THE DIFFERENCE A YEAR MAKES: THE ADMISSIBILITY OF EXPERT OPINION TESTIMONY UNDER THE 2023 AMENDMENT TO FEDERAL RULE OF EVIDENCE 702

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INTRODUCTION

Rule 702 of the Federal Rules of Evidence governs the admissibility of expert opinion testimony in federal court.[1] Indeed, the admissibility of expert opinion testimony is a key driver of the outcome in a multitude of criminal and civil proceedings. In the absence of admissible DNA or fingerprint evidence, a prosecutor may make an attractive plea offer. Without an admissible expert opinion, a plaintiff in a toxic tort or products liability action will be unable to survive a defense motion for summary judgment. Thus, the standard for admitting expert opinion testimony remains of critical importance to the resolution of both criminal and civil cases in federal court. Rule 702 has seen several updates and modifications since it was first enacted, starting with the Supreme Court's landmark interpretation of the Rule in 1993 in *Daubert v. Merrell Dow Pharmaceuticals, Inc.*[2] In that case, the Supreme Court cemented the trial judge's role as "gatekeeper" to ensure that unreliable expert opinion testimony is not presented to a lay jury.[3] But Rule 702 has been amended twice since the *Daubert* opinion to clarify and even to expand the role of the trial judge in regulating the admissibility of expert opinion testimony, most recently on December 1, 2023.[4]

Rule 702, as recently amended, contains several threshold admissibility requirements that the proponent of an expert witness must demonstrate to the court by a preponderance of the evidence before presenting the expert to the jury.[5] Our review of every published federal district court opinion interpreting these important admissibility requirements in the year since Rule 702 was amended reveals that the amendment has made great strides in ensuring that unreliable expert opinion testimony does not reach the jury. Some federal courts have applied the new Rule in its first year carefully and appropriately.[6] Still, there is further progress to be made in applying Rule 702 as intended to ensure that jurors are shielded from unreliable expert opinion testimony that they lack the experience to evaluate effectively. Many litigants continue to rely upon outdated case law, such as the decades-old *Daubert* opinion itself, to support

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1 FED. R. EVID. 702.

2 509 U.S. 579 (1993).

3 *Id.* at 597.

4 FED. R. EVID. 702.

5 *See id.* (requiring that the proponent of an expert demonstrate that admissibility requirements are "more likely than not" satisfied).

6 *See infra* note 134 and accompanying text.

the admissibility of expert opinion testimony.[7] The *Daubert* Court sent some mixed signals about a trial judge's duty to police "shaky" expert testimony, and this dicta has been deployed to allow testimony through the gate that is inadmissible under current Rule 702.[8] And some federal courts continue to cite precedent that predates one or both of the amendments to Federal Rule of Evidence 702 since *Daubert* was decided to support admissibility determinations that are inconsistent with its current mandate. Relying upon and applying amended Rule 702 faithfully is crucial to the goals of the Federal Rules of Evidence to "ascertain[] the truth" and "secur[e] a just determination" in complex cases in federal court.[9]

A hypothetical products liability action like many routinely brought in federal court can help to illustrate how a court's reliance on outdated precedent may undermine the operation of Rule 702. Assume that a homeowner uses defoliant in his yard consistently over a two-year period. A year later, the homeowner is tragically diagnosed with cancer. He sues the manufacturer of the defoliant, claiming that the defoliant caused his cancer diagnosis. To succeed, the homeowner must prove, among other things, that the defoliant more likely than not causes the cancer from which he suffers. The plaintiff homeowner will need admissible testimony from a qualified expert to establish this crucial element of causation. In support of a motion for summary judgment, the defendant manufacturer moves to exclude the testimony of the plaintiff's expert, a highly qualified cancer specialist, claiming that it fails to satisfy Rule 702 standards. The plaintiff argues that the expert's testimony is admissible because the expert relied on three peer-reviewed studies concluding that long-term exposure to the defoliant raises the risk of developing the cancer from which the plaintiff suffers. In response, the defendant manufacturer shows that four more recent studies found no causative link, that the FDA has found the defoliant to be safe for consistent human exposure, and that the three studies upon which the plaintiff's expert relied could not be replicated.

Under these circumstances, the plaintiff could well rely on the Supreme Court's analysis in the antiquated *Daubert* decision to get a favorable ruling on admissibility. The Court in

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7 *See infra* note 171 and accompanying text.

8 509 U.S. at 596 (stating that the remedy for "shaky but admissible" expert opinion testimony is cross-examination).

9 FED. R. EVID. 102.

Daubert required only that an expert utilize a reliable *methodology* in forming an opinion for trial.[10] The plaintiff's expert in this hypothetical scenario has certainly done so by relying on peer-reviewed studies to form an opinion about the cancer-causing effects of the defoliant. The plaintiff could highlight the *Daubert* Court's emphasis on the "liberal thrust" of the Federal Rules of Evidence and the Rules' general relaxation of the "traditional barriers to 'opinion' testimony" in his quest to have his expert's opinion admitted.[11] The plaintiff could also argue that the *Daubert* Court rejected an admissibility standard requiring an expert's opinion to be "generally accepted" as too "austere."[12] While conceding that the causation expert's work would not be universally accepted in her field, the plaintiff could argue that *Daubert* instructs trial judges to examine an expert's methodology, and not the *application* of that methodology or the expert's ultimate conclusions.[13] Finally, the plaintiff would argue that any defects in the expert's testimony go to the weight to be given to the opinion, and not to its admissibility, because the *Daubert* Court instructed: "Vigorous cross-examination, presentation of contrary evidence, and careful instruction on the burden of proof are the traditional and appropriate means of attacking shaky but admissible evidence."[14]

All of those arguments may have helped a plaintiff such as this one obtain a favorable ruling on admissibility from the date of the *Daubert* decision in 1993 until December 1, 2000. On that date, Rule 702 of the Federal Rules of Evidence was amended for the first time to codify the *Daubert* requirement of a reliable methodology (a new Rule 702(c)), but also to add two *new* requirements for the admissibility of expert opinion testimony not found in the *Daubert* decision: (1) a new Rule 702(b), requiring an expert's opinion to be based on sufficient facts or data—i.e., essentially a requirement that an expert perform sufficient homework to credibly support her opinion; and

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10 509 U.S. at 595.

11 *Id.* at 588 (quoting Beech Aircraft Corp. v. Rainey, 488 U.S. 153, 169 (1988)).

12 *Id.* at 589 (rejecting the "general acceptance" standard set forth in *Frye v. United States*, 293 F. 1013 (D.C. Cir. 1923)).

13 *Id.* at 595 ("The focus, of course, must be solely on principles and methodology, not on the conclusions that they generate.").

14 *Id.* at 596.

(2) a new Rule 702(d), requiring that an expert reliably *apply* her methodology to the facts of the particular case.[15]

When these Rule 702 requirements are applied to the plaintiff's causation expert in the defoliant litigation, the chances of admission are drastically reduced. First, it is unlikely that the plaintiff's expert did adequate homework where she relied only on cherry-picked, older studies and failed to consider other, more recent ones. Second, the plaintiff's causation expert failed to apply her methodology (relying on studies) reliably to the facts of the defoliant case because her ultimate conclusion of causation cannot be supported by the conflicting and more recent studies. Unlike *Daubert,* Rule 702, as amended in 2000, required a court to evaluate an expert's conclusion, as well as her methodology.[16] Finally, as the Advisory Committee Note to the 2000 amendment made clear, these Rule 702 admissibility requirements must be established by the proponent of an expert opinion by a preponderance of the evidence.[17] It is not enough that a reasonable *juror* could find the opinion to be reliable. The trial court must find it to be reliable before granting jurors access to the opinion. In light of the recent studies showing no causative connection between the defoliant and the plaintiff's cancer, a trial court would be hard pressed to admit the plaintiff's expert in our hypothetical case, after properly applying these updated standards.

The 2000 amendment to Federal Rule of Evidence 702 recognized that lay jurors may be improperly swayed by so-called "expert" witnesses who overwhelm them with sterling credentials and scientific jargon, but who may have cut corners or made unsupported assumptions on the way to their conclusions. Accordingly, the 2000 amendment to Rule 702 required trial judges to truly mind the gate: to find by a preponderance of the evidence that an expert has relied on sufficient facts or

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15 The 2000 amendment to Rule 702 altered the provision as follows:

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

RICHARD D. FRIEDMAN & JOSHUA DEAHL, FEDERAL RULES OF EVIDENCE: TEXT AND HISTORY 286 (2015) (detailing 2000 amendment with added material underscored).

16 FED. R. EVID. 702(3), 529 U.S. 1189 (2000) (amended 2011).

17 FED. R. EVID. 702 advisory committee's note to 2000 amendment.

data and a reliable methodology that has been reliably applied before unleashing the expert onto the jury.[18] Yet, despite the important differences between the text of amended Rule 702 and the *Daubert* decision, Rule 702 has become synonymous with *Daubert.* Pretrial hearings on the reliability of expert testimony are widely known as *Daubert* hearings.[19] And many federal courts remained steeped in *Daubert* dicta even after the 2000 amendment to Rule 702 and missed the memo on the enhanced role of the trial judge as gatekeeper.[20] Many federal courts continued to hold that issues concerning the foundation for and reliability of expert opinion testimony were questions of weight to be grappled with by the jury.[21] Furthermore, when it came to forensic feature comparison expertise long accepted in federal court to support criminal convictions, such as fingerprint analysis, many federal courts failed to monitor gross expert overstatement about the results that could be promised by such disciplines. Federal courts permitted prosecutorial experts to make misleading claims of a "match" or of a "zero percent error rate" in criminal trials.[22]

Beginning in 2016, the Judicial Conference Advisory Committee on Evidence Rules began work on a second proposed amendment to Rule 702 that was intended to restore order by emphasizing the crucial role of the trial judge as the true gatekeeper against unreliable expert opinion testimony. The 2023 amendment to Rule 702 was the result of many years of study and deliberation and was intended to accomplish three important goals. First, the 2023 amendment sought to establish expressly in rule text that the reliability requirements of Rule 702

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18 *Id.*

19 *See, e.g.*, United States v. Shipp, 422 F. Supp. 3d 762, 769 (E.D.N.Y. 2019) (addressing the defendant's request for a "*Daubert* hearing").

20 *See, e.g.*, Mark A. Behrens & Andrew J. Trask, *Federal Rule of Evidence 702: A History and Guide to the 2023 Amendments Governing Expert Evidence*, 12 TEX. A&M L. REV. 43, 44 (2024) ("Despite the clear guidance provided by the 2000 amendments, many courts 'continued to apply significantly more lenient standards for expert testimony than Rule 702 permits.'" (quoting David E. Bernstein, *The Misbegotten Judicial Resistance to the* Daubert *Revolution*, 89 NOTRE DAME L. REV. 27, 30 (2013))).

21 *See* David E. Bernstein & Eric G. Lasker, *Defending* Daubert*: It's Time to Amend Federal Rule of Evidence 702*, 57 WM. & MARY L. REV. 1, 25–26 (2015).

22 *See, e.g.*, United States v. Otero, 849 F. Supp. 2d 425, 435, 438 (D.N.J. 2012) (allowing opinion on a ballistics match to a reasonable degree of scientific certainty); United States v. Casey, 928 F. Supp. 2d 397, 399–400 (D.P.R. 2013) (allowing the ballistics expert to testify that he was 100% certain of a match).

must be established by a preponderance of the evidence, thus rejecting case law classifying defects in reliability as matters of weight and not admissibility.[23] Second, the amendment aimed to clarify that trial courts *should* closely assess an expert's conclusions, to ensure that an expert's opinion as expressed at trial reflects a reliable application of a reliable methodology, and to exclude any opinion that overstates or overpromises on what the particular methodology can support.[24] Third and finally, the 2023 amendment sought to require federal courts to take a more careful look at the admissibility of forensic feature comparison testimony—especially testimony presented with a degree of certainty that cannot be supported by the current state of the art in the applicable forensic discipline.[25]

Part I of this Article offers an insider's account of the process and thinking that generated the 2023 amendment to Rule 702. It provides a detailed roadmap to guide proper application of the new provision, as well as insights into the federal rulemaking process. Part II of the Article examines the early returns from the Advisory Committee's 2023 modification to Rule 702, reviewing every published federal district court opinion regarding the Rule 702 reliability requirements in the year since the amendment took effect. It reveals that, although many federal courts have taken the amendment's message to heart and have carefully applied the preponderance standard to Rule 702's threshold admissibility requirements, many others have neglected to follow the evolving demands of Rule 702. Some federal courts continue to cite precedent that predates even the 2000 amendment to Rule 702 to justify admissibility outcomes that are unwarranted under existing law. These courts remain mired in the mixed messages of the now-dated *Daubert* opinion and risk admitting unreliable expert opinion testimony that threatens to alter the outcomes of criminal and civil actions in federal court. Part III of the Article encourages courts and litigants to adhere to the express admissibility requirements now embodied in Federal Rule of Evidence 702 and identifies alternatives for increasing the visibility and uptake of the 2023 amendment, as well as future rule amendments. The Article then briefly concludes.

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23 *See* FED. R. EVID. 702 advisory committee's note to 2023 amendment.

24 *Id.*

25 *Id.*

I
The Long Journey to the 2023 Amendment

The long road to the 2023 amendment to Rule 702 began with a brief phone call. In 2016, the President's Council of Advisors on Science and Technology (PCAST) sponsored a project to review forensic testimony offered in criminal trials in federal and state courts.[26] In connection with that project, its co-chair, Dr. Eric Lander, reached out to the Reporter for the Evidence Advisory Committee to request that the Committee add a new Committee Note to Rule 702, setting forth standards to assure that forensic testimony offered in criminal trials would be valid and would not overstate the conclusions that may be drawn from an essentially subjective analysis.[27] Because, by statute, Advisory Committee Notes may be drafted and published only as an accompaniment to an actual rule amendment, this option for improving the presentation of forensic testimony was not legally viable.[28] Nor could the Committee propose a specious textual change (such as "moving a comma" within Rule 702) as an excuse to append a lengthy Committee Note providing reliability requirements for forensic evidence.[29] Rules Committee policy authorizes Committee Notes that explain and

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26 *See* President's Council of Advisors on Sci. & Tech., Forensic Science in Criminal Courts: Ensuring Scientific Validity of Feature-Comparison Methods (2016) [hereinafter PCAST Report], https://obamawhitehouse.archives.gov/sites/default/files/microsites/ostp/PCAST/pcast_forensic_science_report_final.pdf [https://perma.cc/9BD9-TVR9].

27 *See infra* note 29.

28 28 U.S.C. § 2073(d) (stating that a rules committee's recommendation "shall provide a proposed rule, [and] an explanatory note on the rule").

29 See *Symposium on Forensic Testimony,* Daubert*, and Rule 702*, 86 Fordham L. Rev. 1463, 1523 (2018), for this suggestion:

> DR. LANDER: I'll note PCAST did not recommend changing Rule 702.
> PROFESSOR CAPRA: Right.
> DR. LANDER: We recommended changing the advisory note.
> PROFESSOR CAPRA: Right, but—
> DR. LANDER: We were told that's not possible.
> PROFESSOR CAPRA: That's right.
> DR. LANDER: And so we're discussing amending Rule 702.
> PROFESSOR CAPRA: Right.
> DR. LANDER: Our belief was this is what Rule 702 is meant to mean and there must be a means to make the courts do it. If an advisory note is a possibility, I'd favor it. If it's not, change a comma in the rule and then write a new advisory note. Change one word, any word and write an advisory note. Anyway, thank you.

amplify textual changes and does not allow nonbinding notes to set wide-ranging standards beyond the text of the Rules.[30]

Though these proposed fixes to problems with forensic testimony were not possible, Dr. Lander's inquiry, and the Report ultimately generated by PCAST, spurred the Evidence Advisory Committee to launch an inquiry into whether to amend Rule 702 to demand more rigorous analysis of forensic expert testimony.[31] Because the Advisory Committee is comprised of lawyers and judges who may not have scientific training, a foray into forensics required background research and input from experts on forensics (including on its limitations). In 2017, the Committee convened a symposium to study the methodologies behind numerous forensic disciplines routinely presented in both federal and state court.[32] Participants included Dr. Eric Lander, a bevy of statisticians, other scientists who worked on the PCAST project, federal judges Rakoff, Kozinski and Saris, legal scholars, and representatives of the Justice Department.[33] The Advisory Committee Symposium (together with the report ultimately produced by PCAST) established two fundamental principles regarding forensic evidence:

> 1. Virtually all the forensic disciplines (such as fingerprint and ballistics methodologies) involve inherently subjective analyses, with fundamental premises that have not been established empirically, and that carry no defined rates of error.
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> 2. Forensic experts routinely have been permitted to overstate the conclusions that may reliably be drawn from the application of these methodologies. Courts have permitted testifying forensic experts to state their conclusions to a degree of certainty that cannot be supported by the methodology.[34]

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30 *See* Daniel J. Capra & Liesa L. Richter, *Poetry in Motion: The Federal Rules of Evidence and Forward Progress as an Imperative*, 99 B.U. L. REV. 1873, 1920–21 (2019) (discussing proper role of Advisory Committee Notes).

31 *See* Minutes of Advisory Committee on Evidence Rules 2 (Apr. 26–27, 2018) [hereinafter Spring 2018 Minutes], https://www.uscourts.gov/sites/default/files/ev_minutes_april_2018_final_0.pdf [https://perma.cc/QFN5-U2NV] (noting that the Committee's consideration of Rule 702 began with the PCAST recommendations).

32 *See Symposium on Forensic Testimony,* Daubert*, and Rule 702*, *supra* note 29, at 1464–65.

33 *Id.* at 1463–64.

34 *See id.* at 1469–70, 1508–09; *see also, e.g.*, United States v. Casey, 928 F. Supp. 2d 397, 399–400 (D.P.R. 2013) (concluding the court would remain "faithful to the long-standing tradition of allowing the unfettered testimony of qualified ballistics experts" when ballistics expert stated that he was "100% certain" of a match); United States v. Taylor, 663 F. Supp. 2d 1170, 1180 (D.N.M. 2009) (holding that expert could testify that the bullet came from suspect rifle to a

After reviewing the symposium presentations, the Evidence Advisory Committee resolved to consider the possibility of an amendment to the Evidence Rules that would regulate the admissibility of forensic expert testimony.[35] Thus, the Committee's investigation into a Rule 702 amendment originally focused on forensic expertise.

Amendments to the Federal Rules of Evidence are costly and labor intensive, and the efficacy of the Rules depends upon their relative stability.[36] Therefore, frequent amendment proposals that continually tinker with the same provision are ill-advised. In an effort to ensure that the Committee would address all potential infirmities in the admissibility of expert opinion testimony in a single, efficient amendment package, the Reporter supplied the Committee with a law review article identifying problems with the application of Rule 702 outside the context of forensic evidence.[37] The article demonstrated that many federal courts were ignoring the admissibility requirements that were added to Rule 702 in 2000. Specifically, the article highlighted several federal opinions that sidestepped the trial judge's obligation to determine that an expert's opinion is based on sufficient facts or data (Rule 702(b)) and that an expert has reliably applied reliable principles and methods to the facts of the case (Rule 702(d)).[38] Many courts erroneously characterized defects in an expert's basis and misapplication of methodology as questions of weight to be left to the jury.[39]

Because the standards added to Rule 702 in 2000 are admissibility requirements, the proponent must show them by a preponderance of the evidence before an expert's opinion may be given to the jury.[40] Indeed, Federal Rule of Evidence 104(a) has long provided that preliminary questions of admissibility

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"reasonable degree of certainty in the firearms examination field"); United States v. Mahone, 453 F.3d 68, 72 (1st Cir. 2006) (finding no error in admitting testimony that footwear-impression identification methodology had a zero error rate).

35 *See* Spring 2018 Minutes, *supra* note 31, at 5 (discussing focus on forensic evidence).

36 *See generally* Capra & Richter, *supra* note 30 (discussing rulemaking process and the importance of stability).

37 *See* Bernstein & Lasker, *supra* note 21.

38 *Id.* at 25–36.

39 *See id.* at 19–30.

40 *See* Daubert v. Merrell Dow Pharms., Inc., 509 U.S. 579, 592 & n.10 (1993) (stating that under Rule 104(a), the Rule 702 reliability requirements must be determined by a preponderance of the evidence); *see also* Bourjaily v. United States, 483 U.S. 171, 175–76 (1987) (holding that Federal Rules admissibility requirements are determined by a preponderance of the evidence).

are to be decided by the trial judge.[41] By treating Rule 702's admissibility requirements as ones of "weight," federal courts were essentially evaluating them pursuant to Rule 104(b), which allows jurors to evaluate "conditionally relevant" information so long as there is evidence "sufficient to support a finding" of the requisite condition.[42] Because application of this lax Rule 104(b) standard to the Rule 702 reliability requirements undermines the trial judge's critical gatekeeping role first identified in *Daubert*, the Advisory Committee decided to add the "weight v. admissibility" issue to its deliberations regarding a potential amendment.

Although other rulemaking committees routinely utilize subcommittees in considering proposed amendments, the Evidence Advisory Committee has rarely funneled proposals through subcommittees, both because the Evidence Advisory Committee is smaller than some of the other committees (thus making subdivided consideration of amendments less constructive), and also because the Evidence Advisory Committee has generally avoided tinkering with numerous provisions at once to protect the aforementioned predictability of the Evidence Rules.[43] Due to the scientific inquiry necessitated by the review of forensic evidence, as well as the existence of other simultaneously proceeding amendment proposals, the Chair of the Evidence Rules Committee established a Subcommittee to investigate the possibility of amending the Rules to address both the problem of forensics and the problem of courts misapplying the Rule 702 admissibility requirements.[44]

A. The Road Not Taken: A New Federal Rule of Evidence on Forensics

In exploring potential solutions to the problem of overstated forensic testimony, the Subcommittee first rejected the possibility of adding new, forensic-specific limitations to Rule 702.

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41 FED. R. EVID. 104(a).

42 FED. R. EVID. 104(b).

43 Indeed, the Evidence Advisory Committee has been roundly criticized for its refusal to frequently and radically upend the evidentiary standards used in all federal trials. *See, e.g.*, G. Alexander Nunn, *The Living Rules of Evidence*, 170 U. PA. L. REV. 937, 944 (2022) (criticizing the Advisory Committee for imposing a "dogmatic slumber" in the development of the Federal Rules of Evidence). For a response, see Daniel J. Capra & Liesa L. Richter, *Long Live the Federal Rules of Evidence*, 31 GEO. MASON L. REV. 1 (2023).

44 *See* Spring 2018 Minutes, *supra* note 31, at 7 (describing the need for a subcommittee).

Because Rule 702 is a rule of general applicability designed to establish a baseline for the admissibility of expert opinion testimony of all stripes, it was deemed ill-advised to clutter Rule 702 with limitations applicable only to certain disciplines.[45] Therefore, in coordination with the Subcommittee and guided by the findings of the PCAST Report, the Reporter drafted a potential new Federal Rule of Evidence 707 that would govern the admissibility of expert "forensic" testimony specifically.[46] Proposed Rule 707 provided as follows:

> **Rule 707. Testimony by Forensic Expert Witnesses**
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> If a witness is testifying on the basis of a forensic examination . . . the proponent must prove the following in addition to satisfying the requirements of Rule 702:
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> (a) the witness's method is repeatable, reproducible, and accurate for its intended use—as shown by empirical studies conducted under conditions appropriate to that use;
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> (b) the witness is capable of applying the method reliably—as shown by adequate empirical demonstration of proficiency—and actually did so; and
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> (c) the witness accurately states, on the basis of adequate empirical evidence, the . . . meaning of[] any similarity or match between the evidentiary sample and the source sample.[47]

After identifying multiple potential pitfalls in the application of a new Rule 707, the Advisory Committee ultimately rejected the concept of a freestanding, forensics-focused provision.[48] First, the Committee expressed concern that courts would experience difficulty in coordinating the forensic-specific

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45 *See* Minutes of Advisory Committee on Evidence Rules 17 (May 3, 2019) [hereinafter Spring 2019 Minutes], https://www.uscourts.gov/sites/default/files/final_-_minutes_of_the_spring_2019_meeting_of_the_evidence_rules_committee_0.pdf [https://perma.cc/7CYM-4RQK] ("At its Denver symposium in fall 2018, the Committee heard from panelists about potential effects on expert testimony outside of the forensic arena were the Committee to pursue amendments to Rule 702, which is an all-purpose rule that controls admissibility of a wide range of expert opinion testimony. The Chair noted that all of the judges at the Denver symposium raised questions about amending Rule 702, suggesting that it was functioning properly in its current form.").

46 *See* Memorandum from Daniel J. Capra to Advisory Comm. on Evidence Rules (Apr. 1, 2018), *in* ADVISORY COMMITTEE ON RULES OF EVIDENCE at 49, 50 (Apr. 2018), https://www.uscourts.gov/sites/default/files/agenda_book_advisory_committee_on_rules_of_evidence_-_final.pdf [https://perma.cc/R62G-KXFH].

47 *Id.*

48 *Id.* at 51 (noting that Rule 707 would "create as many problems as it solves").

Rule 707 requirements with the general Rule 702 requirements, which would remain applicable to all expert testimony. There would have been obvious overlap between the Rule 702(d) reliable application requirement and proposed Rule 707(b), which would have required a court to find that a forensic expert was capable of applying methodology reliably and, then, actually did apply that methodology reliably in the context of the case. The Committee predicted that federal courts would have difficulty parsing any differences between the two provisions and would simply default back to the Rule 702 standards, thus undermining the utility of a new Rule 707.[49]

The Committee also recognized that a bespoke provision applicable only to "forensic" expert witnesses would require the Committee to develop a workable definition of the term "forensic." Although certain disciplines are commonly identified as "forensic," delineating the contours of the category with any precision proved impossible. The Committee considered whether a new Rule 707 could be limited to expert testimony regarding "feature-comparison" techniques, which were the focus of the PCAST Report.[50] But other methodologies that do not involve strict feature comparison, such as arson-detection techniques, suffer from similar limitations (subjectivity and lack of empirical validity) that should be similarly regulated. Notably, the PCAST Report, which targeted "forensic" evidence, made no real attempt to define the term, and it is nowhere discussed in the current Evidence Rules.[51] Furthermore, the Committee questioned whether singling out "forensic" expert testimony for heightened scrutiny was justified. It is fair to state that opinions from a number of questionable disciplines, beyond forensics, have been admitted under Rule 702.[52] Given the institutional interests supporting longstanding forensic disciplines (i.e., the well-developed forensic expert community and the Department of Justice), the Committee concluded that

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49 *See* Spring 2018 Minutes, *supra* note 31, at 5 (noting problematic overlap between a new Rule 707 and Rule 702).

50 *See Symposium on Forensic Testimony,* Daubert*, and Rule 702*, *supra* note 29, at 1523.

51 The PCAST Report offered a vague definition unequal to the task of rulemaking. *See* PCAST REPORT, *supra* note 26, at 1 ("'Forensic science' has been defined as the application of scientific or technical practices to the recognition, collection, analysis, and interpretation of evidence for criminal and civil law or regulatory issues.").

52 *See, e.g.*, Robert Lyman Dewey, Note, *Expert Testimony: Admissibility of Human Factors Testimony Under the Federal Rules of Evidence*, 60 N.C. L. REV. 411, 411 (1981).

it would be suboptimal to single out forensics as the only expertise subject to heightened scrutiny under a customized Federal Rule of Evidence 707.[53]

After rejecting a new Rule 707 exclusively dedicated to forensic expertise, the Committee rejected a number of alternative proposals aimed at forensic evidence. The Committee rejected the suggestion that the Advisory Committee draft a lengthy, treatise-like Committee Note setting forth detailed scientific standards governing the admissibility of forensic expertise. The Committee concluded that such a note would be ill-advised because it would necessarily extend well beyond whatever textual change could be made to Rule 702.[54] A note setting forth detailed standards for evaluating forensic expertise would also require significant scientific input and would very likely have confronted the same controversies regarding sources and standards that plagued the PCAST review of forensic evidence.[55] And the Committee worried that a detailed note setting forth standards for regulating forensic evidence would run the risk of becoming outmoded by scientific advancements and developing forensic disciplines.[56]

As an alternative to a Committee Note to Rule 702, the PCAST Report proposed that the Evidence Advisory Committee, with support from relevant scientific communities, prepare a Best Practices Manual regarding the admissibility of forensic evidence.[57] The Advisory Committee determined that publishing a "Best Practices Manual" would be outside its statutorily derived authority, which is limited to rulemaking.[58] Further, an official, Advisory Committee-sponsored Best Practices Manual could resemble an attempt to establish Evidence Rules outside the rulemaking process. Accordingly, any such Manual would need to be published under the names of individual authors and not by the Advisory Committee in any formal sense. The Committee concluded that a Best Practices Manual published without the official imprimatur of the Evidence Advisory Committee would not achieve meaningful change in

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53 Spring 2019 Minutes, *supra* note 45, at 17 (noting that "a free-standing evidence rule on 'forensic evidence' would be ill-advised").

54 *Id.* (noting that an amendment to a Committee Note would be "outside the charter of the Committee").

55 *Id.*; *see also* PCAST REPORT, *supra* note 26.

56 Spring 2019 Minutes, *supra* note 45, at 17 (rejecting concept of a Committee Note change).

57 PCAST REPORT, *supra* note 26, at 20.

58 Spring 2019 Minutes, *supra* note 45, at 17.

the presentation of forensic expertise despite the dip into the deep end of the science pool that would be required to generate a credible resource. Accordingly, the Evidence Advisory Committee discarded the concept of a Committee-driven Best Practices Manual.[59] The reception received by the detailed PCAST Report following its scientific review of forensics suggests that the Advisory Committee was right to question the efficacy of a Best Practices Manual on forensic evidence. Federal courts have generally refused to follow the PCAST Report's recommendations when ruling on the admissibility of forensic evidence.[60]

B. Regulating Expert Overstatement Through Rule 702

Having rejected a customized new provision directed at forensics, as well as the concept of drafting a treatise on proper forensic techniques in Committee Notes or in a freestanding manual, the Evidence Advisory Subcommittee did recommend further consideration of an amendment to Rule 702 to address forensics. Although the problem of expert overstatement has been particularly acute in the context of forensic experts, trial experts from any discipline who exaggerate the conclusions that may be drawn from the principles and methods applicable in their field have not "reliably applied" those principles and methods to the facts of the case as required by Rule 702. Although Rule 702 should exclude overstated expert testimony, the Committee reviewed a comprehensive case law digest demonstrating that some form of "overstatement" by an expert witness could be found in approximately 25% of reported federal cases.[61] The Advisory Committee was, thus, persuaded that experts, including those in fields other than forensics, have a tendency to exaggerate trial opinions. Indeed, trial lawyers encourage their experts to state their opinions as definitively and

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59 *Id.*

60 *See, e.g.*, United States v. Alvin, No. 22-20244-CR, 2024 WL 149288, at *4, *7 (S.D. Fla. Jan. 5, 2024) ("As a threshold matter, we are unpersuaded that . . . the PCAST . . . [R]eport[] sufficiently undermines the foundational validity of the ballistics analysis field to the extent of rendering the entire practice inadmissible for *Daubert* purposes. . . . [W]e find no basis to force the Government's expert to adopt the PCAST findings; experts are free to choose the literature upon which they wish to rely in forming their expert conclusions.").

61 Advisory Committee on Rules of Evidence at 167–239 (Oct. 2019), https://www.uscourts.gov/sites/default/files/advisory_committee_on_rules_of_evidence_-_final_draft_agenda_book.pdf [https://perma.cc/AA53-3VBS].

superlatively as possible. An opinion that is qualified, even if properly so, packs less of a punch with the factfinder.[62]

Although the Advisory Committee could not delineate proper forensic techniques in rule text or note material, the Committee could modify Rule 702 to expressly prohibit *all* expert witnesses from overstating the conclusions that may fairly be drawn from their methodologies. Consequently, the Committee next considered the following proposed amendment to Rule 702 to attack the problem of overstatement head on:

> **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 by a preponderance of the evidence that:
>
> (a) the ~~expert's~~ witness'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~~ witness has reliably applied the principles and methods to the facts of the case; and
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> (e) the witness does not overstate the conclusions that may be drawn from a reliable application of the principles and methods.[63]

This proposed amendment to Rule 702 expressly outlawing expert overstatement was met with strong opposition,

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62 *See* Lewis A. Kaplan, *Experts in the Courthouse: Problems and Opportunities*, 2006 COLUM. BUS. L. REV. 247, 251 ("Lawyers want experts who will express unwavering certainty about their conclusions: Eighty-four percent of lawyers surveyed in a recent study said that the adamancy of an expert's support for the lawyer's position was an important consideration in the expert selection process. Experts are well aware of this overwhelming preference. The same study showed that sixty-four percent of experts believe that the willingness to draw firm conclusions was important to being retained. The desire to please lawyers often leads experts to overstate the certainty of their conclusions and to gloss over important nuances in an effort to present the most uncompromising support for the lawyers' position." (footnotes omitted)).

63 Memorandum from Daniel J. Capra & Liesa L. Richter to Advisory Comm. on Evidence Rules (Apr. 1, 2021), *in* ADVISORY COMMITTEE ON EVIDENCE RULES: AGENDA 90, 107 (Apr. 2021), https://www.uscourts.gov/sites/default/files/advisory_committee_on_evidence_rules_-_agenda_book_spring_2021.pdf [https://perma.cc/U3UH-5RM5].

particularly from the Justice Department. The Department sent a letter to the Chair of the Advisory Committee recommending that the Committee delay any overstatement amendment indefinitely because the Department planned to promulgate Uniform Language for Testimony and Reports (ULTRs) designed to limit testimonial overstatement by forensic experts.[64] The ULTRs would offer uniform policy guidance to federal prosecutors regarding the language and conclusions that could be employed appropriately by experts in various forensic disciplines.[65] Specifically, the ULTRs would prohibit an expert subject to them from testifying to a zero rate of error, to a "match," or to a conclusion to a "reasonable degree of certainty"—all opinions that cannot be supported by the relevant feature comparison methodologies.[66] The Department recommended that the issue of expert testimonial overstatement be monitored in future meetings, and an amendment revisited in the future if deemed necessary following implementation and uptake of the ULTRs.[67]

Notwithstanding the Justice Department's good-faith efforts to improve forensic expert testimony in federal criminal cases and the important progress made by the ULTRs that were ultimately adopted, the Department's ULTRs do not offer a complete solution to the problem of overstatement, for a number of reasons. First, leaving crucial gatekeeping protections up to internal Department of Justice policy means that any failure in compliance is not actionable; a violation of a ULTR does not result in the exclusion of evidence or a right of appeal.[68] Second, the Department's internal reforms, as salutary as they may be, do not prevent overstatement by experts outside the purview of the Department of Justice. For example, in many federal criminal cases, ballistics testimony is provided by state experts who

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64 *See* Spring 2019 Minutes, *supra* note 45, at 18–19 (noting that Department had provided a written response); *see also Uniform Language for Testimony and Reports*, U.S. DEP'T OF JUST. (Mar. 6, 2024), https://www.justice.gov/olp/uniform-language-testimony-and-reports [https://perma.cc/W84E-VMP5]; United States v. Richardson, No. 19-20076, 2024 WL 961228, at *11 (D. Kan. Mar. 6, 2024) (allowing a ballistics examiner to testify to a source identification, in according with DOJ guidelines).

65 *See* Spring 2019 Minutes, *supra* note 45, at 18 (noting that "the DOJ has implemented a uniform testimony monitoring program, and has developed testimonial standards for fourteen disciplines, with three more in development").

66 *Id.* at 19 (discussing testimonial limitations imposed by the ULTRs).

67 *Id.* at 18 (referencing DOJ memo to Advisory Committee).

68 *See* FED. R. EVID. 402 (indicating DOJ standards are not a source of excluding relevant evidence as they are not federal statutes or federal rules of procedure).

are not subject to Department guidance.[69] Third, there is no guarantee that the Department's internal protocols will remain in place to protect against unreliable overstatement. Administrations change, objectives evolve, and internal guidance can be discarded with the stroke of a pen.

Finally, and most importantly, allowing federal prosecutors to be the arbiters of appropriate forensic testimony is inconsistent with the adversarial process and places the fox in charge of the proverbial henhouse.[70] For example, the ULTRs promulgated by the Department of Justice permit testifying forensic experts to make a "source identification."[71] According to the ULTR, a "source identification," of a toolmark for example, means that the examiner has seen sufficient pattern agreement to "provide extremely strong support for the proposition that the two toolmarks originated from the same source and extremely weak support for the proposition that the two toolmarks originated from different sources."[72] While this may sound as though the expert's conclusion is based on a statistical assessment, the Uniform Language makes clear that this testimony reflects the feature comparison examiner's subjective assessment that lacks any quantifiable statistical foundation.[73] Scientists, including those that contributed to the PCAST Report, agree that forensic feature comparison methodologies, such as fingerprint examination and ballistics testing, do not permit examiners to find a true "match" between a questioned item and a source to the exclusion of all other possible sources.[74] The ULTR thus purports to outlaw forensic experts

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69 *See, e.g.*, United States v. Shipp, 422 F. Supp. 3d 762, 765–66 (E.D.N.Y. 2019) (addressing ballistics expert who was a police detective and was prepared to testify to a match with certainty).

70 Spring 2019 Minutes, *supra* note 45, at 22 (noting comment by the public defender that "there is an inherent conflict of interest in allowing experts to be regulated by the entity that benefits from their testimony").

71 U.S. DEP'T OF JUST., UNIFORM LANGUAGE FOR TESTIMONY AND REPORTS FOR THE FORENSIC FIREARMS/TOOLMARKS DISCIPLINE—PATTERN EXAMINATION at 2 (2023), https://www.justice.gov/olp/media/1295781/dl?inline [https://perma.cc/8B8A-ZEY6].

72 *Id.*

73 *Id.*; *see also* Spring 2019 Minutes, *supra* note 45, at 20 (quoting DOJ memo explaining that "an examiner's 'source identification' conclusion is a knowledge, skill, and experience-based decision that the evidence provides sufficiently strong support in favor of the same-source proposition to conclude that, in his or her expert opinion, the questioned mark or impression came from the same source as the known mark or impression").

74 *See* PCAST REPORT, *supra* note 26, at 19 ("Statements suggesting or implying greater certainty are not scientifically valid and should not be permitted.

testifying to a "match." But the ULTRs distinction between a "source identification" and a "match" is evanescent, and the Justice Department should not be left to its own devices in crafting critical protections for criminal defendants against unreliable or overblown forensic testimony.[75]

Notwithstanding the shortcomings in the ULTR guidance as a solution to the problem of expert overstatement, the Department's arguments persuaded some Committee members that an amendment to Rule 702 expressly prohibiting expert "overstatement" was unnecessary.[76] Committee members suggested that testimonial overstatement was already prohibited by the then-existing requirement of Rule 702(d) that an expert reliably "apply" a reliable methodology. A forensic expert claiming a "zero" rate of error or professing to have found a "match" should have been excluded under Rule 702(d) as it was drafted at the time because the subjective methodology underlying forensic feature comparisons cannot support such damning conclusions. This perspective on Rule 702 was a legitimate one to be sure. Rule 702, as it was drafted in 2000, should have excluded exaggerated and unsupported expert conclusions. But the Committee's extensive research revealed that federal courts *were* permitting overstated expert opinions in a significant number of cases, particularly in the area of forensics, thus necessitating some textual enhancement to Rule 702 to better regulate overheated expert testimony.

Committee members also expressed concern that an amendment to Rule 702 barring expert "overstatement" could have negative and unforeseen consequences outside the realm of forensic evidence. Specifically, Committee members feared that an amendment banning expert "overstatement" would

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In particular, courts should never permit scientifically indefensible claims such as: 'zero,' 'vanishingly small,' 'essentially zero,' 'negligible,' 'minimal,' or 'microscopic' error rates; '100 percent certainty' or proof 'to a reasonable degree of scientific certainty;' identification 'to the exclusion of all other sources;' or a chance of error so remote as to be a 'practical impossibility.'").

75 *See* Spring 2019 Minutes, *supra* note 45, at 20 (noting Dr. Lau's skepticism that an examiner can say there is "strong support" for a source identification "*without* making a claim about other possible sources").

76 *See* Minutes of Advisory Committee on Evidence Rules at 2 (Apr. 30, 2021) [hereinafter Spring 2021 Minutes], https://www.uscourts.gov/sites/default/files/ev_minutes_spring_2021_0.pdf [https://perma.cc/4MBZ-3PNN] (noting Committee division over an overstatement prohibition).

result in weaponized wordsmithing with adversaries litigating the language choice for virtually every expert opinion. For example, if an expert in accident reconstruction were to testify in a negligence action that the accident at issue was "definitely caused by the defendant veering out of his lane," the defendant might argue that the word "definitely" constituted a prohibited overstatement requiring exclusion or reframing of the expert's opinion. Some members of the Advisory Committee feared that an amendment expressly banning expert overstatement would lead to tedious checking and chilling of expert opinion testimony in the courtroom.[77]

Based upon the significant degree of overstatement found in federal opinions, a minority of Committee members, most notably the public defender, continued to favor an amendment to Rule 702 that would include some limitation on overstatement. These Committee members emphasized that a Rule 702 amendment would need to include some textual change directed at the problem of overstatement if the Committee aimed to express concerns about forensic overstatement in the accompanying Committee Note.[78] Eventually, the Committee reached consensus around a compromise approach to the problem of overstatement. Judge Thomas Schroeder, who chaired the Rule 702 Subcommittee, suggested that the language of existing Rule 702(d) could be modified very slightly to focus courts on the ultimate trial opinion expressed by an expert without specifically outlawing "overstated" opinion testimony.[79] Requiring courts to examine the actual opinion expressed by a testifying expert would lead to the exclusion of clearly overstated testimony without inviting adversaries to litigate the meaning of "overstatement."[80] The Committee ultimately approved the

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77 Spring 2019 Minutes, *supra* note 45, at 22.

78 *See* Spring 2021 Minutes, *supra* note 76, at 5 (noting public defender's concern about deleting overstatement language from proposed text); *see also* Minutes of Advisory Committee on Evidence Rules at 7 (Nov. 13, 2020) [hereinafter Fall 2020 Minutes], https://www.uscourts.gov/sites/default/files/ev_minutes_fall_2020_0.pdf [https://perma.cc/8ULK-EF6D] (noting public defender's "strong support for an overstatement amendment").

79 *See* Fall 2020 Minutes, *supra* note 78, at 8.

80 *See id.* at 9 (explaining that modest modification to Rule 702(d) could address overstatement without creating a prohibition). A similar proposal was made by Judge Caroline Kuhl, a member of the Judicial Conference Rules Committee,

following slight change to the finding that the court must make under Rule 702(d):

> (d) the ~~expert has reliably applied~~ expert's opinion reflects a reliable application of the principles and methods to the facts of the case.[81]

By making the "expert's opinion" the subject of the Rule 702(d) standard, the amendment encourages courts to focus directly on the opinion as expressed by the expert at trial, to ensure that it is sufficiently supported by the applicable methods. Under this standard, even an expert who has reliably applied proper methodology within her discipline should not be permitted to testify if the opinion expressed extends further than the methodology allows.

The Committee Note explaining this textual modification to Rule 702(d) highlighted the problem of overstatement in the field of expert forensic evidence that precipitated the Committee's review of Rule 702. Although the amendment applies to all expert testimony, it was important for the Committee Note to point out the most significant problem to which the text is directed. The note language dedicated to overstatement was carefully crafted by the Justice Department, the Chair of the Committee Judge Patrick Schiltz, and the Reporter:

> Rule 702(d) has also been amended to emphasize 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. Judicial gatekeeping is essential because just as jurors may be unable, due to lack of specialized knowledge, to evaluate meaningfully the reliability of scientific and other methods underlying expert opinion, jurors may also lack the specialized knowledge to determine whether the conclusions of an expert go beyond what the expert's basis and methodology may reliably support.
>
> The amendment is especially pertinent to the testimony of forensic experts in both criminal and civil cases. Forensic experts should avoid assertions of absolute or one hundred percent certainty—or to a reasonable degree of scientific certainty—if the methodology is subjective and thus potentially subject to error. In deciding whether to admit forensic expert testimony, the judge should (where possible) receive

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who provided outstanding service as liaison from that Committee to the Advisory Committee on Evidence Rules.

81 COMMITTEE ON RULES OF PRACTICE AND PROCEDURE at 891–92 (June 2022), https://www.uscourts.gov/sites/default/files/2022-06_standing_committee_agenda_book_final.pdf [https://perma.cc/CYT8-DYJB].

> an estimate of the known or potential rate of error of the methodology employed, based (where appropriate) on studies that reflect how often the method produces accurate results. Expert opinion testimony regarding the weight of feature comparison evidence (i.e., evidence that a set of features corresponds between two examined items) must be limited to those inferences that can reasonably be drawn from a reliable application of the principles and methods. This amendment does not, however, bar testimony that comports with substantive law requiring opinions to a particular degree of certainty.[82]

In sum, the Advisory Committee proposed a modest modification to Rule 702(d) to address the problem of expert overstatement generally, supported by a Committee Note targeting the forensic disciplines where the problem has been most acute. To be sure, the ultimate change to the text of Rule 702(d) is a subtle one. And subtle rulemaking is often less effective than more direct and drastic changes to rule text that signal loudly the direction that courts and litigants are to take. Busy judges and trial lawyers already well-versed in the operation of the Federal Rules of Evidence may overlook nuanced shifts in focus or terminology in the heat of trial. Courts comfortable with the current operation of Rule 702 that are inclined to follow existing practices may more easily evade a subtle change that is not explicitly prohibitive. Given the Committee's concerns about the potential unintended consequences of a more drastic prohibition on expert "overstatement," however, and in light of the compromise required to propose any amendment to Rule 702, the Committee faced a choice between proposing *no amendment* to address the problem of expert overstatement, or the very modest one ultimately adopted. A subtle amendment that works to limit expert overstatement, especially in the ubiquitous arena of forensic evidence, is certainly better than the only other option—nothing. The amendment provides the criminal defense bar—one important constituency with the incentive to pick up and advocate for the amendment—a hook upon which to hang arguments against overblown expert trial opinions. Courts can rely on the textual change, however modest, and the accompanying Committee Note to further the important goal of preventing forensic experts from overstating their opinions.

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82 FED. R. EVID. 702 advisory committee's note to 2023 amendment.

C. Clarifying the Trial Court's Role as Gatekeeper

Rule 702, as originally enacted in 1975, was simple and straightforward, allowing a qualified expert to provide opinion testimony whenever the court found that scientific, technical, or other specialized knowledge would "assist the trier of fact."[83] When Rule 702 was amended in 2000 following the Supreme Court's *Daubert* trilogy of opinions, the resulting provision established three new requirements for the admissibility of expert opinion testimony.[84] Rule 702 thereafter required that: (1) the expert's testimony was "based upon sufficient facts or data"; (2) the expert's testimony was "the product of reliable principles and methods"; and (3) the expert "applied the principles and methods reliably to the facts of the case."[85] The Committee determined that the sufficiency of an expert's basis and the reliability of an expert's application of principles to the facts of the case must be subject to the judicial gatekeeping emphasized by the Supreme Court in *Daubert*, just like the question of reliable methodology.[86]

According to Federal Rule of Evidence 104(a), preliminary questions of admissibility are to be decided by the trial judge before evidence is given to the jury.[87] In *Bourjaily v. United States*, the Supreme Court made clear that the trial judge must make such preliminary findings by a "preponderance of the evidence."[88] In adding new admissibility requirements to Rule 702, the Advisory Committee expected and intended, as expressed in the Committee Note accompanying the 2000 amendment, that the proponent of expert opinion testimony would have to satisfy those requirements by a preponderance of the evidence before admitting the expert's opinion.[89] Jurors, who lack the training or expertise to evaluate the reliability of an expert's opinion, should not be left to grapple with questions of sufficiency and reliable application in the first instance. Therefore, treating

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83 FRIEDMAN & DEAHL, *supra* note 15, at 283 (setting forth original text of Rule 702).

84 *See* FED. R. EVID. 702 advisory committee's note to 2000 amendment.

85 FED. R. EVID. 702, 529 U.S. 1189 (2000) (amended 2011).

86 *See id.*

87 FED. R. EVID. 104(a) ("The court must decide any preliminary question about whether a witness is qualified, a privilege exists, or evidence is admissible.").

88 483 U.S. 171, 175–76 (1987) ("The preponderance standard ensures that before admitting evidence, the court will have found it more likely than not that the technical issues and policy concerns addressed by the Federal Rules of Evidence have been afforded due consideration.").

89 FED. R. EVID. 702 advisory committee's note to 2000 amendment.

challenges to an expert's basis or application as questions of weight and not of admissibility constitutes a misapplication of Rules 702 and 104(a).

Yet many federal courts stated plainly, even after the 2000 amendment to Rule 702, that questions regarding sufficient facts or data and proper application were questions of weight to be resolved by the jury and not questions that would foreclose admissibility of an expert's opinion.[90] In some cases, therefore, expert opinion testimony was deemed admissible notwithstanding inadequacies in the expert's factual basis or application, leaving untrained jurors to assess reliability for themselves.[91] To add insult to injury, these courts often relied on circuit court opinions decided *before* 2000 even though these pre-2000 pronouncements had been rejected by the intervening amendment.[92] This misinterpretation of the gatekeeper role outlined in amended Rule 702 stemmed in part from the Supreme Court's opinion in *Daubert* itself. The opinion offered litigants a potpourri of pronouncements regarding a trial court's evaluation of expert opinion testimony. There is language in *Daubert* for everyone. Litigants seeking to admit expert testimony freely may cite to *Daubert* passages opining that the remedy for "shaky but admissible"[93] expert evidence is not exclusion but rather robust cross-examination, and

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90 *See, e.g.*, United States v. Gipson, 383 F.3d 689, 697 (8th Cir. 2004) ("[W]hen the *application* of a scientific methodology is challenged as unreliable under *Daubert* and the methodology itself is otherwise sufficiently reliable, outright exclusion of the evidence in question is warranted only if the methodology 'was so altered [by a deficient application] as to skew the methodology itself.'" (alteration in original) (quoting United States v. Beasley, 102 F.3d 1440, 1448 (8th Cir. 1996))); Bresler v. Wilmington Tr. Co., 855 F.3d 178, 195 (4th Cir. 2017) ("'[Q]uestions regarding the factual underpinnings of the [expert witness'] opinion affect the weight and credibility' of the witness' assessment, 'not its admissibility.'" (alteration in original) (quoting Structural Polymer Grp. v. Zoltek Corp., 543 F.3d 987, 997 (8th Cir. 2008))); City of Pomona v. SQM N. Am. Corp., 750 F.3d 1036, 1047–48 (9th Cir. 2014) ("[E]xpert evidence is inadmissible where the analysis 'is the result of a faulty methodology or theory as opposed to imperfect execution of laboratory techniques whose theoretical foundation is sufficiently accepted in the scientific community to pass muster under *Daubert*.'" (quoting United States v. Chischilly, 30 F.3d 1144, 1154 (9th Cir. 1994))). *But cf. In re* Paoli R.R. Yard PCB Litig., 35 F.3d 717, 745 (3d Cir. 1994) ("[A]ny step that renders the analysis unreliable . . . renders the expert's testimony inadmissible. This is true whether the step completely changes a reliable methodology or merely misapplies that methodology." (emphasis omitted)).

91 *See, e.g.*, *In re Paoli*, 35 F.3d at 753–54.

92 *See, e.g.*, Milward v. Acuity Specialty Prods. Grp., Inc., 639 F.3d 11, 22 (1st Cir. 2011) (holding that defects in the witness's basis and application were questions of weight and relying on pre-2000 authority).

93 509 U.S. 579, 596 (1993).

statements regarding the "liberal thrust" of the Federal Rules of Evidence.[94] Litigants seeking rigorous enforcement of the trial court's gatekeeper role can emphasize the Court's specific citation to Rule 104(a) of the Federal Rules—and can highlight the Supreme Court precedent establishing that Rule 104(a) imposes a preponderance of the evidence requirement.[95]

Notwithstanding the conflicting and misleading verbiage contained in the *Daubert* opinion, Rules 702 and 104(a)—when taken together—clearly established admissibility requirements for expert opinion testimony that must be decided by the court by a preponderance of the evidence. The Advisory Committee thus faced the confounding issue of courts applying Federal Rule of Evidence 702 in a manner inconsistent with the clear intent of that provision. The Committee had to grapple with whether and how to amend Rule 702—not to alter its intended operation in any way—but rather to educate wayward courts and litigants as to its proper application. The Advisory Committee does not typically propose amendments to *properly* drafted Federal Rules of Evidence to add cautionary provisos effectively exclaiming "we meant what we said."[96]

The Committee determined that the only way to prevent trial courts from leaving expert admissibility questions to juries would be to add an explicit requirement to the text of Rule 702 demanding that trial courts find the admissibility standards satisfied by a "preponderance of the evidence." This solution raised concerns about unintended consequences for other Federal Rules of Evidence, however. Because Rule 104(a) requires that trial courts find *all* preliminary requirements for admissibility satisfied by a preponderance of the evidence, the Committee was concerned about the implications of adding that generally applicable standard to Rule 702 alone. Courts could legitimately question why Rule 702 makes *explicit* what is *implicit* in virtually every other evidence rule.

For example, a trial court must find all three requirements of the excited utterance hearsay exception satisfied by a preponderance of the evidence before admitting a hearsay statement

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94 *Id.* at 588.

95 *Id.* at 592 & n.10 ("These matters should be established by a preponderance of proof." (citing Bourjaily v. United States, 483 U.S. 171, 175–76 (1987))).

96 *See* Minutes of Advisory Committee on Evidence Rules at 4 (Oct. 19, 2018), https://www.uscourts.gov/sites/default/files/ev_minutes_oct_2018_final_0.pdf [https://perma.cc/8RXU-EEK7] (noting that the preponderance standard applied to Rule 702 prior to the 2023 amendment).

for its truth through Federal Rule of Evidence 803(2).[97] The Committee was concerned that arguments would be made that a different standard of proof applies to preliminary admissibility requirements like these because Rule 803(2) does not contain an express "preponderance standard" and instead relies (as do all other provisions) on the general standard of proof provided in Rule 104(a).[98] Where one rule uses express preponderance language to define a trial court's duty, one would expect other rules imposing the same duty upon the trial judge to deploy the same language in rule text. The risk of creating negative inferences for the application of other Federal Rules of Evidence was the principal downside to amending Rule 702 to add an express preponderance standard of proof.[99]

The Committee ultimately concluded that the benefits of adding an express preponderance standard to the text of Rule 702 outweighed this risk for several reasons. First, while the preponderance standard already applied under a proper interpretation of Rules 104(a) and 702, the Committee recognized that this was not immediately obvious from a reading of the Rules.[100] Courts and litigants had to navigate a complicated path through multiple Evidence Rules, Supreme Court opinions, and Committee Notes to uncover the preponderance standard applicable to Rule 702. Rule 702 itself said nothing explicit about whether the judge or jury should make the relevant determinations or about the standard of proof applicable to those determinations. Litigants would need to consult Rule 104(a) to learn that "[t]he *court* must decide any preliminary question about whether . . . evidence is admissible."[101] Still, Rule 104(a) says nothing about a standard of proof for the court's determination.[102] Courts and litigants would also need to review the Supreme Court's 1987 opinion in *Bourjaily v. United States* to learn that the preponderance standard of proof applies to such preliminary determinations.[103] The *Daubert* opinion itself included a footnote referencing *Bourjaily*.[104] Finally, the lengthy

97 FED. R. EVID. 803(2); *see* FED. R. EVID. 104(a); *Bourjaily*, 483 U.S. at 175–76.

98 FED. R. EVID. 803(2); FED. R. EVID. 104(a).

99 *See* FED. R. EVID. 702 advisory committee's note to 2023 amendment (emphasizing that there was no intent to create a negative inference as to the applicability of the Rule 104(a) standard to other Evidence Rules).

100 *See* Spring 2021 Minutes, *supra* note 76, at 3.

101 FED. R. EVID. 104(a) (emphasis added).

102 *Id.*

103 483 U.S. 171, 175–76 (1987).

104 509 U.S. 579, 592 n.10 (1993).

Committee Note to the 2000 amendment to Rule 702 included two sentences regarding the applicability of Rule 104(a) and the preponderance standard.[105] Because such a significant number of federal courts were overlooking the preponderance standard buried within the notes and cases, the Committee concluded that it was necessary to amend Rule 702 to make the requirement express. Finally, the Committee reasoned that any risk that courts would draw negative inferences about the application of the preponderance standard to other provisions covered by Rule 104(a) could be mitigated through an explanatory Committee Note to the amendment.

Accordingly, Rule 702 was ultimately amended to clarify the court's duty to find the preliminary requirements satisfied and to include a standard of proof, as follows:

> **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.[106]

The concern that courts might draw negative inferences for other provisions that do not include the same standard in rule text was squarely addressed in the accompanying Committee Note:

> There is no intent to raise any negative inference regarding the applicability of the Rule 104(a) standard of proof for other rules. The Committee concluded that emphasizing the

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105 *See* FED. R. EVID. 702 advisory committee's note to 2000 amendment ("Consequently, the admissibility of all expert testimony is governed by the principles of Rule 104(a). Under that Rule, the proponent has the burden of establishing that the pertinent admissibility requirements are met by a preponderance of the evidence." (citing *Bourjaily*, 483 U.S. 171)).

106 COMMITTEE ON RULES OF PRACTICE AND PROCEDURE: AGENDA, *supra* note 81, at 891–92. Deletions from the prior version of Rule 702 are stricken and additions are underscored.

> preponderance standard in Rule 702 specifically was made necessary by the courts that have failed to apply correctly the reliability requirements of that rule.[107]

It should be noted that the amendment originally proposed the phrase "preponderance of the evidence" to describe the standard of proof that applies to the Rule 702 requirements (as opposed to the "more likely than not" language ultimately adopted).[108] Much of the public comment on the proposed amendment was directed to the preponderance standard, and the requirement was severely criticized by the plaintiffs' bar.[109] Interestingly, however, most of the negative feedback regarding the preponderance standard directly demonstrated the need for an amendment. For example, many of the unfavorable comments argued that the amendment would "change" existing law, under which there was a "liberal" thrust that "presumed" expert testimony to be reliable—and hence, admissible.[110] This is the very misunderstanding concerning the trial court's obligation to ensure reliability that the amendment was designed to remedy. While the Committee was further persuaded of the need to amend Rule 702 following public comment, the Committee elected to replace "preponderance of the evidence" language with "more likely than not" language to assuage any concern that the amendment was *raising* the standard of proof above a preponderance standard.[111] Of course, a "preponderance of the

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107 FED. R. EVID. 702 advisory committee's note to 2023 amendment.

108 *See* COMM. ON RULES OF PRAC. & PROC. OF THE JUD. CONF. OF THE U.S., PRELIMINARY DRAFT OF PROPOSED AMENDMENTS TO THE FEDERAL RULES OF APPELLATE, BANKRUPTCY, CIVIL, AND CRIMINAL PROCEDURE, AND THE FEDERAL RULES OF EVIDENCE at 308 (2021), https://www.uscourts.gov/sites/default/files/preliminary_draft_of_proposed_amendments_-_august_2021_0.pdf [https://perma.cc/9P8N-J9FR].

109 *See, e.g.*, ADVISORY COMMITTEE ON EVIDENCE RULES at 159 (May 2022), https://www.uscourts.gov/sites/default/files/evidence_agenda_book_may_6_2022.pdf [https://perma.cc/NKR5-BR6B] (noting that Nathan VanDerVeer, Esq. "contends that the phrase 'the preponderance of the evidence' threatens the right to a jury trial, and recommends that it be changed to 'the preponderance of available information'").

110 *See, e.g.*, *id.* at 157 (noting that Attorneys Information Exchange Group "contends that the current rule has worked well, and that the amendment would change what it asserts to be the existing law that 'Rule 702 represents a liberal standard of admissibility for expert opinions'").

111 *See* Minutes of Advisory Committee on Evidence Rules at 6 (May 6, 2022) [hereinafter Spring 2022 Minutes], https://www.uscourts.gov/sites/default/files/2022-04_evidence_rules_meeting_minutes_final_0.pdf [https://perma.cc/G26V-WBNE] (noting the Committee's decision to modify language to respond to negative public comment).

evidence" means a showing that the admissibility requirements are "more likely than not" satisfied.[112]

During the public comment period, the defense bar urged the Committee to include citations to federal cases that had misapplied the Rule 702 admissibility requirements in the Committee Note—essentially to call out errant courts specifically. The Lawyers for Civil Justice[113] contended that most of the federal decisions that incorrectly leave Rule 702 reliability issues to the jury have relied upon one or more of three particular cases that inaccurately describe the threshold requirements of Rule 702 as matters of "weight" rather than as questions of admissibility to be resolved by the trial judge.[114] All three of the cases highlighted by the defense bar did include incorrect language providing that questions of an expert witness's sufficiency of data and reliability of application are generally jury questions.[115] And the Lawyers for Civil Justice recommended that the Committee Note cite these opinions as incorrect and rejected by the amendment.

The Committee determined that there would be a risk in referencing these three cases specifically and declined to reject them in the Committee Note.[116] Such a specific citation would likely be interpreted not only as disagreement with the standards articulated by these courts for evaluating expert opinion testimony but also as rejection of the admissibility determinations regarding the particular expert opinions proffered in those cases. But the Committee could not reject the ultimate admissibility determination in any of these cases without a record before it from which to evaluate the basis for and reliability of the expert opinions at issue. In *Loudermill v. Dow Chemical Co.*, the court simply held that the trial court did not abuse its discretion in admitting the plaintiff's expert.[117] Notwithstanding the court's reference to an improper standard of admissibility,

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112 *Id.* (discussing equivalence of the two phrases).

113 *See* ADVISORY COMMITTEE ON EVIDENCE RULES: AGENDA, *supra* note 109, at 155 (describing comments).

114 The allegedly offending cases are: Loudermill v. Dow Chem. Co., 863 F.2d 566 (8th Cir. 1988); Viterbo v. Dow Chem. Co., 826 F.2d 420 (5th Cir. 1987); and Smith v. Ford Motor Co., 215 F.3d 713 (7th Cir. 2000). *See* Memorandum from Daniel J. Capra & Liesa L. Richter to Advisory Comm. on Evidence Rules (Apr. 1, 2022), *in* ADVISORY COMMITTEE ON EVIDENCE RULES, *supra* note 109, at 125, 147.

115 *See Loudermill*, 863 F.2d at 570; *Viterbo*, 826 F.2d at 422; *Smith*, 215 F.3d at 718.

116 *See* Memorandum from Daniel J. Capra & Liesa L. Richter to Advisory Comm. on Evidence Rules, *supra* note 114, at 148.

117 *Loudermill*, 863 F.2d at 570.

the Committee could not confidently conclude that the trial court *did* abuse its wide discretion in allowing the expert to testify under the proper standard. In *Viterbo v. Dow Chemical Co.*, the trial court had *excluded* the plaintiff's expert, and the court of appeals found no abuse of discretion in that ruling.[118] It's hard to see how the application of an *insufficiently rigorous* standard of admissibility led to an improper outcome in that case. And as for *Smith v. Ford Motor Co.*, the court of appeals did rely upon incorrect language about the standard of proof applicable to Rule 702 to find that the trial judge abused discretion in excluding the plaintiff's expert. But the trial court's reasoning in that case was actually wrong—even under the applicable preponderance standard—because the trial court excluded the expert on reliability grounds *solely* because the expert's methodology was not peer-reviewed.[119] Therefore, the Committee was reluctant to act as a super-appellate tribunal and to criticize these particular opinions in a Committee Note.

As an alternative to criticizing specific federal opinions, the Committee considered a Committee Note cautioning against the general *language* that has been littered throughout many federal opinions and that is patently inconsistent with the preponderance of the evidence standard. The Reporter proposed an admonition to be included in the Committee Note as follows:

> Under this amendment, the following statements, made by some courts in the past, are not supportable. These include:
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> • "There is a presumption in favor of admitting expert testimony."
>
> • "The sufficiency of facts or data supporting an expert opinion is a question for the jury, not the court."
>
> • "Whether the expert has properly applied the methodology is a question for the jury, not the court."
>
> • "The Federal Rules of Evidence establish a liberal thrust in favor of expert testimony."[120]

After deliberation, the Committee decided not to include this language in the Committee Note for fear of being needlessly critical of federal courts applying Rule 702 prior to the clarifying

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118 *Viterbo*, 826 F.2d at 424.

119 *Smith*, 215 F.3d at 720.

120 Memorandum from Daniel J. Capra & Liesa L. Richter to Advisory Comm. on Evidence Rules, *supra* note 114, at 148.

amendment.[121] The precatory language in the Committee Note that was ultimately adopted references the improper characterizations of the Rule 702 standard by federal courts that gave rise to the amendment, but in an explanatory and nonspecific manner:

> First, the rule has been amended to clarify and emphasize that expert testimony may not be admitted unless the proponent demonstrates to the court that it is more likely than not that the proffered testimony meets the admissibility requirements set forth in the rule. *See* Rule 104(a). This is the preponderance of the evidence standard that applies to most of the admissibility requirements set forth in the evidence rules. *See Bourjaily v. United States*, 483 U.S. 171, 175 (1987) ("The preponderance standard ensures that before admitting evidence, the court will have found it more likely than not that the technical issues and policy concerns addressed by the Federal Rules of Evidence have been afforded due consideration."); *Huddleston v. United States*, 485 U.S. 681, 687 n.5 (1988) ("preliminary factual findings under Rule 104(a) are subject to the preponderance-of-the-evidence standard"). But many 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).[122]

In drafting a Committee Note for the preponderance portion of the amendment, the Committee also wrestled with crafting proper admonitions about the weight versus admissibility of expert testimony. As explained above, many courts have wrongly held that the sufficiency of an expert's basis and reliable application of principles are questions that affect the weight of the evidence and not its admissibility.[123] This means that these courts have incorrectly left the requisite determination regarding the reliability of an expert's opinion testimony up to the jury under a standard akin to the permissive standard of Rule 104(b) (instead of applying the proper Rule 104(a) standard that requires a judicial determination). This is problematic because the Rule 104(a) preponderance requirement is substantially higher than the admissibility requirement for questions decided under Rule 104(b). Under Rule 104(b), the standard of proof is

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121 Spring 2021 Minutes, *supra* note 76, at 4.

122 FED. R. EVID. 702 advisory committee's note to 2023 amendment.

123 *See, e.g.*, *In re* Bair Hugger Forced Air Warming Devices Prods. Liab. Litig., 9 F.4th 768, 787 (8th Cir. 2021) (reversing trial court decision excluding expert testimony on the ground that defects in the expert's factual basis and application were questions of weight and not admissibility).

a *prima facie* case. This requires the proponent to produce only enough evidence for a *reasonable juror* to find that the fact exists.[124] Therefore, a court stating that challenges to sufficiency or application are *generally* questions of weight and not admissibility would be misreading and misapplying Rule 702.

It is important to note, however, that there will remain some questions about an expert's opinion or process that *will* affect only the weight to be given to the testimony by the jury and that should not undermine its admissibility—even under a properly applied Rule 104(a) preponderance of the evidence standard. Under Rule 104(a), the judge must find that it is more likely than not that the expert's basis is sufficient and that the expert's application is reliable. But once the court has made the requisite admissibility findings, any contrary arguments or quibbles with the expert's opinion do affect only its weight. Thus, a ruling that *some* disputes concerning expert testimony constitute questions of weight is not necessarily a misapplication of Rule 702. The distinction between questions of weight and admissibility under Rule 702 can be subtle, however, and the Committee toiled to identify cases that had handled that distinction deftly and to signal the proper approach in the accompanying Committee Note.

One opinion identified by the Committee that drew a proper line between matters of weight and admissibility was *United States v. Silva*.[125] *Silva* was a felon-firearm-possession prosecution in which the government called a DNA expert who testified on the basis of "single source samples" that she could not exclude the defendant's profile as the donor of samples collected from a truck and a house.[126] The defendant argued that the testimony should have been excluded because the numerals for the samples that the expert recorded in her digital record were not identical to the numbers on the tubes containing the actual samples.[127] The expert explained that the errors in the digital record identified by the defendant were typographical only and did not affect her analysis or results because she relied on the last two digits of

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124 Huddleston v. United States, 485 U.S. 681, 690 (1988).

125 United States v. Silva, 889 F.3d 704 (10th Cir. 2018). The *Silva* example was raised by the Reporter for the fall 2018 meeting. *See* Memorandum from Daniel Capra to Rule 702 Subcommittee (Oct. 1, 2018), *in* ADVISORY COMMITTEE ON EVIDENCE RULES at 173–74 (Oct. 2018), https://www.uscourts.gov/sites/default/files/2018-10-evidence-agenda-book_0.pdf [https://perma.cc/4RCJ-KHUN].

126 "Single source" means that there was no problem of extracting a sample from other samples; the process of abstraction raises questions of reliability. *See* PCAST REPORT, *supra* note 26, at 70.

127 *Silva*, 889 F.3d at 718.

each case number to verify the samples. She entered these numbers in her digital record correctly each time and mistyped only the first two digits, which indicated the year. She also explained that the errors in the digital record did not appear on the labels affixed to the test tubes she kept in front of her during her analysis. She focused on keeping the test tubes in order.

The Tenth Circuit held that the trial court did not err in concluding that the expert had reliably applied accepted DNA analysis to the samples.[128] Where the expert's only error was in recording the first two digits of the sample number, it did not undermine the reliability of her DNA analysis or prevent her from reliably connecting her results to the defendant in the particular case. Of course, the defendant was free to raise the errors in the expert's digital record on cross-examination and in argument, to show that the expert was not being as careful as she could have been in her analysis. As the appellate court explained, these challenges were "question[s] of weight rather than admissibility."[129] *Silva* is *not* a holding that the matter of reliable application is *always* or even often a question of weight and not admissibility. It correctly illustrates that, once a trial court finds reliable application by a preponderance, any residual doubts about the expert's work are questions that affect the weight given to her opinion by the jury.

Contrast *Silva* with a hypothetical expert testifying to the results of a water sample using standard testing procedures—but using a contaminated instrument, or an instrument that has not been calibrated, or chemicals that have expired. A court improperly treating the Rule 702 requirements as ones of weight might say that a reasonable juror could overlook these flaws in the expert's application of otherwise reliable sampling methodology. Such a court would also be likely to make a generalized statement that "questions of application of the method go to weight and not admissibility." A court applying the proper Rule 104(a) analysis would exclude the testimony, however. Because the question of reliable application is one of admissibility, the court must find reliability by a preponderance before allowing the expert to testify to the result of the water sampling. Under Rule 104(a), it would be exceedingly difficult to find more likely than not a reliable application of the standard sampling methodology where the expert utilized faulty equipment and expired chemicals.

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128 *Id.* at 719.

129 *Id.*

To illustrate the crucial distinction between these types of problems with expert testimony and to acknowledge that problems of weight may remain even after a proper Rule 104(a) inquiry, the Committee described the proper approach to weight and admissibility in the Committee Note to the 2023 amendment:

> Some challenges to expert testimony will raise matters of weight rather than admissibility even under the Rule 104(a) standard. For example, if the court finds it more likely than not that an expert has a sufficient basis to support an opinion, the fact that the expert has not read every single study that exists will raise a question of weight and not admissibility. But this does not mean, as certain courts have held, that arguments about the sufficiency of an expert's basis always go to weight and not admissibility. Rather it means that once the court has found it more likely than not that the admissibility requirement has been met, any attack by the opponent will go only to the weight of the evidence.
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> It will often occur that experts come to different conclusions based on contested sets of facts. Where that is so, the Rule 104(a) standard does not necessarily require exclusion of either side's experts. Rather, by deciding the disputed facts, the jury can decide which side's experts to credit.[130]

On December 1, 2023, the amendment to Rule 702 took effect. With two modifications to the text of Rule 702, the amendment sought to ameliorate the problem of overstated expert testimony that promises more than the applicable methodology can deliver and to correct the federal courts that were treating admissibility requirements regarding an expert's basis and application of methodology as ones of weight to be passed on to an untrained jury. Although the textual tweaks to Rule 702 were admittedly subtle, the Committee sought to elaborate and educate through a detailed Committee Note guiding courts in proper application of the updated provision. Both of these alterations are critical to the proper operation of Rule 702, which serves as the gateway for expert opinion evidence that is pivotal in the vast majority of criminal and civil cases.[131] When federal courts permit jurors to evaluate the reliability of expert testimony in the first instance and allow overblown and unsupportable opinions to be conveyed to the fact finder, they have failed to guard the gate as required by Rule 702.

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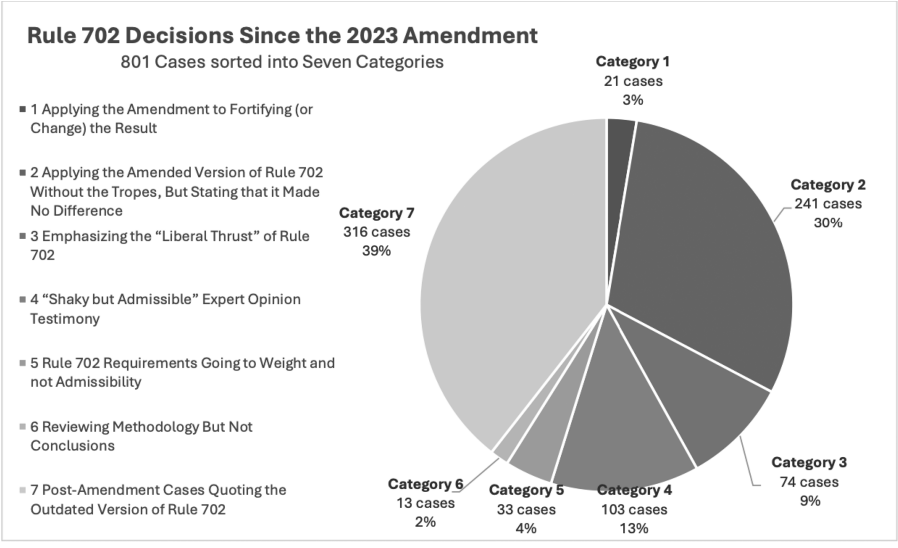
130 FED. R. EVID. 702 advisory committee's note to 2023 amendment.

131 *See* Andrew W. Jurs, *Expert Prevalence, Persuasion, and Price: What Trial Participants Really Think About Experts*, 91 IND. L.J. 353, 359 (2016) ("[S]tudies have found that experts appear in between 63% and 86% of cases . . . .").

II
THE DIFFERENCE A YEAR MAKES: THE JUDICIAL RESPONSE TO THE RULE 702 AMENDMENT



We reviewed and compiled all district court opinions discussing Rule 702 for the one-year period from the amendment's effective date of December 1, 2023 through December 1, 2024.[132]

Powerfully illustrating the importance of expert opinion testimony in federal court, 766 published district court opinions addressed the reliability requirements of Rule 702 in the year following the 2023 amendment.[133] To lead with good news, there are many reported opinions showing that federal courts have latched onto the amendment and have already used it effectively to apply Rule 702 as intended to guard against

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132 *See generally* Liesa L. Richter & Daniel J. Capra, *The Difference a Year Makes: The Admissibility of Expert Opinion Testimony Under the 2023 Amendment to Federal Rule of Evidence 702*, UNIV. OF OKLA. COLL. OF L. DIGIT. COMMONS (2025), https://digitalcommons.law.ou.edu/fac_other_pubs/142/ [https://perma.cc/RVE5-ULKD] (collecting and indexing the cases referenced in the pie chart).

133 This survey does not include any Rule 702 opinions involving an expert's qualifications or the proper subject of expert testimony because those admissibility factors were not affected by the amendment. For a discussion of a few appellate court cases decided after the amendment, see Recent Rule, *Federal Rule of Evidence 702*, 138 HARV. L. REV. 899, 902–06 (2025).

the admission of unreliable junk expertise. Many others have properly acknowledged the amendment to Rule 702 and have affirmed that they are applying the relevant preponderance standard to the Rule 702 admissibility requirements. But the early returns suggest that there is still much work to be done. As examined below, a significant number of federal courts somewhat shockingly continue to rely upon an outdated version of Rule 702 in evaluating expert testimony. Still others acknowledge that Rule 702 was amended in 2023 but fall back on erroneous tropes about a presumption in favor of expert testimony and the admissibility of "shaky" expert opinion. Though the early returns for the 2023 amendment show promise, they also reveal that systematic work remains to be done to encourage understanding and uptake of the amendment.

A. Making a Difference: Using the Amendment to Exclude Questionable Expert Testimony

In many reported cases regarding Rule 702 reliability standards, the court found that the 2023 amendment either mandated a different admissibility determination than the court would previously have conducted or fortified the court's decision to exclude questionable expert testimony.[134]

A number of opinions have emphasized the preponderance standard applicable to the trial court's reliability findings under amended Rule 702 and have expressly rejected proponents' efforts to characterize those crucial admissibility requirements as matters of weight for the jury. In *Johnson v. Packaging Corp. of America*, for example, the district court relied upon the 2023 amendment to exclude a proffered expert opinion about "what a reasonable pulp and paper mill plant owner or operator would or should have known based on industry knowledge."[135] The district court rejected the plaintiff's argument that "questions relating to the bases and sources of an expert's opinion affect the weight to be assigned that opinion rather than its

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134 *See* Liesa L. Richter & Daniel J. Capra, *The Difference a Year Makes: The Admissibility of Expert Opinion Testimony Under the 2023 Amendment to Federal Rule of Evidence 702*, UNIV. OF OKLA. COLL. OF L. DIGIT. COMMONS at 7–10 (2025), https://digitalcommons.law.ou.edu/fac_other_pubs/142/ [https://perma.cc/RVE5-ULKD] (setting forth cases using the 2023 amendment to Rule 702 to fortify or change the result).

135 Johnson v. Packaging Corp. of Am., No. CV 18-613, 2023 WL 8649814, at *1 (M.D. La. Dec. 14, 2023) (excluding expert testimony about a person's state of mind).

admissibility."[136] The court relied on the 2023 amendment to Rule 702, as follows:

> Recent revisions to FRE 702 and the official comments clarify that this is an inaccurate statement of the Court's inquiry under *Daubert* and FRE 702. The intent of the rule change is to focus and direct district courts to conduct the gate-keeping inquiry enunciated in *Daubert* and refrain from bypassing the admissibility determination in favor of a question of weight to be decided by a fact finder.[137]

Similarly, the trial court in *Hickcox v. Hyster-Yale Group, Inc.* excluded a plaintiff's product liability expert where the expert failed to present a reasonable alternative design.[138] The recent amendment to Rule 702 assisted the court in rebuffing the plaintiff's argument that the infirmities in the expert's methodology constituted matters of weight for the jury to resolve rather than problems that would defeat admissibility:

> One last thought: Plaintiff argues "it is within the realm of the jurors to determine what weight to give the testimony of an expert proffered to them[.]" This approach would have the court cast aside its gatekeeping role. Because Rule 702 gives experts "wide latitude to offer opinions, including those that are not based on firsthand knowledge or observation[,]" "[e]xpert evidence can be both powerful and quite misleading[.]" "Thus, under *Daubert*, the district court performs an important gatekeeping role[.]" The recent amendment to Rule 702 confirms as much. "[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)." The court thus declines to abdicate its role as gatekeeper of expert testimony.[139]

Many more trial courts, in just the first year following the amendment to Rule 702, utilized the new "more likely than not" language to reinforce their gatekeeping authority and to

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136 *Id.* at *2.

137 *Id.*

138 Hickcox v. Hyster-Yale Grp., Inc., 715 F. Supp. 3d 1362, 1379–80 (D. Kan. 2024).

139 *Id.* (alterations in original) (citations omitted) (first quoting Daubert v. Merrell Dow Pharms., Inc., 509 U.S. 579, 592, 595 (1993); then quoting Hollander v. Sandoz Pharms. Corp., 289 F.3d 1193, 1204 (10th Cir. 2002); and then quoting FED. R. EVID. 702 advisory committee's note to 2023 amendment).

reject arguments that matters of expert basis and application are ones of "weight" for the jury.[140]

Some courts drew heavily on the Committee's work on expert overstatement to exclude essentially subjective and overblown opinions that could not be supported by an expert's relevant methodology. *State Automobile Mutual Insurance Co. v. Freehold Management, Inc.*, for example, involved a dispute regarding the damages caused by certain weather events, and a "forensic meteorologist" sought to testify to his conclusions about the weather-related damage.[141] Relying heavily on the 2023 amendment to Rule 702(d) and the Committee's work on forensic overstatement, the district court excluded the opinion:

> Further, given the admittedly subjective nature of Mr. Calaci's testimony, the admonition against forensic experts making "assertions of absolute or one hundred

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140 *See, e.g.*, Allen v. Foxway Transp., Inc., No. 21-CV-00156, 2024 WL 388133, at *3 (M.D. Pa. Feb. 1, 2024) ("A recent amendment to Rule 702 'clarif[ied] and emphasize[d] that expert testimony may not be admitted unless the proponent demonstrates to the court that it is more likely than not that the proffered testimony meets the admissibility requirements set forth in the rule.'" (alterations in original) (quoting FED. R. EVID. 702 advisory committee's note to 2023 amendment)); Jensen v. Camco Mfg., LLC, No. CV-23-00266, 2024 WL 4566781, at *1, *5 (D. Ariz. Oct. 24, 2024) (relying on the amendment, and emphasizing the preponderance of the evidence standard of proof, to conclude that expert testimony that a defective campfire lamp was the cause of an injury was inadmissible under Rule 702(c) and (d) and reasoning "[the expert] speculates that the flame must have been due to some transient defect he did not detect, but speculation is not a reliable engineering method under Rule 702(c)" and "relying on a speculative cause because it 'cannot be ruled out' is not a reliable application of an engineering method to the facts of this case under Rule 702(d)"); Boyer v. City of Simi Valley, No. 19-cv-00560, 2024 WL 993316, at *1–2 (C.D. Cal. Feb. 13, 2024) (relying on the amendment to enforce the requirement that the expert have sufficient facts or data and a reliable application); Hill v. Med. Device Bus. Servs., Inc., No. 21-cv-0440, 2024 WL 3696481, at *5 n.9 (M.D. Tenn. Aug. 7, 2024) (recognizing that it could no longer follow Sixth Circuit precedent that "demonstrates a contradiction of the burden of proof articulated in the text of Rule 702 as revised"); United States v. Diaz, No. 24-CR-0032, 2024 WL 758395, at *5 (D.N.M. Feb. 23, 2024) (deferring ruling on admissibility of law enforcement expert regarding drug activity in light of amendment that rejects any presumption of admissibility for expert testimony and requiring the government to make "a careful showing, by a preponderance of the evidence, that his testimony satisfies the requirements of Rule 702"); James v. Thompson/Ctr. Arms, Inc., No. 22-cv-01781, 2024 WL 1328738, at *2, *4 (N.D. Ohio Mar. 28, 2024) (excluding plaintiff's expert regarding an allegedly defective firearm in reliance on the amendment and reasoning "[t]his is not merely a question of weight, to be decided by a jury" and "[t]he expert's proponent bears the burden of demonstrating to *me*, by a preponderance of the evidence, 'the sufficiency of an expert's basis[] and the application of the expert's methodology'" (second alteration in original) (quoting FED. R. EVID. 702 advisory committee's note to 2023 amendment)).

141 State Auto. Mut. Ins. Co. v. Freehold Mgmt., Inc., No. 16-CV-2255, 2023 WL 8606773, at *15 (N.D. Tex. Dec. 12, 2023).

> percent certainty" is particularly relevant here in light of the 2023 amendments to Rule 702. During the hearing, Mr. Calaci also contradicted himself a number of times, and his testimony was circular, nonresponsive, and difficult to follow. He acknowledged that there was no certification for forensic meteorologists and that "[n]othing is absolute," but he expressed the opinion on more than one occasion that "I have a high degree of meteorological confidence that my analysis is correct."
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> . . . .
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> This testimony by Mr. Calaci not only underscores the admittedly subjective nature of his opinions and lack of evidence regarding the known or potential rate of error of the unexplained methodology used by him, it also undermines and contradicts his hearing testimony that he has a "high degree of meteorological confidence that [his] analysis" and conclusions are "correct." Additionally, the high level of confidence expressed by him regarding the accuracy of his opinions is inconsistent with the 2023 commentary to Rule 702, which cautions against forensic experts making "assertions of absolute or one hundred percent certainty or a reasonable degree of scientific certainty" when, as here, expert opinions or the bases for opinions are subjective and "thus potentially subject to error."[142]

In the forensic arena, courts have recognized that the 2023 amendment to Rule 702(d) requires them to take a closer look at the ultimate conclusions offered by an expert to ensure that they are ones that follow from the applicable methodology. In *United States v. Graham*, the district court acknowledged that the amendment to Rule 702(d) necessitated a closer examination of the opinion communicated by the prosecution's ballistics expert:

> The 2023 amendments clarified that, under Rule 702(d), courts must examine an expert's conclusion to ensure that it follows from the methodology the expert relied on. Before

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142 *Id.* at *16, *18 (alterations in original) (citations omitted) (quoting FED. R. EVID. 702 advisory committee's note to 2023 amendment); *see also* Davidson Surface/Air, Inc. v. Zurich Am. Ins. Co., No. 22 CV 547, 2024 WL 1674519, at *2, *4 (E.D. Mo. Apr. 18, 2024) (referencing amendment in limiting the conclusions to which an expert would be permitted to testify and reasoning, "[w]hile his opinion that a storm capable of producing two-inch hail passed over Davidson's building is based on sufficient facts and data with a tested methodology reliably applied to the facts, there is an insufficient factual basis to support his extrapolated opinion that two-inch hail actually struck the building on March 27, 2020," concluding, "I must therefore exclude that speculative opinion").

> the amendments, courts examined the methodology that an expert relied on but were reticent to analyze the conclusion itself. According to the advisory committee, such analysis was "an incorrect application of Rules 702 and 104(a)." As of December 2023, Rule 702(d) enlisted courts to take a more active role in analyzing the expert's conclusion.[143]

After reviewing the expert's conclusions about the ballistics identification in the case, the court permitted the expert to testify, consistently with the Department of Justice Uniform Language for Testimony and Reports (ULTR) for the Forensic Firearms/Toolmarks Discipline, that "the quality and quantity of corresponding individual characteristics is such that the examiner would not expect to find that same combination of individual characteristics repeated in another source and has found insufficient disagreement of individual characteristics to conclude they originated from different sources."[144] The court noted that the ULTR guidance would prohibit the examiner from opining that "two toolmarks originated from the same source to the exclusion of all other sources," that "examinations conducted in the forensic firearms/toolmarks discipline are infallible or have a zero error rate," or that "two toolmarks originated from the same source with absolute or 100% certainty."[145] Although the court's deference to the Department of Justice guidelines is not optimal, the court at least recognized and fulfilled its obligation to examine the expert's conclusion as required by the 2023 amendment—a clear improvement from allowing testimony of "100% certainty" or "a match."[146]

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143 United States v. Graham, No. 23-cr-00006, 2024 WL 688256, at *14 (W.D. Va. Feb. 20, 2024) (citations omitted) (quoting FED. R. EVID. 702 advisory committee's note to 2023 amendment).

144 *Id.* at *16.

145 *Id.*

146 *Id.*; *see also* United States v. Richardson, No. 19-20076, 2024 WL 961228, at *4, *11 (D. Kan. Mar. 6, 2024) (allowing a ballistics examiner to testify to a source identification, in accordance with DOJ guidelines); United States v. Alvin, No. 22-20244-CR, 2024 WL 149288, at *7 (S.D. Fla. Jan. 5, 2024) ("[C]onsistent with the limitations that recent federal rulings addressing this same issue have endorsed, we recommend that Mr. Barr's testimony be tethered to the directives of the DOJ's ULTR for the forensic toolmarks and firearms disciples. By doing so, the expert's testimony cannot be presented as absolute scientific certainty, and he must acknowledge and explain to the jury the significance of rates of error in the field of ballistics analysis." (citations omitted)). For an opinion refusing to reconsider a ruling on forensics in light of the amendment, see United States v. Pulliam, No. 21-CR-00156, 2024 WL 1142004, at *2 (D. Conn. Mar. 15, 2024) ("The amendments merely made more textually explicit the Court's obligations as they existed and continue to exist under applicable case law. In rendering the prior decision, the Court undertook the required gatekeeping analysis to assess the

Some opinions in the year following the amendment expressly acknowledged that the amendment has effectively overruled the outdated precedent announcing a presumption in favor of expert testimony or a "liberal" thrust to Rule 702 that favors admissibility of even "shaky" expert opinion testimony. The trial court in *Knight v. Avco Corp.* noted that Third Circuit precedent instructing that the Rule 702 standard is "not that high" and that "[t]he 'reliability and believability of expert testimony . . . is exclusively for the jury to decide'" was inconsistent with the preponderance requirement subsequently added to the Rule in 2023.[147] The court thus declined to follow Circuit precedent that predated the 2023 amendment and that conflicted with its clear mandate.[148] Following the 2023 amendment, the court substantially limited the testimony of two experts, in particular limiting the certainty that could be expressed by one of them.[149]

In sum, it is clear that the Advisory Committee's many years of labor on the issue of reliable expert testimony have borne some fruit and that the 2023 amendment to Rule 702 has

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validity of the methodology behind firearm and toolmark analysis before deciding its reliability and whether and how to limit the scope of the firearms source identification testimony."). For a case in which the court makes an effort under the 2023 amendment to control overstatement on fingerprint comparison, see United States v. Roper, No. 23-CR-1617, 2024 WL 4444304, at *5 (D.N.M. Oct. 8, 2024) (ruling fingerprint expert may not testify that the latent print is a "one hundred percent" match, but she may testify to an "identification" and "that she has never made a false positive identification").

147 Knight v. Avco Corp., No. 21-CV-00702, 2024 WL 3746269, at *6, *7 n.103 (M.D. Pa. Aug. 9, 2024) (alteration in original) (quoting United States v. Care Alts., 952 F.3d 89, 93 (3d Cir. 2020)).

148 *Id.* at *7 n.103 ("To the extent that *Care Alternatives* is inconsistent with Rule 702 as amended, the Court declines to follow it for the reasons stated herein.").

149 *Id.* at *31; *see also* United States v. Diaz, No. 24-CR-0032, 2024 WL 758395, at *4 (D.N.M. Feb. 23, 2024) ("In the past, courts have held that the Federal Rules of Evidence 'encourage the admission of expert testimony.' Thus, courts have operated on the presumption 'is [sic] that expert testimony is admissible.' However, amendments to Rule 702 recently took effect on December 1, 2023." (citations omitted) (quoting United States v. Channon, No. CR 13-966, 2015 WL 13666980, at *3 (D.N.M. Jan. 8, 2015))); Cleaver v. Transnation Title & Escrow, Inc., No. 21-cv-00031, 2024 WL 326848, at *2 (D. Idaho Jan. 29, 2024) (noting that "[t]he amendments are intended to correct some courts' prior, inaccurate application of Rule 702" and concluding that the court should be hesitant to take guidance from decisions rendered prior to the 2023 rule change). *But see* Hill v. Med. Device Bus. Servs., Inc., No. 21-cv-0440, 2024 WL 3696481, at *5 (M.D. Tenn. Aug. 7, 2024) ("To the extent that misguided cases of the type that concerned the Advisory Committee are among the cases cited by Plaintiff or decided by the Sixth Circuit, the Court does not have to disagree with them at this juncture, because the Court has otherwise found that Plaintiffs failed to meet their burden.").

already made a significant impact in many cases, both criminal and civil. District courts have embraced the gatekeeping role with respect to all the Rule 702 admissibility requirements, as required by Rule 104(a) and the preponderance standard. Trial judges have paid closer attention to the ultimate conclusions expressed by even reliable trial experts to ensure that they do not overpromise in the heat of trial on the results that can be achieved through a reliable application of their methodologies. But work remains to be done. As examined below, far too many federal courts have continued to repeat the very mistakes that the Rule 702 amendment was designed to correct.

B. Who, Me?: Courts That Need No Correction

The Advisory Committee Note to the 2023 amendment to Rule 702 specifically recognized that only "some courts" have applied Rule 702 incorrectly in the past.[150] Perhaps not surprisingly, most federal courts that have acknowledged the amendment have placed themselves in the camp that has applied Rule 702 correctly all along. Because these courts purport to have properly utilized the Rule 104(a) preponderance standard prior to the amendment, the amendment has had no impact on their admissibility determinations.[151]

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150 FED. R. EVID. 702 advisory committee's note to 2023 amendment.

151 *See* Richter & Capra, *supra* note 134, at 11–49 (setting forth cases that apply the amendment but state that it made no difference without using tropes); *see also* Hoog v. Dometic Corp., No. CIV-20-00272, 2024 WL 1234951, at *4 (W.D. Okla. Mar. 22, 2024) ("The 2023 amendments are intended to correct *some courts*' prior and inaccurate application of Rule 702. As reflected in the advisory committee's note, 'many courts have [incorrectly] 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,' which is an 'incorrect application of Rules 702 and 104(a).'" (alteration in original) (emphasis added) (quoting FED. R. EVID. 702 advisory committee's note to 2023 amendments)); McCoy v. DePuy Orthopaedics, Inc., No. 22-CV-2075, 2024 WL 1705952, at *9 (S.D. Cal. Apr. 19, 2024) ("Rule 702's 2023 amendments do not represent the sea change Defendants contend. The Advisory Committee wished to correct 'certain courts' by *clarifying* that Rule 104(a)'s preponderance of the evidence standard applies to each of Rule 702's requirements. And applying Rule 104(a) in making *Daubert* determinations is nothing new, as Defendants' own authority confirms. . . . The Court thus rejects Defendants' argument pertaining to Rule 702's 2023 amendments." (citations omitted) (quoting FED. R. EVID. 702 advisory committee's note to 2023 amendment)); Maldonado v. Town of Greenburgh, No. 18-CV-11077, 2024 WL 4336771, at *10 n.14 (S.D.N.Y. Sep. 26, 2024) ("Rule 702 was amended, effective December 1, 2023, to clarify that a proponent must demonstrate that proffered testimony meets the Rule's requirements by a preponderance of the evidence. That change was aimed at courts that 'had erroneously 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.'" (citation omitted) (quoting Johnson

For example, the court in *Greene v. Ledvance LLC* had to determine which version of Rule 702 to apply when the amendment took effect during the pendency of the action.[152] Although the parties disputed which version of Rule 702 should control, the court accurately recognized that the amended version of Rule 702 should apply immediately to the pending litigation.[153] But the court pointed out that its determination regarding the admissibility of the proffered accident reconstruction expert would be the same regardless of which version of Rule 702 it chose to apply:

> But the result would be the same regardless of whether the Court applied the current or prior version of Rule 702. The changes to the rule are not substantive. Rather, "[t]he amendment clarifies that the preponderance standard applies to the three reliability-based requirements added in 2000—requirements that many courts have incorrectly determined to be governed by the more permissive Rule 104(b) standard."[154]

Applying the Rule 104(a) preponderance standard of proof to all the Rule 702 admissibility requirements, the court excluded expert testimony regarding the cause of the accident because the proponent of the opinion had not demonstrated "more likely than not" that the expert's opinion was based on sufficient facts or data.[155] Several other courts similarly found that the amendment did not affect their admissibility determinations under Rule 702.[156]

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v. United States, No. 21-CV-2851, 2024 WL 1246503, at *3 n.7 (E.D.N.Y. Jan. 16, 2024))); Alter Domus, LLC v. Winget, No. 23-10458, 2024 WL 4904658, at *2 (E.D. Mich. Nov. 27, 2024) ("Rule 702 was amended in 2023 to reinforce the idea, sidestepped sometimes by some courts, that Evidence Rule 104(a) entrusts the court with deciding whether the admissibility criteria have been satisfied, rather than treating them as 'questions of weight' to be determined by the factfinder. However, 'nothing in the amendment requires the court to nitpick an expert's opinion in order to reach a perfect expression of what the basis and methodology can support. The Rule 104(a) standard does not require perfection.'" (citation omitted) (quoting FED. R. EVID. 702 advisory committee's note to 2023 amendment)).

152 Greene v. Ledvance LLC, No. 21-CV-256, 2023 WL 8635246, at *7 n.1 (E.D. Tenn. Dec. 13, 2023).

153 *Id.* ("The Court utilizes the current version of Rule 702 because it governs 'insofar as just and practicable, all proceedings then pending.'" (quoting Order Amending Federal Rules of Evidence, 344 F.R.D. 850, 851 (U.S. 2023))).

154 *Id.* (alteration in original) (citations omitted) (quoting FED. R. EVID. 702 advisory committee's note to 2023 amendment).

155 *See id.* at *7, *10.

156 *See, e.g.*, SEC v. Terraform Labs Pte. Ltd., 708 F. Supp. 3d 450, 463 n.4 (S.D.N.Y. 2023) ("The quoted language includes some small changes that took effect on December 1, 2023, but the Court's decision would be identical under both the old and the new versions."); Mann v. QuikTrip Corp., No. 22-CV-01060,

It is no surprise that a significant number of courts have interpreted the 2023 amendment to have no impact on their admissibility determinations. As explained above, the Rule 104(a) preponderance standard that applies to all preliminary determinations of admissibility has *always* applied to the Rule 702 admissibility requirements. The 2023 amendment to Rule 702 was designed to connect the dots between Rules 104(a) and 702 for the courts that had failed to apply them together as originally intended. Thus, the amendment *should have had no impact* on the many federal courts that exercised their gatekeeping authority appropriately and already demanded proof by a preponderance of all Rule 702 reliability requirements. That, of course, was the intent of the amendment—to affirm and reinforce the admissibility decisions that correctly applied the preponderance of the evidence standard under the 2000 amendment.

In many cases, district courts excluded expert opinion testimony after stating that their admissibility determinations were not affected by the 2023 modifications to Rule 702.[157] Because the amendment was designed to clarify the trial court's gatekeeping role and to ensure careful scrutiny of expert opinion testimony before it is admitted into evidence, there is little reason to be concerned that courts that *excluded* proffered expert testimony were overlooking the critical message of the 2023 amendment in stating that it "made no difference" to their rulings. There is also reason to be optimistic about the courts that made mixed rulings after opining that the amendment would have no impact on their determination. Where these courts admitted some but excluded other portions of proffered expert testimony, it appears that they carefully scrutinized the Rule 702 admissibility requirements under a preponderance

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2023 WL 9023262, at *2 n.1 (E.D. Mo. Dec. 29, 2023) ("The Advisory Committee Notes clarify that this amendment does not impose any new, specific procedures, but instead 'is simply intended to clarify that Rule 104(a)'s requirement applies to expert opinions under Rule 702.'" (quoting FED. R. EVID. 702 advisory committee's note to 2023 amendment)); Thomas v. State Farm Mut. Auto. Ins. Co., 712 F. Supp. 3d 1229, 1231 n.1 (E.D. Mo. 2024) ("The Court's decision regarding the admissibility of Plaintiff's expert would be the same under either version of the Rule.").

157 *See, e.g.*, *Thomas*, 712 F. Supp. 3d at 1231 n.1, 1236 (opinion excluded); *cf.* Johnson v. United States, No. 21-CV-2851, 2024 WL 1246503, at *3 n.7, *6 (E.D.N.Y. Jan. 16, 2024) (same); Jones v. Varsity Brands, LLC, No. 20-cv-02892, 2024 WL 102611, at *1–2 (W.D. Tenn. Jan. 9, 2024) (same); *Mann*, 2023 WL 9023262, at *2–3 (same).

standard and did not treat them as matters of weight to be sorted out by the jury.[158]

Even courts that *admitted* expert opinion testimony after opining that the 2023 amendment had no impact on their determination usually took pains to demonstrate that they had carefully applied the preponderance standard to all Rule 702 admissibility requirements. For example, in *Le v. Zuffa, LLC*, the court reviewed a prior class certification order in light of intervening developments, including the 2023 amendment to Rule 702.[159] In affirming prior rulings admitting expert opinion testimony, the court assured the parties that it had "carefully considered the recent amendment to Federal Rule of Evidence 702," and that "its prior Order on Class Certification found both that Dr. Singer's and Dr. Zimbalist's testimony was admissible to a preponderance and that they reflect a reliable application of the principles and methods to the facts of the case."[160] After "careful reconsideration" in light of the 2023 amendment to Rule 702, the court expressly found that its prior findings continued to stand.[161] Although the court did not alter its ruling as a result of the amendment, it recognized the import of the modifications to Rule 702 and affirmed that the prior ruling conformed to the preponderance standard now expressly enshrined in rule text.[162]

The Advisory Committee certainly recognized that many federal courts were properly applying the Rule 104(a) preponderance standard to the Rule 702 admissibility requirements prior to the amendment and were appropriately fulfilling the

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158 *See, e.g.*, Block v. Gen. Motors LLC, No. CV 22-556, 2023 WL 8651376, at *5 (E.D. Pa. Dec. 14, 2023) (rejecting a purported expert's qualifications); Cope v. Auto-Owners Ins. Co., No. 18-CV-0051, 2023 WL 8455203, at *1, *3–5 (D. Colo. Dec. 6, 2023) (mixed result); *Terraform Labs*, 708 F. Supp. 3d at 463–71 (same); Costello v. Mountain Laurel Assurance Co., No. 22-CV-35, 2024 WL 239849, at *4, *11 (E.D. Tenn. Jan. 22, 2024) (same).

159 *See* Le v. Zuffa, LLC, No. 15-cv-01045, 2024 WL 195994, at *5 & n.5 (D. Nev. Jan. 18, 2024).

160 *Id.* at *5 n.5.

161 *Id.*

162 *Id.*; *see also* Vasquez v. Johnson, No. 22-150, 2024 WL 2194871, at *1 (M.D. La. Feb. 7, 2024) ("The intent of the rule change is to focus and direct district courts to conduct the gate-keeping inquiry enunciated in *Daubert* and refrain from bypassing the admissibility determination in favor of a question of weight to be decided by a fact finder."); United States v. Pulliam, No. 21-CR-00156, 2024 WL 1142004, at *2 (D. Conn. Mar. 15, 2024) ("In rendering the prior decision, the Court undertook the required gatekeeping analysis to assess the validity of the methodology behind firearm and toolmark analysis before deciding its reliability and whether and how to limit the scope of the firearms source identification testimony.").

gatekeeping duty imposed upon them. It was to be expected, therefore, that there would not be a sea change in the admissibility of expert testimony as a result of the amendment. Still, the Advisory Committee proposed an amendment to Rule 702 because there were many federal courts that were *not applying* the correct preponderance standard.[163] In the wake of the amendment, very few courts have acknowledged that they might have been shirking their gatekeeping obligations under Rule 702 prior to the amendment.[164] It is necessary to monitor the courts that continue to freely admit expert opinion testimony after stating that the amendment has "made no difference" to ensure that the amendment is not being overlooked and ignored by the very courts to which it was targeted.[165] A decision stating that the amendment is immaterial is particularly suspect when the court sits in a circuit that has routinely held that the Rule 702 reliability standards present questions of weight. One example would be any case within the Eighth Circuit. Prior to the amendment, the Eighth Circuit often stated that defects in basis and application were almost always questions of weight and not admissibility.[166] To say that

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163 *See* Behrens & Trask, *supra* note 20, at 44 ("Despite the clear guidance provided by the 2000 amendments, many courts 'continued to apply significantly more lenient standards for expert testimony than Rule 702 permits.'" (quoting Bernstein, *supra* note 20, at 30)).

164 Even courts that hold that defects in basis or application generally present questions of weight and not admissibility fail to recognize that they are the target audience for the 2023 amendment. *See, e.g.*, Petersen v. United States, No. 21-CV-00097, 2024 WL 1116161, at *3–4 (D. Idaho Mar. 14, 2024) (remarking that "[t]he current version of Rule 702 corrects *some courts'* prior, inaccurate application of Rule 702" but then finding expert testimony admissible because the court "cannot find the facts and data on which Dr. Orlowski relied are wholly speculative, unfounded, or not credible" (emphasis added)).

165 *See, e.g.*, Su v. Reliance Tr. Co., No. CV-19-03178, 2023 WL 8715627, at *2 (D. Ariz. Dec. 18, 2023) (reasoning that the amendment change does not change the analysis and admitting expert opinion); Walden v. Bank of N.Y. Mellon Corp., No. 20-CV-01972, 2024 WL 343087, at *2 n.3 (W.D. Pa. Jan. 30, 2024) ("The amendment did not substantively change the legal standard applicable to *Daubert* motions and the Court will consider Dr. O'Neal's testimony under the amended standard."); Hoog v. Dometic Corp., No. CIV-20-00272, 2024 WL 1234951, at *3–4, *9 (W.D. Okla. Mar. 22, 2024) (reasoning that the amendment merely served to clarify and admitting expert testimony on fire origin).

166 *See In re* Bair Hugger Forced Air Warming Devices Prods. Liab. Litig., 9 F.4th 768, 778 (8th Cir. 2021) (stating that "the factual basis of an expert opinion goes to the credibility of the testimony, not the admissibility" (quoting United States v. Coutentos, 651 F.3d 809, 820 (8th Cir. 2011))); United States v. Finch, 630 F.3d 1057, 1062 (8th Cir. 2011) ("[D]oubts regarding whether an expert's testimony will be useful should generally be resolved in favor of admissibility." (alteration in original) (quoting Sphere Drake Ins. PLC v. Trisko, 226 F.3d 951, 954 (8th Cir. 2000))).

the amendment has made "no difference" in such a Circuit essentially ignores the amendment. And unfortunately, as seen in the next section, such cases exist.[167]

C. "Old Habits Die Screaming"[168]: Federal Courts that Cannot Let Go of the Erroneous Tropes About "Liberal" Admissibility

One of the most troubling findings in the federal opinions handed down in the year since the amendment to Rule 702 took effect is the number of cases that recognize the amendment—and even quote it and explain it—but then proceed to deploy old and inaccurate tropes about the "liberal" admissibility of expert opinion evidence to admit testimony that should

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167 *See, e.g.*, Ag Tech Res., Inc. v. Land O'Lakes, Inc., No. 22-CV-00188, 2024 WL 1236471, at *2 (S.D. Iowa Mar. 1, 2024). The case uses all the tropes that the Eighth Circuit has used to allow dubious expert testimony:

> The Court's gatekeeping role is designed to protect the jury "from being swayed by dubious scientific testimony." However, "[v]igorous cross-examination, presentation of contrary evidence, and careful instruction on the burden of proof are the traditional and appropriate means of attacking shaky but admissible evidence." "Courts should resolve doubts regarding the usefulness of an expert's testimony in favor of admissibility." Generally, "the factual basis of an expert opinion goes to the credibility of the testimony, not the admissibility." But "a district court may exclude an expert's opinion if it is 'so fundamentally unsupported' by its factual basis 'that it can offer no assistance to the jury.'"

Id. (alteration in original) (citations omitted) (first quoting *In re* Zurn Pex Plumbing Prods. Liab. Litig., 644 F.3d 604, 613 (8th Cir. 2011); then quoting Daubert v. Merrell Dow Pharms., Inc., 509 U.S. 579, 596 (1993); then quoting Marmo v. Tyson Fresh Meats, Inc., 457 F.3d 748, 758 (8th Cir. 2006); and then quoting *In re Bair Hugger*, 9 F.4th at 778). And so, even with deficiencies, the valuation expert was allowed to testify:

> Land O'Lakes identifies several material inaccuracies with Nalley's initial report, which Nalley corrected in his second report . . . . Land O'Lakes claims that Nalley's valuation would change significantly if the correct revenues were used. Land O'Lakes argues that Nalley's analysis contains so many errors that a jury could not figure out and rectify his mistakes.
>
> As with the revenue values and multipliers, the inaccuracies in Nalley's opinion go to credibility, not admissibility. Even with the inaccuracies, the Court determines that a jury could be assisted by Nalley's testimony. Land O'Lakes can address any inaccuracies on cross-examination.

Id. at *12–13 (citations omitted).

168 TAYLOR SWIFT, *The Black Dog*, *on* The Tortured Poets Department (Spotify, Republic Apr. 19, 2024).

be excluded.[169] Many of the bromides that have littered the federal reporters regarding the admissibility of expert opinion testimony are flatly inconsistent with the trial court's obligation to determine the admissibility requirements of Rule 702 by a preponderance of the evidence that was emphasized in the 2023 amendment.[170] The usual suspects include that: (1) Rule 702 has a "liberal thrust"; (2) Rule 702 "presumes" the admissibility of expert testimony; (3) the remedy for "shaky but admissible" evidence is cross-examination; (4) defects in an expert's basis and application generally present questions of weight; and (5) the focus of the court's inquiry should be on expert methodology and not on the application of that methodology. Even where they pay lip service to the 2023 amendment, the federal courts that enlist these tired and erroneous platitudes in their Rule 702 analysis fail to apply the 2023 amendment as intended and fail to mind the gate. To ensure that the recent amendment to Rule 702 fulfills its intended purpose, these tired tropes must be buried and discarded once and for all.

In the database of cases recognizing the amendment in the year following its enactment, a whopping 103 opinions emphasized that cross-examination should be the remedy for "shaky but admissible" expert opinion.[171] Of all the outdated platitudes

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169 *See, e.g.*, DoubleLine Cap. LP v. Odebrecht Fin., Ltd., No. 17-CV-4576, 2024 WL 1115944, at *5–6, *14 (S.D.N.Y. Mar. 14, 2024) (referring to the amended rule but using said tropes to allow an event study expert to testify).

170 *See, e.g.*, Frazier v. Eagle Air Med Corp., No. 22-CV-00300, 2024 WL 3952759, at *1 (D. Utah Aug. 27, 2024) (making the contradictory statement: "[a]lthough the standard under Rule 702 is 'liberal . . . regarding expert qualifications,' '[t]he proponent of expert testimony bears the burden of showing that the testimony is admissible'" (second alteration in original) (quoting Fowers Fruit Ranch, LLC v. Bio Tech Nutrients, LLC, No. 11-CV-00105, 2015 WL 2201715, at *1 (D. Utah May 11, 2015))); Roberson v. Kan. City S. Ry. Co., No. 22-CV-00358, 2024 WL 4502924, at *2–3 (W.D. Mo. Oct. 16, 2024) (citing the new rule but stating specifically that the Rule "favor[s] admission over exclusion"); Ballew v. StandardAero Bus. Aviation Servs., LLC, No. 21-CV-747, 2024 WL 245803, at *8 (M.D. Fla. Jan. 23, 2024) (allowing expert to testify to the cause of a plane accident even though he had conducted no testing and his methodology was "not the model for clarity," reasoning the expert's testimony was "shaky" but the remedy for such testimony is cross-examination).

171 Richter & Capra, *supra* note 134, at 63–84 (setting forth cases that "apply" the amendment but rely on the "shaky but admissible" trope). This statement is a truism, of course, because cross-examination *is* the proper remedy for any remaining concerns or questions regarding expert testimony that has satisfied the admissibility standards of Rule 702. But Rule 702 demands *reliable* expert testimony. "Shaky" testimony, by definition, cannot satisfy the Rule 702 reliability requirements. A proper characterization of the treatment of "shaky" expert testimony would read: "If the proffered expert testimony is shaky, it should not be admissible under the preponderance of the evidence standard."

about the admissibility of expert testimony, the "shaky but admissible" trope is arguably one of the most dangerous. This language clearly suggests that the Rule 702 requirements are matters of weight to be evaluated by the jury. This was precisely the misunderstanding that the 2023 amendment was designed to eradicate. A total of thirty-three district court opinions went even further, with some even stating that defects in an expert's basis or application *almost always* go to the weight to be given to an expert's opinion and not to its ultimate admissibility.[172] Another seventy-four cases discussing the reliability requirements of Rule 702 included a reference to a "liberal thrust" to the admissibility of expert opinion testimony.[173] Again, where the proponent of an expert opinion bears the burden of demonstrating the Rule 702 requirements by a preponderance of the evidence, there is no "liberal" approach to admissibility that creates a presumption in favor of admission. And thirteen opinions emphasized that the trial court's gatekeeping focus should be on an expert's methodology only, and not on the expert's application of that methodology to the facts of the particular case.[174] These courts are shockingly almost a quarter century behind the times because Rule 702(d), which requires a trial court to ensure "reliable application" of the expert's methods to the facts of the case, was added by the *2000 amendment* to Rule 702.[175] And these figures undercount the number of dangerous tropes littered throughout the federal reporters where a number of courts deployed more than one to decide the admissibility of expert opinion testimony.[176]

The repetition of these tired and inaccurate tropes about the admissibility of expert opinion testimony appears strongly correlated with a trial judge's decision to admit proffered expert testimony. Indeed, the presence of such language in an opinion served as a strong indicator that the proffered expert opinion ultimately would pass through the gate. For example, 88 of the 103 district court opinions that emphasized the admissibility of even "shaky" expert opinion testimony admitted all or

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172 *Id.* at 85–92 (setting forth cases applying the amendment but also stating that weakness in application or basis is a question of weight and not admissibility).

173 *Id.* at 50–62 (setting forth cases applying the amended rule but relying on the "liberal thrust" of Rule 702).

174 *Id.* at 93–96 (setting forth cases applying the amendment but also using the methodology but not conclusion trope).

175 *See* FED. R. EVID. 702(3), 529 U.S. 1189 (2000) (amended 2011).

176 A number of courts that utilized the "shaky but admissible" language also trotted out additional tropes.

a substantial part of a challenged expert's testimony.[177] Only fifteen of the opinions that relied on this defunct *Daubert* dicta excluded expert opinion testimony under Rule 702.[178] In courts that incorrectly recognized a "liberal thrust" to the admissibility standards of Rule 702, the admission ratio was also high—of the seventy-four cases reviewed, fifty-eight of these opinions admitted all or most of the proffered expert opinion testimony, and only ten excluded it on Rule 702 reliability grounds.[179] Of the courts that expressly continued to characterize defects in an expert's basis as a question of weight, twenty-nine admitted the proffered expert opinion testimony and only three even partially excluded it on Rule 702 reliability grounds.[180] Nine of the trial courts that declined to review an expert's application of methodology admitted *all* proffered expert testimony, while four of these trial courts produced mixed results, admitting and excluding in part proffered expert testimony.[181] Conversely, the rate of exclusion of expert opinion testimony was significantly higher in the district court cases that applied the amendment without relying on any of this loose and erroneous verbiage about the admissibility of expert opinion testimony, even those that claimed the amendment made no difference to their analysis. While eighty-five of these district court opinions admitted proffered expert testimony outright under the amended provision, eighty-nine excluded it outright, and sixty-one excluded

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177 *See* Richter & Capra, *supra* note 134, at 63–83 (setting forth cases that "apply" the amendment but rely on the "shaky but admissible" trope).

178 *Id.*

179 *See id.* at 50–62 (setting forth cases applying the amended rule but relying on the "liberal thrust" of Rule 702); *see also* San Bernardino Cnty. v. Ins. Co. of State of Pa., No. CV 21-01978, 2024 WL 1137959, at *2–3, *6 (C.D. Cal. Feb. 27, 2024) (citing the 2023 Committee Note for the proposition that an expert's basis and reliable application are threshold questions of admissibility but stating both that the rule "should be applied with a 'liberal thrust' favoring admission" and that "[t]he party seeking to submit expert testimony bears the burden of proving admissibility" and admitting virtually all the expert testimony over multiple objections of basis and application (quoting Messick v. Novartis Pharms. Corp., 747 F.3d 1193, 1196 (9th Cir. 2014))).

180 *See* Richter & Capra, *supra* note 134, at 85–92 (setting forth cases applying the amendment but also stating that weakness in application or basis is a question of weight and not admissibility). One court excluded the expert for reasons unrelated to the Rule 702 requirements. *See* Berry v. Hennepin Cnty., No. 20-CV-2189, 2024 WL 3495797, at *22–23 (D. Minn. July 22, 2024) (stating that factual basis is ordinarily a question of weight under Rule 702 but excluding experts on homelessness because they would be testifying to issues rendered moot, or to legal standards).

181 *See* Richter & Capra, *supra* note 134, at 93–96 (setting forth cases applying the amendment but also using the methodology but not conclusion trope).

some part of the proffered testimony.[182] Reliance on the old and outdated tropes about the admissibility of expert testimony was, therefore, strongly correlated with a court's ultimate decision to admit proffered testimony.

It is not at all surprising that the ratios of admissibility are so high when courts fall back on these tired tropes about expert opinion testimony in setting the table for their admissibility analysis. These truisms (more accurately "falsisms") serve as a signpost for the reader along the way to the court's ultimate destination. There is little reason to trot out the *Daubert*-inspired tropes about the "liberal" admissibility of "shaky" expert opinions when a court has decided to exclude expert testimony. Indeed, use of these phrases and quotes would be confusing and would work at cross-purposes with a ruling excluding an expert opinion. For example, the court in *Nehal LLC v. Accelerant Specialty Insurance Co.* paid no homage to these classic platitudes leading up to the exclusion of expert testimony:

> Under *Daubert*, expert testimony is admissible only if the proponent demonstrates by a preponderance of the evidence that: (1) the expert is qualified; (2) the evidence is relevant to the suit; and (3) the evidence is reliable. . . . "The proponent need not prove that the expert's testimony is correct, but she must prove by a preponderance of the evidence that the testimony is reliable."[183]

In contrast, the court in *Blue Buffalo Co. v. Wilbur-Ellis Co.*, a district court in the Eighth Circuit, heavily relied on these adages in support of a decision to greenlight proffered expert opinion testimony.[184] The court first deployed these truisms to improperly characterize the 2000 amendment to Rule 702: "Due to the liberalization of expert testimony admission standards signaled by *Daubert* and its progeny, and the codification of this trend in Rule 702, the Eighth Circuit has held that expert testimony should be liberally admitted."[185]

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182 *See id.* at 11–49 (setting forth cases that apply the amendment without using the tropes but state that it made no difference). In an additional six opinions in this category, courts did not ultimately rule on the admissibility of expert testimony. *See id.*

183 Nehal LLC v. Accelerant Specialty Ins. Co., No. SA-23-CV-00747-FB, 2024 WL 1134967, at *2 (W.D. Tex. Feb. 29, 2024) (quoting Moore v. Ashland Chem. Inc., 151 F.3d 269, 276 (5th Cir. 1998)).

184 Blue Buffalo Co. v. Wilbur-Ellis Co., No. 14-CV-859, 2024 WL 111712, at *9 (E.D. Mo. Jan. 10, 2024).

185 *Id.* at *4.

The court then offered incoherent and internally inconsistent pronouncements regarding the admissibility of expert opinion testimony under the 2023 amendment in successive sentences, noting correctly that "[t]he proponent of expert testimony must prove its admissibility by a preponderance of the evidence"[186] but then immediately stumbling into inaccurate tropes: "'Rule 702 reflects an attempt to liberalize the rules governing the admission of expert testimony' and favors admission over exclusion."[187] But the preponderance standard cannot coexist with the court's characterization of Rule 702 as liberally favoring admissibility. The fundamental feature of the preponderance standard is that it places the burden of satisfying the Rule 702 reliability requirements on the proponent of expert opinion testimony. By emphasizing this hurdle for the proponent of expert opinion testimony to surmount, the 2023 amendment to Rule 702 does not "favor" admissibility. Relying on these erroneous and internally inconsistent Rule 702 standards, the *Blue Buffalo* court found the expert's testimony admissible, concluding that: "The factual basis for Buchakjian's testimony, including his failure to consider other identified suppliers of poultry meal, goes to the credibility of his testimony and is certainly fodder for vigorous cross-examination. It is not, however, under these circumstances a basis to exclude the testimony as inadmissible."[188] Therefore, notwithstanding the clarification of the preponderance standard of proof in the

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186 *Id.*

187 *Id.* (quoting Lauzon v. Senco Prods., Inc., 270 F.3d 681, 686 (8th Cir. 2001)).

188 *Id.* at *5. For other cases recognizing the amendment, but using the tropes to admit questionable expert testimony, see Ratcliffe v. BRP U.S., Inc., No. 20-CV-00234, 2024 WL 4681535, at *6 (D. Me. Nov. 5, 2024) (acknowledging amendment but citing *Daubert* for the proposition that shaky but admissible evidence is properly addressed by vigorous cross examination, contrary evidence, and careful instruction); Roberson v. Kan. City S. Ry. Co. No. 22-CV-00358, 2024 WL 4502924, at *6–7 (W.D. Mo. Oct. 16, 2024) ("Whether [the expert's] method *accurately* captures the wages employees lost because of the alleged FMLA violations is a question of fact for the jury at the damages stage. . . . Since the expert testimony is not 'so fundamentally unsupported' by its factual assumptions, the Court will not exclude it on that basis. 'Defendants will have ample opportunity at trial to challenge [the expert's] opinions and the factual bases upon which they rest.'" (second alternation in original) (citations omitted) (first quoting Hose v. Chi. Nw. Transp. Co., 70 F.3d 968, 974 (8th Cir. 1995); and then quoting A.H. v. St. Louis Cnty., No. 14-CV-2069, 2016 WL 4269548, at *4 (E.D. Mo. Aug. 15, 2016))); Dennis v. Andersons, Inc., No. 20-CV-4090, 2024 WL 4433471, at *7, *9 (N.D. Ill. Oct. 7, 2024) (admitting expert testimony involving market manipulation and event studies despite defendant opposition relying on the 2023 amendment, agreeing with the plaintiff that the statistical significance challenge goes to weight not admissibility, and finding that the expert report is "closer to shaky than unreliable").

2023 amendment to Rule 702, a significant number of district courts failed to comprehend their gatekeeping duties and continued to rely on inaccurate and outdated bromides on their path to admitting expert opinion testimony.

D. Ignorance is Not Bliss: Federal Courts That Have Failed to Recognize the 2023 Amendment

An amendment to the Federal Rules of Evidence cannot be expected to have much impact if federal courts are not aware of it. Somewhat shockingly, 316 district court cases—almost *half* of the district court opinions published in the year following the amendment—made no reference to it at all and applied the prior version of Rule 702 as if there had been no intervening change.[189] Improving federal courts' uptake of rulemaking accomplishments is critical in ensuring the success of amendments to the Federal Rules of Evidence.

Most of the rulings that failed to acknowledge the 2023 amendment to Rule 702 were made in cases that had been initiated prior to December 1, 2023.[190] Courts and litigants may be inclined to ignore Evidence Rules that come into effect midstream. But the Rules Enabling Act provides that new rules may be made immediately applicable to existing proceedings unless their application "would not be feasible or would work injustice."[191] And the Order from the Supreme Court, transmitting the proposed amendment to Congress, dated April 24, 2023, specifically states that the amendment "shall govern in all proceedings thereafter commenced and, insofar as just and practicable, all proceedings then pending."[192] There is certainly nothing "unjust" in applying the 2023 amendment to Rule 702 to pending litigation, because it simply corrected mistaken interpretations of the admissibility requirements applicable

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189 *See* Richter & Capra, *supra* note 134, at 97–133 (setting forth cases using the old version of Rule 702 after December 1, 2023).

190 *Id.*

191 28 U.S.C. § 2074(a).

192 Order Amending the Federal Rules of Evidence, 344 F.R.D. 850 (U.S. 2023); *see, e.g.*, Ziegler v. Polaris Indus., Inc., No. 23-CV-00112, 2024 WL 482212, at *2 n.3 (W.D.N.C. Feb. 7, 2024) (noting that the amendment would "govern in all proceedings . . . commenced [after December 1, 2023,] and, insofar as just and practicable, all proceedings then pending" (alteration in original) (quoting *id.*)); United States v. DynCorp Int'l LLC, 715 F. Supp. 3d 45, 54 n.5 (D.D.C. 2024) ("Although the parties filed their *Daubert* motions before this amendment, the Court will apply Rule 702 as amended because doing so would not 'result in manifest injustice.'").

under the prior version of the Rule.[193] One might credibly argue that busy federal judges cannot be expected to track amendments in real time and that a trial court ruling on the admissibility of expert opinion testimony on December 3, 2023 might be excused for its oversight. But the failure to recognize that Rule 702 had been amended extended into the final months of 2024.[194] To be sure, the opinions published in the year following the effective date of the amendment show a downward curve with respect to the failure to acknowledge the amendment. But one year out from the amendment, federal courts continue to overlook the important changes made to Rule 702 since 2000. While ninety district court opinions cited the prior version of Rule 702 in the first three months after the effective date of the amendment, fifty-six opinions continued to reference the defunct version of Rule 702 in the final months of the year.[195] An entire calendar year should be ample time for federal courts (or for their law clerks) to learn that one of the most important rules in the Federal Rules of Evidence has been amended.[196]

That so many federal district courts failed to appreciate that Rule 702—arguably one of the most significant provisions in the Federal Rules of Evidence—had been amended suggests that salutary modifications to the Rules are insufficient standing alone to improve the consideration of expert opinion testimony. Additional measures are clearly needed to get the word out when an amendment is enacted.

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193 *See* Richter & Capra, *supra* note 134, at 97–133 (setting forth cases using the old version of Rule 702 after December 1, 2023). For a case where it makes sense not to apply the new rule, see D'Pergo Custom Guitars, Inc. v. Sweetwater Sound, Inc., 111 F.4th 125, 140 n.11 (1st Cir. 2024) ("In December 2023, two years after the trial, Rule 702 was amended. In evaluating Sweetwater's claim of error, we apply the version of Rule 702 in effect at the time of the bench trial.").

194 *See, e.g.*, SEC v. SBB Rsch. Grp., LLC, No. 19-CV-6473, 2024 WL 4894315, at *1 (N.D. Ill. Nov. 26, 2024) (failing to recognize the amendment); Cashman Dredging & Marine Contracting Co., LLC v. Belesimo, 759 F. Supp. 3d 120, 155 (D. Mass. 2024) (same).

195 *See* Richter & Capra, *supra* note 134, at 97–133 (setting forth cases using the old version of Rule 702 after December 1, 2023).

196 In another strange twist, about a dozen federal opinions expressly recognized that Rule 702 had been amended but failed to note the important change to Rule 702(d) aimed at regulating expert overstatement. *See, e.g.*, Beaubien v. Trivedi, No. 21-11000, 2024 WL 2891497, at *4–5 (E.D. Mich. June 10, 2024) (quoting the first part of the amended rule but the unamended version of Rule 702(d)); Koen v. Monsanto Co., No. 22-CV-209, 2024 WL 2948652, at *3 (W.D. Tex. June 11, 2024) (same).

III
Ensuring Appropriate Gatekeeping Under the 2023 Amendment to Rule 702

The first year of operation under the 2023 amendment has shown some promise. But more work clearly needs to be done to ensure the success of the important gatekeeping amendment to Federal Rule of Evidence 702.

Given the many federal courts that continued to rely on inaccurate tropes about the liberal admissibility of expert opinion testimony, the Evidence Advisory Committee may have been well advised to specifically reject those bromides in the Committee Note accompanying the amendment. As explained above, this possibility was raised by the Reporter in a memorandum to the Advisory Committee in the spring of 2022.[197] The Committee ultimately declined to include admonitions against specific inaccurate characterizations of the Rule 702 standard in the Committee Note, however. The Committee incorrectly predicted that such admonitions would be unnecessary given that these improper characterizations of a trial court's task under Rule 702 are so patently inconsistent with the preponderance standard expressly added to the text of the Rule by the 2023 amendment.[198] Further, the Committee sought to avoid any appearance of placing a thumb on the scale against admission of expert opinion testimony given substantial opposition to the amendment from the plaintiffs' bar.[199] Rule 702 certainly permits the use of expert opinion testimony to build critical components of a party's case once the proponent has shown its reliability by a preponderance. Hindsight suggests that specific rejection of inaccurate tropes about the liberal admissibility of expert opinion testimony may have strengthened the Committee Note and the 2023 amendment.

Removing some qualifying language from the Committee Note might also have improved judicial adherence to the

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197 *See* Memorandum from Daniel J. Capra & Liesa L. Richter to Advisory Comm. on Evidence Rules, *supra* note 114, at 148.

198 *Id.*

199 *Id.* at 149 ("Under the amendment, it is quite clear that the statements above are wrong as a simple matter of textual analysis. It seems that including the paragraph above is gilding the lily—with the potential cost that the Committee will appear to be stretching to put an extra thumb on the scale, on one side of the v. Why do that, given all the pushback from the plaintiff's bar?").

amendment. The Committee Note may have blunted the impact of the amended language in the following passages:

> Some challenges to expert testimony will raise matters of weight rather than admissibility even under the Rule 104(a) standard. For example, if the court finds it more likely than not that an expert has a sufficient basis to support an opinion, the fact that the expert has not read every single study that exists will raise a question of weight and not admissibility. . . .
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> . . . .
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> Nothing in the amendment imposes any new, specific procedures. Rather, the amendment is simply intended to clarify that Rule 104(a)'s requirement applies to expert opinions under Rule 702.[200]

These statements were added to temper the note in an effort to allay concerns of the plaintiffs' bar that the amendment was intentionally harsh and forbidding to the admission of expert testimony.[201] In retrospect, such tempering provisions can easily be exploited by a court that wishes to apply a "liberal thrust" to the admission of expert testimony. A trial court could draw on the first point to reach a holding that a defect in an expert's opinion remains, in the end, a question of weight and not admissibility.[202] And the second point may be enlisted by a court to say, as many have, that the amendment makes no difference to the result, because no substantive change has been made.[203] Although hindsight suggests that it may have been prudent to include warnings against improper tropes in the Committee Note and to remove tempering provisos, it is now too late to make helpful modifications to the Note. As explained above, Committee Notes cannot be amended without a corresponding amendment to rule text. And it will be many years before another amendment to Rule 702 can be considered. Any measures taken to improve the operation of amended

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200 FED. R. EVID. 702 advisory committee's note to 2023 amendment.

201 *See* Spring 2022 Minutes, *supra* note 111, at 5.

202 *See, e.g.*, Frazier v. Eagle Air Med. Corp., No. 22-CV-00300, 2024 WL 3952759, at *3 (D. Utah Aug. 27, 2024) (relying on language similar to the qualifying passage in the Committee Note to rule that weaknesses in an expert's facts or data raise questions of weight and not admissibility).

203 *See, e.g.*, Slaughter v. Edney, No. 20-CV-789, 2024 WL 4149762, at *2–4 (S.D. Miss. Sep. 11, 2024) (stating that the amendment does not affect the result because it "does not change the existing law" and relying on the "shaky but admissible" trope to find sufficient facts/data even though important sources were omitted).

Rule 702, therefore, will have to come from outside the formal rulemaking process.

First, it is important to highlight the passage of time as a factor likely to improve uptake of the 2023 amendment. While the significant number of district courts failing to recognize that Rule 702 was amended a year after the effective date is somewhat unexpected, it often takes federal courts and litigants some time to absorb and incorporate rules amendments. It also often takes time for lawyers to embrace new positions. For example, Federal Rule of Evidence 502 was enacted by Congress in 2008.[204] That rule was designed to provide protection from unforgiving common law rules of privilege waiver, in order to reduce the cost of reviewing electronic data for production in discovery.[205] Because it offered an opportunity for cost savings, Rule 502 should have been readily embraced by practicing lawyers. Yet lawyers long accustomed to painstaking eyes-on review of all potentially privileged information were slow to adapt.[206] In 2013, five full years after Congress added the new provision, the Evidence Advisory Committee sponsored a symposium designed to "reinvigorate" Rule 502 and promote its use.[207]

Certainly, similar programs and symposia designed to educate courts and counsel may enhance the operation of the recent amendment to Rule 702. To have maximum effect, such education should delve into the reason for the amendment, as well as the intent of the drafters to solidify the trial judge's role as gatekeeper of all Rule 702 reliability requirements. Although it has routinely sponsored symposia in aid of rulemaking efforts, the Evidence Advisory Committee is not fashioned as a vehicle to produce education programs, notices, and the like. The Administrative Office of the Federal Courts publishes a pamphlet of new rules annually that is widely distributed to the bench and bar, and that is included in advance sheets of the West Federal Reporter. This routine communication of all rules amendments is certainly a critical component of publicizing rules changes. The Administrative Office could consider making modifications to this pamphlet to make the publication

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204 *See Reinvigorating Rule 502*, 81 FORDHAM L. REV. 1533, 1535 (2013).

205 FED. R. EVID. 502(d)–(e) (allowing clawback of privileged materials previously produced with an appropriate agreement or court order).

206 *See* Liesa L. Richter, *Making Horses Drink: Conceptual Change Theory and Federal Rule of Evidence 502*, 81 FORDHAM L. REV. 1669, 1670 (2013) (analyzing the underuse of Rule 502).

207 *See generally Reinvigorating Rule 502*, *supra* note 204.

more user-friendly and more likely to clearly and succinctly communicate rules changes. But this pamphlet is one of innumerable missives that a federal judge receives from the Administrative Office. The Administrative Office may need to take additional, more aggressive steps to bring new rules to the attention of the overwhelmed federal judiciary. Other efforts could include supplemental email notifications to judges and to their law clerks about specific updates to the Federal Rules.

When it comes to meaningful education about the fact and import of amendments to all the Federal Rules, the Federal Judicial Center (FJC) is the institution that is built to have the greatest impact. The FJC is the research and education arm of the federal judiciary.[208] The FJC provides education programs to judges on a wide variety of topics.[209] To date, there has been no systematic effort to promote education tailored specifically to new amendments to the Federal Rules that federal judges rely upon daily to perform their important roles. Because all amendments to the Federal Rules become effective on December 1 of the year in which they are transmitted to Congress according to the Rules Enabling Act, the FJC could host annual programs throughout the country in the first week of December to highlight all recent changes to the national rules of procedure.[210]

Because of the outsized importance of expert opinion evidence to contemporary litigation, the Federal Judicial Center already prepares an important publication to help judges navigate the intricacies of expert testimony in numerous complex fields. The Reference Manual on Scientific Evidence "assists judges in managing cases involving complex scientific and technical evidence by describing the basic tenets of key scientific fields from which legal evidence is typically derived and by providing examples of cases in which that evidence has been used."[211] The Reference Manual is currently in its third edition,

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208 *See* FED. JUD. CTR., https://www.fjc.gov [https://perma.cc/762Z-4AHM] (last visited Aug. 4, 2025) ("The Federal Judicial Center is the research and education agency of the judicial branch of the U.S. government.").

209 *Id.* ("The Center educates federal judges and judiciary staff on law, case management, leadership, ethics, and court administration, using in-person programs, online resources, videos, and publications.").

210 *See* 28 U.S.C. § 2074(a) (stating that rules "take effect no earlier than December 1 of the year in which such rule is so transmitted"); *see also* Order Amending the Federal Rules of Evidence, 345 F.R.D. 825 (U.S. 2024) (indicating Evidence Rules amendments that would become effective on December 1, 2024).

211 *Reference Manual on Scientific Evidence, Third Edition*, FED. JUD. CTR. (Jan. 1, 2011), https://www.fjc.gov/content/reference-manual-scientific-evidence-third-edition-1 [https://perma.cc/VY5S-BRHF].

which was published almost a decade and a half ago in 2011.[212] This very dated version of the Reference Manual obviously contains no discussion of the 2023 amendment to Rule 702 that now governs judicial decision making with respect to expert opinion testimony. But a committee of the National Academy of Sciences has worked with the FJC to prepare a fourth edition, with publication expected imminently.[213] The fourth edition will contain an extensive introduction that is devoted in large part to the 2023 amendment to Rule 702 and its application of the preponderance of the evidence standard.[214] Every member of the federal judiciary receives a copy to aid in the consideration of expert evidence. This upcoming update to the Reference Manual also promises to expose judges to the important messages of the 2023 amendment to Rule 702.

In addition to updating these traditional methods of notifying important constituencies of amendments, improvements could be made to the manner in which ubiquitous electronic research services, such as Westlaw and Lexis, signal rules' changes. As they must, judges and their law clerks rely heavily on the controlling precedent in the relevant circuit when drafting opinions ruling on the admissibility of expert testimony. Where the controlling *case law* cites Federal Rule of Evidence 702 and explains its interpretation in the circuit, judges and clerks may see little need to hunt through the rulebook itself to understand the import of the provision.[215] When an amendment to a Federal Rule of Evidence alters the interpretation of a particular provision, the federal cases applying *prior* versions of the provision are not "overruled" in any strict sense of the term. Accordingly, electronic research services do not include any notation in precedent that preceded an amendment to signal that the Federal Rule of Evidence applied in the case has since been amended.[216] Without anything in the case law to

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212 *Id.*

213 *Science for Judges—Development of the Reference Manual on Scientific Evidence, 4th Edition*, NAT'L ACADS., https://www.nationalacademies.org/our-work/science-for-judges-development-of-the-reference-manual-on-scientific-evidence-4th-edition [https://perma.cc/AHC3-T5PG] (last visited Aug 1, 2025).

214 Liesa L. Richter & Daniel J. Capra, *Introduction to* FED. JUD. CTR., REFERENCE MANUAL ON SCIENTIFIC EVIDENCE (4th ed. forthcoming 2025).

215 *See* Bernstein & Lasker, *supra* note 21, at 8 (noting that courts have routinely relied on pre-2000 precedent rather than on the text of Rule 702 in analyzing admissibility of expert opinion testimony).

216 For example, the Westlaw version of *Daubert* cites and quotes the 1975 version of Federal Rule of Evidence 702 without any flag or notation within the opinion alerting readers that the referenced Rule has been amended.

alert them to a potential change, judges may bake pre-amendment standards and analysis into post-amendment opinions. This would explain the many, many federal courts that failed to recognize that there had been *any* change to Rule 702 in the year following the 2023 amendment, as well as the courts that continued to repeat outdated and erroneous platitudes about the liberal admissibility of expert opinion testimony.[217]

It would undoubtedly assist courts and litigants in recognizing and applying amendments to the Federal Rules of Evidence (and other Federal Rules) if electronic research services began including a "flag" in pre-amendment opinions to indicate that a cited rule has since been altered.[218] Older, pre-amendment cases in electronic research databases already include hyperlinks to the Federal Rules of Evidence cited that take a researcher to the *current* versions of the Rules.[219] But without any indication of a rule change, even the most competent legal researcher may not follow the hyperlink to review rule language that already appears to be set forth in an opinion. Adding a flag to alert legal researchers of an intervening amendment would encourage them to follow the link to the new provision and to a better understanding of recent developments. Given the increasing sophistication of electronic legal research engines, creating a feature that would flag rules' amendments seems eminently achievable, as well as desirable.[220]

Finally, the most promising source of judicial education on the existence of new Evidence Rules is *counsel*. Lawyers debating the admissibility of expert opinion testimony in federal court have an incentive and, indeed an obligation, to remain up to date on rule changes that may be beneficial or detrimental to the client's position.[221] Obviously, relying on counsel to educate the federal judiciary about amendments to the Federal Rules of Evidence is not foolproof or sufficient. As explored above, there were a stunning 316 cases in the year following the amendment

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217 *See* Figure 1, *supra*.

218 Many thanks to the Hon. Jesse M. Furman, Chair of the Evidence Advisory Committee, for this thoughtful suggestion.

219 For example, clicking on the hyperlink to Federal Rule of Evidence 702 within the Supreme Court's 1993 analysis in *Daubert* on the Westlaw database takes a researcher to Rule 702 as it exists today.

220 The Reporter for the Evidence Advisory Committee has contacted representatives of Westlaw and Lexis to inquire into the feasibility of an electronic flagging feature for Evidence Rules in old case law.

221 MODEL RULES OF PRO. CONDUCT r. 1.1 cmt. 8 (A.B.A. 2023) ("To maintain the requisite knowledge and skill, a lawyer should keep abreast of changes in the law and its practice . . . .").

to Rule 702 in which *both* the lawyers and the court were seemingly in the dark about the important amendment.[222] In the end, though, it is the responsibility of capable attorneys to bring amendments to the attention of the court. With appropriate continuing legal education and diligence, lawyers should ultimately aid in the uptake of amended Federal Rule of Evidence 702.

Conclusion

The potential futility of painstaking efforts to lead horses to water is the rulemakers' lament.[223] And the multitude of federal opinions that have failed to recognize the 2023 amendment to Rule 702, or that have flagrantly ignored its clear mandate, is disheartening to say the least. But many federal courts did seize upon the amendment in the first year following its enactment to exercise their gatekeeping authority carefully. When properly applied, the 2023 amendment to Rule 702 does much to protect unsuspecting lay jurors from unreliable but highly influential "expert" testimony. With additional efforts and resources aimed at educating both judges and lawyers, and with the benefit of time, Rule 702 as amended should cement the role of the federal trial judge as the true guardian of the gate.

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222 *See* Figure 1, *supra* (reflecting 316 cases, 41% of Rule 702 cases, quoting the old version of the Rule).

223 Richard Marcus, *The Rulemakers' Laments*, 81 Fordham L. Rev. 1639, 1640, 1644 (2013).