the decline of jury trials

Are we seeing more cases settle after the *Daubert* hearing so that appellate judges—that they are testing how far they can push at the trial level?

—I see a lot of summary judgments. They are not getting there. I have not seen—nine years. I cannot remember seeing one.

Everyone's making this assumption that there's no civil jury trials because of gatekeeping or something the courts are doing and I have a lot of friends who are in personal injury and plaintiff's work and they are just settling cases. I don't think it—it's the way that cases are being handled now by the insurance companies and the litigants. And it's just, I mean I don't know that you can say there's a cause and effect here—that one is causing the other. I mean, unless you've got some data or something.

—I disagree if it's an assumption because the parties—risk assessment by the insurance company and the parties and they prepare, they negotiate and they want the certainty of a settlement in most instances rather than the uncertainty of the jury.

—Judges love settlement is the bottom line. Take it off my docket. Why have something that you can resolve go any further so it does seem that there are other things that have pushed settlement beyond just like the fair assessment that we would hope that the two parties get together and say a trial is not beneficial for us here, let's resolve this a different way.

In the discussion groups, the moderators were asked to note areas in which judges' thinking on issues raised in the Forum appeared to converge. Not all attending judges agreed on all points listed.

Evaluating proffered scientific and technical evidence.

- Issues about experts are hard to resolve, and judges feel challenged about evaluating experts.
- Evaluating expert testimony takes up a lot of judicial time.
- Appellate judges have a different constraint on them than even trial judges do in evaluating this because appellate judges are stuck with the record that exists before them and cannot do anything to build that out if they have questions.
- Appellate judges don't see this as much in civil cases. Those cases are often settled or resolved by summary judgment.
- The validity of the expert's testimony should be a question for the jury.

Judicial strategies for working in the *Daubert*/Rule 702 regime.

- Having judges do the initial questioning of experts will produce a better record.
- Rule 702 hearings take too much time away from trials.
- The judge's background can have an effect on how these issues are viewed.
- Remember that the judge is not determining the credibility of the testimony. The judge is only determining whether the evidence meets a *threshold* for reliability and admissibility.

The courts' longstanding failure to police forensic science disciplines more closely.

- Forensic science has evolved considerably, and the courts need to catch up with it.
- There are not enough challenges to expert evidence in criminal cases.
- There has been a significant change with the creation of state-based innocence projects.

Proposal to have the courts choose and compensate all expert witnesses, making them the courts' own witnesses.

- This would require too much judicial involvement before the case is actually heard.
- There would be many practical problems with implementing this proposal.
- In our system, factual issues are to be decided by a jury.

Possible changes to current practice.

- Focus on the peer review process (which judges may already be doing).
- Peer review is seen as a safe place to rely on evidence. But now there may be some question as to how trustworthy the peer review process is.
- Juries are smart. They really try to get it right.

Judicial gatekeeping and the benefits of jury trials

- Juries are less likely to be influenced by corruption, and thus inherently provide protection against corruption. But this is unrelated to gatekeeping.
- Judges find ways to resolve cases. Gatekeeping is one way, so is pushing settlements.
- People need their day in court.
- Juries are meant to balance power in the justice system.

Gatekeeping and current negative perceptions of courts.

- Politicization is the real problem, starting with the U.S. Supreme Court.
- The public may not know much about gatekeeping, or may not think of it in that term, but they do understand when a case gets thrown out of court and they do not get their day in court, their day in front of a jury.

Relative capabilities of juries and judges in evaluating expert evidence.

- Juries are better than one judge (multiple judges said this).
- Juries are better at judging credibility, and judges are better at determining law.
- Juries are capable, but they need evidence that complies with the evidence rules. The "gatekeeping" function is merely an application of the law of evidence, but the "gatekeeping" language has negative connotations.
- Juries evaluate experts' testimony all the time, and they do it right. They are as qualified to judge the credibility of experts as judges are. "Gatekeeping" should be about the scope of the proposed testimony.
- Generally, yes, but we still need gatekeeping as a matter of efficiency and as protection against "junk science."
- We do need initial gatekeeping, but the evidence should go to the jury.

Strategies to keep juries involved with scientific evidence.

- Unless the proposed testimony is substantially outweighed by risks of prejudice, and will confuse or mislead the jury, it should come into evidence. The judge's strategy should be to "get out of the way."
- People generally believe in juries, but to what extent can you trust a jury to rule on scientific evidence? That is a hard question, because science is hard.

- Limit the scope of the testimony. Don't permit an expert to give an opinion on the ultimate issue in the case.
- We should trust our fellow citizens. Allow full hearings on experts and evidence.

Potential use of artificial intelligence (AI) in evaluating expert testimony.

- AI is worrisome.
- AI will have an impact in litigation. We don't know yet what the impact will be.
- Experts who use AI should be required to disclose that fact. Opposing counsel should be allowed to cross-examine experts on the use of AI in their reports.
- It would be judicial malpractice to use, e.g., ChatGPT to evaluate an expert report.

APPENDICES

Faculty Biographies

Paper Writers and Speakers

(In order of appearance)

Christopher T. Nace (Forum Moderator) is the President of the National Institute for Civil Justice. He is the managing member of Paulson & Nace, PLLC, where his practice includes medical malpractice, wrongful death, legal malpractice, and other serious personal injury matters. Chris is a past president of the Trial Lawyers Association of Metropolitan Washington, D.C. He is a member of the American Association for Justice Executive Committee and sits on the boards of the Public Justice Foundation and Living Classrooms Foundation of the National Capital Region. Mr. Nace was the 2019 Recipient of the American Association for Justice's Joe Tonahill Award; the 2021 recipient of AAJ's Howard Twiggs Award; and the 2022 recipient of AAJ's Pro Bono Award. Chris is a graduate of Georgetown University and Emory University School of Law, where he served as Editor-in-Chief of the *Emory Law Journal* and now sits on its Alumni Board of Governors.

Honorable Debra Todd (Welcome Speaker) is the Chief Justice of the Pennsylvania Supreme Court. She served as a judge on the Pennsylvania Superior Court (an appellate court) from 2000-2007. She was first elected to the state supreme court on November 6, 2007, was retained in 2017, and became chief justice on October 1, 2022. Chief Justice Todd received a bachelor's degree from Chatham College in 1979 and a law degree from the University of Pittsburgh in 1982. She earned her LL.M. degree in the Judicial Process from the University of Virginia School of Law. She began her legal career as a litigation attorney with U.S. Steel Corp., working there until 1987. She then entered private practice, where she remained through 1999. She has received numerous awards, including The University of Pittsburgh School of Law's Judge Ruggero J. Aldisert Distinguished Jurist Award.

Professor Michael Saks (Paper Writer/Presenter) is a Regents Professor at the Arizona State University, where he is on the faculties of the Sandra Day O'Connor College of Law, the Department of Psychology, the Law and Behavioral Science Program, and is a fellow in the Center for Law, Science, and Innovation. Previously, he was the Edward F. Howrey Professor of Law and Professor of Psychology at the University of Iowa. For a decade he taught appellate judges in the University of Virginia Law School's summer LL.M. program, as well as trial judges in Duke's Judging Science program, law professors at the Georgetown University Law Center, and law students, graduate students, and/or undergraduates at Boston College, Georgetown, and Ohio State University, as well as at ASU and Iowa. He earned a Ph.D. in experimental social psychology from Ohio State University and an M.S.L. from Yale Law School. His research and scholarship have been concerned primarily with: the psychology of decision-making in the legal process, the behavior of the litigation system, scientific and other expert evidence in the law, and legal policy related to prevention of medical error. Notable publications include: *Modern Scientific Evidence*: *The Law and Science of Expert Testimony* (five volumes, annual updates) (co-editor/co-author with David Faigman, David Kaye, Joe Sanders, and Edward Cheng); *The Psychological Foundations of Evidence Law*

(2016) (co-author with Barbara Spellman); and *Closing Death's Door: Legal Innovations to End the Epidemic of Healthcare Harm* (2021) (co-author with Stephan Landsman).

Peter Andrey Smith (Luncheon Speaker) is a freelance reporter who has covered science and technology for many national outlets, including *The New York Times Magazine, Outside, Bloomberg Businessweek,* and *Wired*. In 2022, he reported an hour-long episode on the award-winning podcast WNYC Radiolab about the *Daubert* standard, and while researching that project he became acquainted with two members of the Daubert family, who were part of the discussion at the Forum lunch. Smith has received awards from the Pulitzer Center, the Investigative Fund, and the Knight Science Journalism Fellowship at MIT. He has a B.A. from Hampshire College and studied at the Salt Institute for Documentary Studies.

Professor Anne Bloom (Paper Writer/Presenter) is the Executive Director of the Civil Justice Research Initiative at Berkeley Law. Previously, she was the Director of Public Programs at Equal Justice Works and Associate Director of the Civil Justice Program at Loyola Law School in Los Angeles. Prior to that, she was Associate Dean for Research and Professor of Law at the University of the Pacific McGeorge School of Law. She has taught Torts, Civil Procedure, Complex Litigation, and related topics for more than a decade. Before becoming a professor, Anne was a public interest lawyer for 13 years, primarily at Public Justice, where she litigated high-impact civil public interest cases at the trial and appellate levels and directed a class action project. Anne holds both a J.D. and a PhD. (Political Science), and has authored many articles on legal topics. Her most recent publications include "Injury and Injustice," in the *Annual Review of Law and Social Science* (2020) and "The Future of Injury: Tort Law in the Wake of Covid," *DePaul Law Review* (2022). Among other projects, she is currently editing a Research Handbook on Civil Justice (Elgar) and writing an essay on the impact of tort reform in America. In 1993, Anne served as co-counsel on an *amicus* brief filed in *Daubert v Merrell Dow Pharms., Inc*.

Panelists

Honorable Roland L. Belsome is a judge of Louisiana's Fourth Circuit Court of Appeal. He was elected in 2004, and his present term will expire in 2030. Judge Belsome is a graduate of the University of New Orleans and Tulane University School of Law. He has served on the board of the New Orleans Domestic Violence Advisory Board. Before his election to the Court of Appeal, Judge Belsome was a well-known trial attorney, and served as a district court judge in Orleans Parish from 1996 to 2004. He is an active lecturer in continuing legal education programs given by the Louisiana State Bar Association, Tulane Law School, Loyola Law School, and the Louisiana Association for Justice. He also has served as an adjunct professor at Tulane University School of Law.

Chancellor & Dean David Faigman is the John F. Digardi Distinguished Professor of Law at the University of California College of the Law, San Francisco, and holds an appointment as Professor in the School of Medicine (Dept. of Psychiatry) at the University of California, San Francisco. He received both his M.A. (Psychology) and J.D. degrees from the University of Virginia.

Professor Faigman is the author of over 50 articles and essays, and has published in a variety of outlets, including the Chicago, Virginia, Pennsylvania and Northwestern law reviews, *Science*, *Sociological Methods & Research* and *Nature Neuroscience*. He is also the author of three books, *Constitutional Fictions: A Unified Theory of Constitutional Facts* (Oxford, 2008), *Laboratory of Justice: The Supreme Court's 200-Year Struggle to Integrate Science and the Law* (Henry Holt & Co. 2004), and *Legal Alchemy: The Use and Misuse of Science in the Law*

(W.H. Freeman,1999). He is a co-author/co-editor of the five-volume treatise *Modern Scientific Evidence: The Law and Science of Expert Testimony* (with Cheng, Mnookin, Murphy, Sanders & Slobogin). The treatise has been cited widely by courts, including several times by the U.S. Supreme Court. Professor Faigman was a member of the National Academies of Science panel that investigated the scientific validity of polygraphs, is a member of the MacArthur Law and Neuroscience Network, and served as a Senior Advisor to the President's Council of Advisors on Science and Technology's Report, Forensic Science in Criminal Courts: Ensuring Scientific Validity of Feature-Comparison Methods.

Honorable Terry Fox sits on the Colorado Court of Appeals (COA), where she has served since January of 2011. In 2017, the Denver Bar Association awarded Judge Fox its Judicial Excellence Award. In 2018, she received the National Association of Women Judges (NAWJ, Region IX) Lady Justice Award. The Colorado Women's Bar Association (CWBA) honored her as the 2019 Outstanding Judicial Officer. In collaboration with the Center for Legal Inclusiveness, she is a member of the Judicial Dream Team's efforts to diversify the bench. She is a member of the Executive Committee of Our Courts Colorado and contributes to the Colorado Judicial Conference Planning Committee, the Supreme Court's Advisory Committee on Language Access, and the Supreme Court's Character and Fitness Committee. Since 2020, she has trained new COA judges. Her community service includes membership and board service in the Colorado Hispanic Bar Association and the CWBA, and mentoring young lawyers and aspiring jurists. She previously served on the Colorado Supreme Court's Attorney Regulation Committee and the Board of Law Examiner's Law Committee. Judge Fox earned an engineering degree from the Colorado School of Mines, her J.D. degree from the South Texas College of Law, and her L.L.M. from Duke University School of Law.

Deepak Gupta is the founding principal of Gupta Wessler, where his practice focuses on U.S. Supreme Court, appellate, and complex litigation on behalf of plaintiffs and public-interest clients. He is also a Lecturer at Harvard Law School, where he teaches the Harvard Supreme Court Litigation Clinic and seminars on forced arbitration, the civil justice system, and public interest entrepreneurship. For over two decades, he has led high-stakes litigation before the U.S. Supreme Court, all thirteen federal circuits, and state supreme courts from Alaska to West Virginia. He has also testified before the U.S. Senate, the U.S. House of Representatives, and the Presidential Commission on the Supreme Court. Much of Deepak's advocacy has focused on ensuring access to justice for consumers, workers, and communities injured by corporate or governmental wrongdoing. His varied clients have included national nonprofits, labor unions, state and local governments, public officials ranging from federal judges to members of Congress, professional athletes, distinguished artists and scientists, and people from all walks of life.

R. Jeffrey Lowe is a partner with Kightlinger & Gray, LLP, in New Albany, Indiana and Louisville, Kentucky. His practice includes the defense governmental entities and their employees in cases involving constitutional and state law torts throughout Southern Indiana and Kentucky. He also regularly defends general liability, premises liability, transportation, and other matters. Jeff has served in various roles within the DRI Civil Rights and Governmental Tort Liability Section ultimately serving as its Chair. He served a term on DRI's Board of Directors and was elected to DRI's Executive Committee as Secretary/Treasurer in 2021 and Second Vice President in 2022. He is also a member of the Federation of Defense and Corporate Counsel, serves on the Kentucky Defense Counsel Board of Directors and formerly served on the Defense Trial Counsel of Indiana Board of Directors. Jeff served as a member of the DTCI contingent of the joint Indiana Trial Lawyers Association/Defense Trial Counsel of Indiana Commission on the Resumption of Jury Trials in Indiana post-Covid.

Dr. David Michaels, PhD, MPH, is an epidemiologist and Professor at the Milken Institute School of Public Health, George Washington University. He served as Assistant Secretary of Labor for the Occupational Safety and Health Administration (OSHA) 2009-2017, the longest serving administrator in OSHA's history. Previously he was Assistant Secretary of Energy for Environment, Safety, and Health, charged with protecting the workers, community, and environment around the nation's nuclear weapons facilities. Much of Dr. Michaels' research focuses on protecting the integrity of the science underpinning public health, safety, and environmental protections. He authored the books *The Triumph of Doubt: Dark Money and the Science of Deception* (Oxford University Press, 2020) and *Doubt is Their Product: How Industry's Assault on Science Threatens Your Health* (Oxford University Press, 2008).

Michelle A. Parfitt Michelle A. Parfitt is a Senior Partner with the law firm of Ashcraft & Gerel, LLP. She focuses on mass torts, specializing in pharmaceutical and product liability cases. She currently heads the Mass Tort practice section of Ashcraft & Gerel, LLP and has represented thousands of individuals in state and federal courts in pharmaceutical and medical device litigation. Ms. Parfitt has been appointed to and has served on numerous Plaintiffs' Steering Committees in national mass tort and complex litigations and has held leadership positions in some of the largest mass tort litigations in recent years, including the Talcum Powder MDL, in which she serves as co-lead counsel. Michelle is the past president of the Trial Lawyers Association of Metropolitan Washington, D.C., and is a Fellow of the Litigation Counsel of America, International Academy of Trial Lawyers, the American Board of Trial Advocates, and International Society of Barristers.

Professor Mary Rose received an A.B. in Psychology from Stanford University and a Ph.D. in social psychology from Duke University. Formerly a research fellow at the American Bar Foundation, she is currently a professor of sociology at the University of Texas at Austin and Director of the Human Dimensions of Organizations program. At UT she teaches courses on social science and law, as well as social psychology and research methods. Her research examines lay participation in the legal system and perceptions of justice, and she has written on a variety of topics, including the effects of jury selection practices on jury representativeness and citizens' views of justice, jury trial innovations, civil damage awards, and public views of court practices. She is also an investigator on the landmark study of decision-making among 50 deliberating juries from Pima County, Arizona. She has served on the editorial boards of *Law & Social Inquiry*, *Law & Society Review, Criminology, Social Psychology Quarterly, and Law & Human Behavior*, and is a former trustee of the Law & Society Association. Her research has been cited in numerous court cases, including three U.S. Supreme Court cases: *Miller-el v. Dretke* (Breyer, J., concurring); *Exxon Shipping Co. v. Baker*, and *Ramos v. Louisiana*.

Discussion Group Moderators

Carla D. Aikens attended The Wharton School of the University of Pennsylvania and received her Juris Doctor degree from Georgetown University Law Center, where she was a national quarterfinalist in the Frederick Douglass Moot Court Competition. While at Georgetown, she also founded a mentoring program for D.C.-area high-schoolers and taught a law class in it. After a federal court clerkship, she worked with a Detroit-area law firm, doing transactional work, including extensive work for the City of Detroit. After years of working for large law firms on corporate cases, Ms. Aikens founded her own firm, with a current practice representing victims of both personal injuries and employment law violations. Carla is a member of the American Association for Justice, the executive board of the Michigan Association for Justice, and the Illinois Trial Lawyers Association. She also chairs the James W. Baker Trial Lawyers Caucus of the Michigan Association for Justice.

Charles "Chip" Becker is an attorney at Kline & Specter, PC, where he represents plaintiffs in personal injury matters and has primary responsibility for the firm's post-trial and appellate practice. Mr. Becker is a member of the Pennsylvania Court of Judicial Discipline. He serves on the Supreme Court of Pennsylvania's Commission on Judicial Independence and previously served on the Supreme Court's Tricentennial Commission and its Appellate Courts Procedural Rules Committee. He teaches state constitutional law as an adjunct professor at the University of Pennsylvania Carey School of Law. Mr. Becker is a fellow of the American Academy of Appellate Lawyers, a member of the American Law Institute, and past president of the Third Circuit Bar Association. A graduate of Williams College and Yale Law School, Mr. Becker served as a law clerk for Judge Sandra Lynch of the U.S. Court of Appeals for the First Circuit.

Jennifer Bennett is a principal at Gupta Wessler PLLC, where she heads the firm's San Francisco office and focuses on cutting-edge public interest and plaintiffs-side appellate litigation. Her practice covers a wide range of issues, including civil rights, consumer protection, constitutional law, worker rights, and government transparency. Jennifer regularly litigates before the U.S. Supreme Court, including recently arguing and winning two landmark victories on behalf of workers challenging forced arbitration in *Saxon v. Southwest* (2022) and *New Prime Inc. v. Oliveira* (2019). Her victory in *New Prime* was the first case in over a decade in which the Supreme Court ruled in favor of the party challenging arbitration. Jennifer also regularly handles appeals in both state and federal court on behalf of workers and consumers. She frequently represents journalists, media organizations, and nonprofits challenging government secrecy. And she regularly represents plaintiffs in civil rights cases involving difficult or novel legal issues. She earned her J.D. degree from Yale Law School.

Kathryn H. Clarke is a sole practitioner in Portland, Oregon, who specializes in appellate practice and consultation on legal issues in complex tort litigation. She served as President of the then-Pound Civil Justice Institute (now NCJI) from 2011 to 2013. She is a member of the Oregon Trial Lawyers Association, and has been a member of its Board of Governors for over 25 years, served as President from 1995 to 1996, and received that organization's Distinguished Trial Lawyer award in 2006. She is also a member of the Board of Governors of the American Association for Justice. She was a member of the adjunct faculty at Lewis and Clark Law School, and taught a seminar in advanced torts for several years. In 2008 she served as a member of a work group on Tort Conflicts of Law for the Oregon Law Commission, which resulted in a bill passed by the 2009 legislature. She has served as member and Chair of Oregon's Council on Court Procedures, and has been a member of the Oregon State Bar's Uniform Civil Jury Instructions Committee. In 2016 she was honored by our Institute for her lifetime achievement as an appellate advocate.

Gary M. DiMuzio is a shareholder in the Asbestos Department at Simmons Hanly Conroy in New York City. He joined the firm in 2019, bringing 25 years of experience helping victims of mesothelioma and other environmental and workplace hazards. Gary has been litigating mesothelioma cases since 1998, and also representing plaintiffs in cases involving lung cancer, leukemia, liver cancer, silicosis, plant explosions, and environmental contamination. Gary received a B.M. in Classical Guitar Performance from Texas A&M University in 1986, and obtained his J.D. degree from University of Houston Law Center in 1992. He undertook environmental public health studies at the University of Texas School of Public Health concurrently with attending law school. He also worked on environmental issues with public officials responsible for pollution control.

Deborah Elman is a partner at Garwin Gerstein & Fisher LLP in New York City, where she specializes in complex antitrust litigation. She is a Fellow of the National Civil Justice Institute, Vice Chair of the Pricing Conduct Committee of the American Bar Association Antitrust Law Section, the Secretary of the Committee for

the Committee to Support the Antitrust Laws. She also serves on the Executive Committee of the Public Justice Foundation. She is a frequent speaker on topics involving class actions and expert witnesses. Ms. Elman holds a B.A. *cum laude* and an M.P.H. from Columbia University, and a J.D. *cum laude* from the University of Pittsburgh School of Law.

Misty A. Farris is senior counsel and an appellate attorney with Dean Omar Branham & Shirley in Dallas. She has spent more than 25 years litigating asbestos, pharmaceutical, and medical device cases for plaintiffs. She has also worked as a teacher, as a minister, and at a home for the developmentally and physically disabled. Ms. Farris received her B.A. from the University of Houston and her J.D. from the University of Texas School of Law. She also holds an M.Div. degree, *summa cum laude*, from the Southern Methodist University Perkins School of Theology. She is a Fellow of the National Civil Justice Institute, and a member of the American Association for Justice, the Texas Trial Lawyers Association, and Public Justice (of which she was a Trial Lawyer of the Year in 2006).

Celene Humphries is board certified in appellate litigation, and she focuses her practice on representing individual plaintiffs and their families in personal injury and products liability appeals around the country, including the United States Supreme Court. She has been an appellate specialist for more than 30 years and has been lead or sole counsel in more than 300 appeals. She has also tried almost 100 cases as appellate counsel, arguing critical legal issues before and during trial.

Lucy Inman, a Senior Counsel at Milberg's Raleigh, NC, office, recently returned to private practice after serving for more than a dozen years as a trial and appellate judge. She concentrates her practice in appellate and major motions in class-action and individual cases on behalf of consumers, employees, and municipalities. From 2015 through 2022, Judge Inman served on the North Carolina Court of Appeals, where she heard more than 1,500 appeals and authored more than 450 opinions, of which less than three percent were reversed. From 2010 through 2014, Judge Inman served as a Superior Court judge in North Carolina. She rendered thousands of decisions as a trial judge; seven were reversed on appeal. Before joining the bench, Judge Inman practiced complex civil litigation for 18 years, first in California and then in North Carolina. Judge Inman serves on the Judicial Independence Committee of the National Association of Women Judges and is a member of the Council of Appellate Lawyers within the American Bar Association's Judicial Division. She has presented continuing education programs for judges and attorneys on topics including writing, professional ethics, trial and appellate practice, and the connection between self-care and a healthy work environment. Judge Inman earned a degree in English from NC State University in 1984 and a law degree from The University of North Carolina School of Law at Chapel Hill in 1990.

Michelle L. Kranz is a native of Springfield, Ohio. She is a 1993 graduate of the University of Toledo College of Law and a 1990 cum laude graduate of Miami University. She joined the firm immediately upon graduation from law school and has been a partner since 1998. She focuses her practice in the areas of national pharmaceutical and product liability mass torts and personal injury. Over her career, she has been appointed to numerous MDL leadership teams and most recently was appointed to the Plaintiff's Executive Committee involving the East Palestine train derailment. Michelle serves on the Board of Trustees of the National Civil Justice Institute and is the current President of the Ohio State Bar Association. She also remains an active member of the Toledo Bar Association and is a Sustaining Fellow of the Toledo Bar Foundation. Michelle served as the President of the Toledo Bar Association from 2015-2016. She is a member of the Toledo Bar Association, the Ohio

State Bar Association, the Ohio State Bar Foundation, the American Association for Justice and the Ohio Association for Justice.

Roger L. Mandel is a business litigation and class-action attorney at the Jeeves Mandel Law Group in Dallas-Ft. Worth, where he is chair of the firm's class action practice. He has successfully represented consumers and small businesses in class actions for almost 35 years. He has tried numerous cases, including one of only two cases known to have been tried to a jury in Texas state court. He is Board Certified in Civil Appellate Law by the Texas Board of Legal Specialization and has briefed and argued appeals in the majority of the federal courts of appeals and the Texas Supreme Court. He received his B.B.A (with High Honors) and his J.D. (with Honors) degrees from the University of Texas at Austin. Roger currently sits on the Board of Directors of the Public Justice Foundation, where he is a new member of the Executive Committee, and the Dallas Trial Lawyers Association, where he is a past president. He is a Fellow of the National Civil Justice Institute, the Texas Bar Foundation, and the Dallas Bar Association Foundation. He is also a member of the American Association of Justice, where he served as a Co-Chair of the Class Action Litigation Group, and the Texas Trial Lawyers Association, where he formerly served on the board.

Peggy Wedgworth is a partner with Milberg Coleman Bryson Phillips Grossman, PLLC, in New York. She is a senior partner and Chair of the firm's Antitrust Practice Group, and Co-Chair of the Diversity, Equity, and Inclusion (DEI) Committee and Chair of the Pro Bono Committee. She started her career as an Assistant District Attorney in Brooklyn, New York. Since leaving the public sector, she has represented victims in antitrust, securities, commodities, and whistleblower matters, and is a Super Lawyer in New York, New York since 2015. She currently serves as lead counsel for a nationwide class of plaintiff car dealerships who allege antitrust violations in data management systems. She also represents consumers in the "Google Play" antitrust litigation, farmers in the John Deere right to repair antitrust litigation and consumers in the hard disk drive antitrust litigation. She has tried numerous cases, including a tobacco case in the *Engle* progeny litigation. She is a member of the New York State Bar Association's Antitrust Committee, the American Association for Justice (AAJ), the Committee to Support the Antitrust Laws (COSAL) and a trustee and treasurer of NCJI. She holds a B.A. degree from Auburn University and a J.D. degree from the University of Alabama School of Law.

David Wirtes is a member of Cunningham Bounds, LLC, of Mobile, Alabama, where he focuses on strategic planning, motion practice, and appeals. He is licensed in all state and federal courts in Alabama and Mississippi, the Fifth and Eleventh Circuit Courts of Appeals, and the United States Supreme Court. He is active in numerous professional organizations including Treasurer and Trustee of The National Civil Justice Institute, Senior Fellow, Litigation Counsel of America, a founder and former Executive Director of the American Institute of Appellate Practice, member of the Amicus Curiae Committee of the American Association for Justice and longtime member and former Chairman of the Amicus Curiae Committee of the Alabama Association for Justice. Dave also presently serves an editor of *The Alabama Lawyer* and editor of *The Alabama Association for Justice Journal.* He is a long-time member of the Alabama Supreme Court's Standing Committee on the Rules of Appellate Procedure, has served on that Court's Standing Committee on the Rules of Civil Procedure, and presently serves as a member of that Court's Task Force on Privacy and Confidentiality in Court Records. Mr. Wirtes has published numerous law review and journal articles and is a frequent lecturer at continuing legal education seminars, having spoken on such topics as Defeating Unlawful Discrimination in Jury Selection, Appellate Practice, Perfecting the Appeal, HIPAA and Ex parte Contacts, Recent Updates on the Law, Electronic Discovery, Arbitration, and Governmental Immunity.

2023 Judicial Participants

ALABAMA
Hon. William Sellers, Supreme Court

ARIZONA
Hon. Philip G. Espinosa, Court of Appeals, Div. 2
Hon. Ann Scott Timmer, Supreme Court

COLORADO
Hon. Terry Fox, Court of Appeals
Hon. Roberto Ramirez, 17th Judicial District; U.S. Air Force Court of Criminal Appeals (D.C.)

DISTRICT OF COLUMBIA
Hon. Herbert B. Dixon Jr., Superior Court

FLORIDA
Hon. Jay Cohen, Sixth District Court of Appeal
Hon. Alan Forst, Fourth District Court of Appeal
Hon. Joseph Lewis, First District Court of Appeal
Hon. Sandra Perlman, Seventeenth Judicial Circuit (ret.)

GEORGIA
Hon. Anne Elizabeth Barnes, Court of Appeals
Hon. Todd Markle, Court of Appeals
Hon. Christopher J. McFadden, Court of Appeals

HAWAI'I
Hon. Todd Weldon Eddins, Supreme Court
Hon. Sabrina Shizue McKenna, Supreme Court
Hon. Clyde J. Wadsworth, Court of Appeals

ILLINOIS
Hon. Mathias W. Delort, Appellate Court, First District
Hon. Sharon O. Johnson, Appellate Court
Hon. Bertina Elnora Lampkin, Appellate Court, First District

IOWA
Hon. Edward Mansfield, Supreme Court

KENTUCKY
Hon. Debra Hembree Lambert, Supreme Court

LOUISIANA
Hon. Roland L. Belsome, Fourth Circuit Court of Appeal
Hon. Paula A. Brown, Fourth Circuit Court of Appeal
Hon. Lee V. Faulkner, 24th Judicial District Court
Hon. John Michael Guidry, First Circuit Court of Appeal
Hon. Marc E. Johnson, Fifth Circuit Court of Appeal
Hon. Rachael D. Johnson, Fourth Circuit Court of Appeal
Hon. John Jackson Molaison Jr., Fifth Circuit Court of Appeal

MARYLAND
Hon. Dan Friedman, Appellate Court of Maryland
Hon. Joseph M. Getty, Supreme Court of Maryland

MASSACHUSETTS
Hon. Paul D. Wilson, Superior Court (ret.)

MICHIGAN
Hon. Thomas C. Cameron, Court of Appeals
Hon. Elizabeth L. Gleicher, Court of Appeals
Hon. Dennis Beryl Leiber, 17th Judicial Circuit
Hon. Sima G. Patel, Court of Appeals
Hon. Elizabeth M. Welch, Supreme Court

MINNESOTA
Hon. Jill Flaskamp Halbrooks, Court of Appeals
Hon. Carol Ann Hooten, Court of Appeals

MISSISSIPPI
Hon. Thomas Kenneth Griffis Jr., Supreme Court
Hon. James Warren Kitchens, Supreme Court
Hon. David Neil McCarty, Court of Appeals
Hon. Deborah A. McDonald, Court of Appeals
Hon. Joel Smith, Court of Appeals

MISSOURI

Hon. Kelly C. Broniec, Court of Appeals, Eastern District

Hon. Renee D. Hardin-Tammons, Court of Appeals, Eastern District

Hon. Mary W. Sheffield, Court of Appeals, Southern District

Hon. W. Douglas Thomson, Court of Appeals

NEW HAMPSHIRE

Hon. James P. Bassett, Supreme Court

NEW YORK

Hon. Linda Christopher, Supreme Court, Appellate Division, Second Department

Hon. Joseph J. Maltese, Supreme Court, Appellate Division, Second Department

Hon. Jenny Rivera, Court of Appeals

NORTH CAROLINA

Hon. Anthony Waldo Brown Sr., Seventh District Court

Hon. John M. Tyson, Court of Appeals

OHIO

Hon. Anita Laster Mays, Court of Appeals, Eighth District

Hon. Mary Jane Trapp, Court of Appeals, Eleventh District

OKLAHOMA

Hon. Robert Bell, Court of Civil Appeals

Hon. David B. Lewis, Court of Criminal Appeals

Hon. Barbara Swinton, Court of Civil Appeals

Hon. Jane P. Wiseman, Court of Civil Appeals

OREGON

Hon. Rex Armstrong, Court of Appeals

Hon. Darleen Ortega, Court of Appeals

Hon. Ulanda L. Watkins, Circuit Court of Clackamas County

PENNSYLVANIA

Hon. Paula A. Patrick, Court of Common Pleas

Hon. Sierra Thomas-Street, Court of Common Pleas

Hon. Debra Todd, Supreme Court

SOUTH CAROLINA

Hon. Clifton B. Newman, Circuit Court

TENNESSEE

Hon. Sharon Lee, Supreme Court

TEXAS

Hon. Peter M. Kelly, First Court of Appeals

Hon. Lionel Aron Pena Jr., Thirteenth Court of Appeals

Hon. Liza Ann Rodriguez, Fourth Court of Appeals

Hon. Beth Watkins, Fourth Court of Appeals

Hon. James T. Worthen, Twelfth Court of Appeals

Hon. Jerry Zimmerer, Thirteenth Court of Appeals

UTAH

Hon. Michele M. Christiansen Forster, Court of Appeals

Hon. David N. Mortensen, Court of Appeals

Hon. Amy J. Oliver, Court of Appeals

Hon. Gregory K. Orme, Court of Appeals

VIRGINIA

Hon. Lisa M. Lorish, Court of Appeals

Hon. William C. Mims, Supreme Court (ret.)

WASHINGTON

Hon. Ian S. Birk, Court of Appeals

Hon. Susan Owens, Supreme Court

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NCJI is dedicated to the cause of promoting access to civil justice through its programs and publications, which give a balanced view of issues affecting the U.S. civil justice system. Since 1956, the Institute has promoted open, ongoing dialogue among the academic, judicial, and legal communities on issues critical to protecting the right to trial by jury. To bring positive changes to American jurisprudence, NCJI promotes and organizes:

Annual Forum for State Appellate Court Judges—Since 1992, NCJI's annual Judges Forum has brought together state appellate judges, legal scholars, attorneys, and policymakers to discuss major issues affecting the U.S. civil justice system. Lauded by attending judges as "one of the best seminars available to jurists in the country," the Forum is unique in its mission to educate state judiciaries on the vital role of the U.S. civil justice system, and state courts in particular, in protecting citizens' rights.

Academic Symposia—The Institute holds periodic Academic Symposia in conjunction with law schools in an effort to produce new empirical research supportive of the civil justice system. The academic papers prepared for the symposia are published in the co-sponsoring law schools' Law Reviews. Recent symposia include The Future of Substantive Due Process: What Are the Stakes? (SMU 2023), The Internet and the Law: Legal Challenges in the New Digital Age (Hastings 2021); Class Actions, Mass Torts and MDLs: The Next 50 Years (Lewis & Clark 2019); The Jury Trial and Remedy Guarantees (OREGON LAW REVIEW, Oregon Jury Project 2017); The Demise of the Grand Bargain (Rutgers, Northeastern 2016); and The "War" on the Civil Justice System (Emory 2015).

Appellate Advocacy Award—This award recognizes excellence in appellate advocacy in America, and is given to legal practitioners who have been instrumental in securing a final appellate court decision with significant impact on the right to trial by jury, public health and safety, consumer rights, civil rights, and access to civil justice.

Civil Justice Scholarship Award—This award for legal academics recognizes current scholarly research and writing focused on the U.S. civil justice system, including access to and the benefits of the civil justice system, and the right to trial by jury in civil cases.

Twiggs Professionalism Lecture—Founded in 2010 to honor former Institute President Howard Twiggs, this annual lecture series, held during the AAJ Annual Convention, educates attorneys on ethics and professionalism. These lectures are delivered by prominent attorneys, law professors and jurists, and qualify for ethics and professionalism CLE credit.

Papers of the Institute—NCJI has an expansive library of research resulting from its Judges Forums, research grants, Academic Symposia, and other sources. This research is available via NCJI's website. NCJI Fellows, judges, courts, and academics receive complimentary copies of NCJI's publications.

Alliance with Academics—The Institute has developed strong relationships within the legal academic community. Currently, 89 Academic Fellows keep NCJI abreast of emerging legal trends.

NCJI Fellows—Attorneys who care about preserving the civil justice system are invited to join NCJI's important dialogue with judges and legal academics by becoming an NCJI Fellow. We offer several affordable, tax-deductible membership levels, with monthly options available.

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Papers of the National Civil Justice Institute

Reports of the Annual Forums for State Appellate Court Judges

(All Forum Reports or academic papers are available for download at www.ncji.org.)

2023 • EXPERT TESTIMONY: JUDGES, SCIENCE, AND TRIAL BY JURY

Michael Saks, Arizona State University, *Expert Evidence: Evolution of Rules and Practices*

Anne Bloom, UC Berkeley School of Law, *Judicial Gatekeeping, Expert Testimony, and the Future of American Courts*

2022 • CIVIL JUSTICE IN AMERICA: RESPONSIBILITY TO THE PUBLIC

Stephan Landsman, DePaul College of Law, Civil Justice and Accountability: The Challenge of Grave Corporate Misconduct

Stephen Daniels, American Bar Foundation, *The Rule of Law is Fragile: The Importance of Legitimacy and Acces*s

2021 • JURIES, VOIR DIRE, *BATSON*, AND BEYOND: ACHIEVING FAIRNESS IN CIVIL JURY TRIALS

Valerie P. Hans, Cornell Law School, *Challenges to Achieving Fairness in Civil Jury Selection*

Shari Seidman Diamond, Northwestern Pritzker School of Law, *Judicial Rulemaking for Jury Trial Fairness*

2020 • DANGEROUS SECRETS: CONFRONTING CONFIDENTIALITY IN OUR PUBLIC COURTS

Dustin B. Benham, Texas Tech University School of Law, *Foundational and Contemporary Court Secrecy Issue*s

Sergio J. Campos, University of Miami School of Law, *Confidentiality in the Courts: Privacy Protection or Prior Restraint?*

2019 • AGGREGATE LITIGATION IN STATE COURTS: PRESERVING VITAL MECHANISMS

D. Theodore Rave, University of Houston Law Center, *Federal Trends Affecting Aggregate Litigation in the State Courts*

Myriam Gilles, Cardozo Law School, Yeshiva University, *Rethinking Multijurisdictional Coordination of Complex Mass Torts*

2018 • STATE COURT PROTECTION OF INDIVIDUAL CONSTITUTIONAL RIGHTS

Robert F. Williams, Rutgers Law School, *State Constitutional Protection of Civil Litigation*

Justin L. Long, Wayne State University School of Law, *State Constitutional Structures Affect Access to Civil Justice*

2017 • JURISDICTION: DEFINING STATE COURTS' AUTHORITY

Simona Grossi, Loyola Law School, Los Angeles, *Personal Jurisdiction: Origins, Principles, and Practice*

Adam Steinman, The University of Alabama School of Law, *State Court Jurisdiction in the 21st Century*

2016 • WHO WILL WRITE YOUR RULES—YOUR STATE COURT OR THE FEDERAL JUDICIARY?

Stephen B. Burbank, University of Pennsylvania Law School and Sean Farhang, University of California, Berkeley, School of Law, *Rulemaking and the Counterrevolution Against Federal Litigation: Discover*y

Stephen Subrin, Northeastern University School of Law and Thomas Main, University of Nevada, Las Vegas, Boyd College of Law, *Should State Courts Follow the Federal System in Court Rulemaking and Procedural Practice?*

2015 • JUDICIAL TRANSPARENCY AND THE RULE OF LAW

Judith Resnik, Yale Law School, *Contracting Transparency: Public Courts, Privatizing Processes, and Democratic Practices*

Nancy Marder, IIT Chicago-Kent College of Law, *Judicial Transparency in the Twenty-First Century*.

2014 • FORCED ARBITRATION AND THE FATE OF THE 7TH AMENDMENT: THE CORE OF AMERICA'S LEGAL SYSTEM AT STAKE?

Myriam Gilles, Cardozo Law School, Yeshiva University, *The Demise of Deterrence: Mandatory Arbitration and the "Litigation Reform" Movement*

Richard Frankel, Drexel University School of Law, *State Court Authority Regarding Forced Arbitration After* Concepcion

2013 • THE WAR ON THE JUDICIARY: CAN INDEPENDENT JUDGING SURVIVE?

Charles Geyh, Indiana University Maurer School of Law, *The Political Transformation of the American Judiciary*

Amanda Frost, American University, Washington College of Law, *Honoring Your Oath in Political Times*

2012 • JUSTICE ISN'T FREE: THE COURT FUNDING CRISIS AND ITS REMEDIES

John T. Broderick, University of New Hampshire School of Law, and Lawrence Friedman, *New England School of Law, State Courts and Public Justice: New Challenges, New Choices*

J. Clark Kelso, McGeorge School of Law, *Strategies for Responding to the Budget Crisis: From Leverage to Leadership*

2011 • THE JURY TRIAL IMPLOSION: THE DECLINE OF TRIAL BY JURY AND ITS SIGNIFICANCE FOR APPELLATE COURTS

Marc Galanter, University of Wisconsin Law School, and Angela Frozena, *The Continuing Decline of Civil Trials in American Courts*

Stephan Landsman, DePaul University College of Law, *The Impact of the Vanishing Jury Trial on Participatory Democracy*

Hon. William G. Young, Massachusetts District Court, *Federal Courts Nurturing Democracy*

2010 • BACK TO THE FUTURE: PLEADING AGAIN IN THE AGE OF DICKENS?

A. Benjamin Spencer, Washington and Lee University School of Law, *Pleading in State Courts after Twombly and Iqbal*

Stephen B. Burbank, University of Pennsylvania Law School, Pleading, *Access to Justice, and the Distribution of Power*

2009 • PREEMPTION: WILL TRADITIONAL STATE AUTHORITY SURVIVE?

Mary J. Davis, University of Kentucky College of Law, *Is the "Presumption against Preemption" Still Valid?*

Thomas O. McGarity, University of Texas School of Law, *When Does State Law Trigger Preemption Issues?*

2008 • SUMMARY JUDGMENT ON THE RISE: IS JUSTICE FALLING?

Arthur R. Miller, New York University School of Law, *The Ascent of Summary Judgment and Its Consequences for State Courts and State Law*

Georgene M. Vairo, Loyola Law School, Los Angeles, *Defending against Summary Justice: The Role of the Appellate Courts*

2007 • THE LEAST DANGEROUS BUT MOST VULNERABLE BRANCH: JUDICIAL INDEPENDENCE AND THE RIGHTS OF CITIZENS

Penny J. White, University of Tennessee College of Law, *Judicial Independence in the Aftermath of Republican Party of* Minnesota v. White

Sherrilyn Ifill, University of Maryland School of Law, *Rebuilding and Strengthening Support for an Independent Judiciary*

2006 • THE WHOLE TRUTH? EXPERTS, EVIDENCE, AND THE BLINDFOLDING OF THE JURY

Joseph Sanders, University of Houston Law Center, Daubert, Frye, *and the States: Thoughts on the Choice of a Standard*

Nicole Waters, National Center for State Courts, *Standing Guard at the Jury's Gate:* Daubert's *Impact on the State Courts*

2005 • THE RULE(S) OF LAW: ELECTRONIC DISCOVERY AND THE CHALLENGE OF RULEMAKING IN THE STATE COURTS

Discussions include state court approaches to rule making, legislative encroachments into that judicial power, the impact of federal rules on state court rules, how state courts can and have adapted to the use of electronic information, whether there should be differences in handling the discovery of electronic information versus traditional files, and whether state courts should adopt new proposed federal rules on e-discovery.

2004 • STILL COEQUAL? STATE COURTS, LEGISLATURES, AND THE SEPARATION OF POWERS

Discussions include state court responses to legislative encroachment, deference state courts should give legislative findings, the relationship between state courts and legislatures, judicial approaches to separation of powers issues, the funding of the courts, the decline of lawyers in legislatures, the role of courts and judges in democracy, and how protecting judicial power can protect citizen rights.

2003 • THE PRIVATIZATION OF JUSTICE? MANDATORY ARBITRATION AND THE STATE COURTS

Discussions include the growing rise of binding arbitration clauses in contracts, preemption of state law via the Federal Arbitration Act (FAA), standards for judging the waiver of the right to trial by jury, the supposed national policy favoring arbitration, and resisting the FAA's encroachment on state law.

2002 • STATE COURTS AND FEDERAL AUTHORITY: A THREAT TO JUDICIAL INDEPENDENCE?

Discussions include efforts by federal and state courts to usurp the power of state court through removal, preemption, etc., the ability of state courts to handle class actions and other complex litigation, the constitutional authority of state courts, and the relationship between state courts and legislatures and federal courts.

2001 • THE JURY AS FACT FINDER AND COMMUNITY PRESENCE IN CIVIL JUSTICE

Discussions include the behavior and reliability of juries, empirical studies of juries, efforts to blindfold the jury, the history of the civil jury in Britain and America, the treatment of juries by appellate courts, how juries judge cases in comparison to other fact-finders, and possible future approaches to trial by jury in the United States.

2000 • OPEN COURTS WITH SEALED FILES: SECRECY'S IMPACT ON AMERICAN JUSTICE

Discussions include the effects of secrecy on the rights of individuals, the forms that secrecy takes in the courts, ethical issues affecting lawyers agreeing to secret settlements, the role of the news media in the debate over secrecy, the tension between confidentiality proponents and public access advocates, and the approaches taken by various judges when confronted with secrecy requests.

1999 • CONTROVERSIES SURROUNDING DISCOVERY AND ITS EFFECT ON THE COURTS

Discussions include the existing empirical research on the operation of civil discovery; the contrast between the research findings and the myths about discovery that have circulated; and whether or not the recent changes to the federal courts' discovery rules advance the purpose of discovery.

1998 • ASSAULTS ON THE JUDICIARY: ATTACKING THE "GREAT BULWARK OF PUBLIC LIBERTY"

Discussions include threats to judicial independence through politically motivated attacks on the courts and on individual judges as well as through legislative action to restrict the courts that may violate constitutional guarantees, and possible responses by judges, judicial institutions, the organized bar, and citizens.

1997 • SCIENTIFIC EVIDENCE IN THE COURTS: CONCEPTS AND CONTROVERSIES

Discussions include the background of the controversy over scientific evidence; issues, assumptions, and models in judging scientific disputes; and the applicability of the *Daubert* decision's "reliability threshold" under state law analogous to Rule 702 of the Federal Rules of Evidence.

1996 • POSSIBLE STATE COURT RESPONSES TO AMERICAN LAW INSTITUTE'S PROPOSED RESTATEMENT OF PRODUCTS LIABILITY

Discussions include the workings of the American Law Institute's (ALI) restatement process; a look at provisions of the proposed restatement on products liability and academic responses to them; the relationship of its proposals to the law of negligence and warranty; and possible judicial responses to suggestions that the ALI's recommendations be adopted by the state courts.

1995 • PRESERVING ACCESS TO JUSTICE: EFFECTS ON STATE COURTS OF THE PROPOSED LONG RANGE PLAN FOR FEDERAL COURTS

Discussions include the constitutionality of the federal courts' plan to shift caseloads to state courts without adequate funding support, as well as the impact on access to justice of the proposed plan.

1993 • PRESERVING THE INDEPENDENCE OF THE JUDICIARY

Discussions include the impact on judicial independence of judicial selection processes and resources available to the judiciary.

1992 • PROTECTING INDIVIDUAL RIGHTS: THE ROLE OF STATE CONSTITUTIONALISM

Discussions include the renewal of state constitutionalism on the issues of privacy, search and seizure, and speech, among others. Also discussed was the role of the trial bar and academics in this renewal.

Law Reviews from Academic Symposia

2023 • THE FUTURE OF SUBSTANTIVE DUE PROCESS: WHAT ARE THE STAKES?, SMU Law Journal, Vol. 76, No. 3

2021 • THE INTERNET AND THE LAW: LEGAL CHALLENGES IN THE NEW DIGITAL AGE, Hastings Law Journal, Vol. 73, No. 5

2019 • CLASS ACTIONS, MASS TORTS, AND MDLS: THE NEXT 50 YEARS, Lewis & Clark Law Review, Vol. 24, No. 2

2017 • THE JURY TRIAL AND REMEDY GUARANTEES: FUNDAMENTAL RIGHTS OR PAPER TIGERS?, Oregon Law Review, Vol. 96, No. 2

2016 • THE DEMISE OF THE GRAND BARGAIN: COMPENSATION FOR INJURED WORKERS IN THE 21ST CENTURY, Rutgers University Law Review, Vol. 69, No. 3

2015 • THE "WAR" ON THE U.S. CIVIL JUSTICE SYSTEM, Emory Law Journal, Vol. 65, No. 6

2005 • MEDICAL MALPRACTICE, Vanderbilt Law Review, Vol. 59, No. 4

2002 • MANDATORY ARBITRATION, Law and Contemporary Problems, Vol. 67, No. 1 & 2, Duke University School of Law

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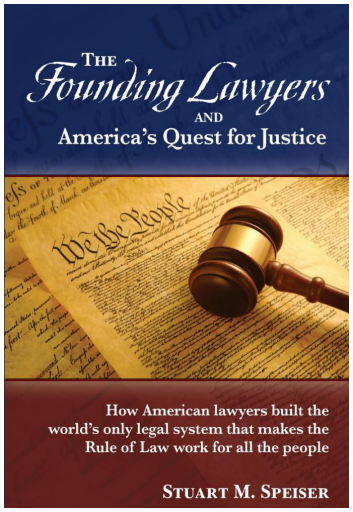

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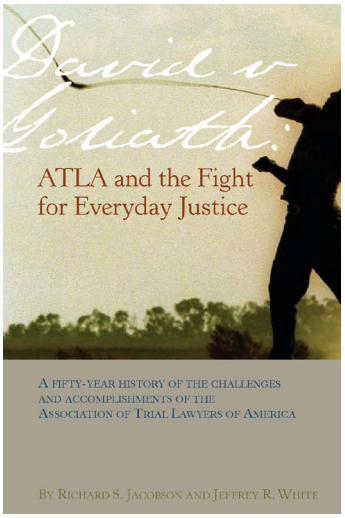

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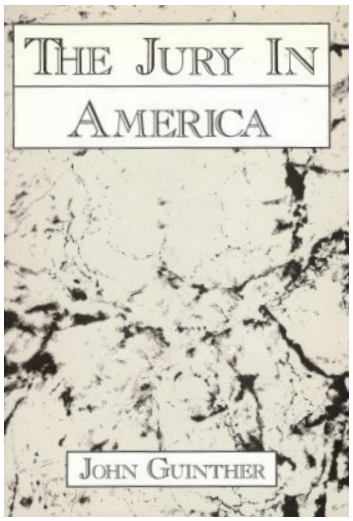

The Jury In America
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