CONQUERING THE PROVINCE OF THE JURY: EXPERT TESTIMONY AND THE PROFESSIONALIZATION OF FACT-FINDING

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I. INTRODUCTION

In our judicial system, the jury functions as the ultimate and exclusive finder of fact.[1] Originally this meant that jurors were members of the community who already knew about the subject matter of the case, and

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1. Juries also serve other functions: they serve as the "[v]oice of the [c]ommunity," occasionally nullifying verdicts in the face of unpopular laws, *see, e.g.*, Anne Bowen Poulin, *The Jury: The Criminal Justice System's Different Voice*, 62 U. CIN. L. REV. 1377, 1392–93 (1994), and they provide a sense of legitimacy to the judicial process, since (in theory) verdicts are easier to accept if they are reached by a cross-section of the community.

who would be expected to gather their own information about the case and report back to the court.[2] Today, of course, most jurors begin a trial ignorant of the facts (or at least willing to keep an open mind about the facts), but their time-honored role as the sole arbiters of the facts remains the same.[3]

When determining the facts, juries make inferences based on the evidence, and weigh probabilities to choose which conclusions are most likely to be true. These inferences may be based on their own logical deductions, their personal experiences, their gut instincts, or (most likely) a combination of all three. The inferences range from the relatively straightforward, such as determining the cause of a tire blowout, to the nearly impossible, such as evaluating the sincerity of a criminal defendant who takes the stand and swears that he is innocent.

For the most part, jurors make these evaluations on their own, assisted only by the rather unhelpful generalities of the jury instructions[4] and the overtly partisan suggestions from the parties' lawyers. Most witnesses are barred from giving opinions or making inferences based on what they have seen or heard; they are only allowed to testify as to what they have perceived directly.[5] The testimony given by expert witnesses, who use their scientific, technical, or other form of expertise to interpret facts and draw conclusions for the jury, is the only exception to this rule.[6] For example, an automotive engineer can examine the wreckage of an automobile and tell the jury her opinion about whether the brake failure was caused by a defect at the factory or poor maintenance by the owner—assuming the expert uses a science or methodology that is found to be reliable under *Daubert v. Merrell Dow Pharmaceuticals*.[7] Likewise, a psychologist could offer his opinion about the likelihood that an eyewitness's perception or memory were adversely affected by

2. *See* Megan Healy McClung, *The Importance of Juries: A Brief History of the Jury*, 19 CBA RECORD 35, 36–37 (2005).

3. Standard jury instructions still refer to the jurors as the sole judges of the facts. *See, e.g.*, Ninth Circuit Manual of Modern Jury Instructions, Criminal § 1.01 (1995) ("It will be your duty to decide . . . what the facts are. You, and you alone, are the judges of the facts.").

4. *See, e.g.*, Ninth Circuit Manual of Modern Jury Instructions, Criminal, Comment to § 3.06 (1995) ("The word 'infer'—or the expression 'to draw an inference'—means to find that a fact exists based on proof of another fact. . . . [I]n deciding whether to draw an inference, you must look at and consider all the facts in light of reason, common sense and experience. After you have done that, it is for you to decide whether to draw a particular inference.").

5. *See* FED. R. EVID. 701 (lay witness' testimony "in the form of opinions or inferences is limited to those opinions or inferences which are (a) rationally based on the perception of the witness . . . .").

6. *See id*. 702.

7. 509 U.S. 579, 589–92 (1993).

stress or post-event information—again, assuming the testimony passed the *Daubert* standards. And (at least in theory) a polygraph technician whose methods passed the *Daubert* test[8] could give the jury her opinion about whether test results indicate that the defendant is lying on the stand.

All three of these examples describe experts using their expertise to suggest which inferences are most likely to be true to help the jury draw necessary inferences. But even if we assume that all three of these experts base their conclusions on reliable methods, most courts will not treat them the same way. The automotive engineer will almost certainly be allowed to testify;[9] the psychologist might or might not;[10] and, in most jurisdictions, the polygraph technician will be barred.[11]

This inconsistency results from a centuries-old doctrine that forbids any witness from "invading the province of the jury." This doctrine arose out of the idea that some aspects of the fact-finding process—such as making inferences, determining the "ultimate issue" in the case, or evaluating credibility—are so basic to the jury's role that no witness should offer advice or assistance about them. This Article will argue that the "province-of-the-jury prohibition" is poorly defined, lacks a legitimate doctrinal basis, and should be abolished in its entirety, so that every piece of expert testimony is evaluated under the same standards and admitted or excluded based on the reliability standards of *Daubert*.

Part II of the Article briefly sketches the history of expert testimony in common law courts,[12] while Part III examines the history of the province-of-the-jury prohibition, including its application to the "ultimate issue" question.[13] These Parts demonstrate that the history of the province of the jury prohibition is a one of slow erosion: as courts have become more and more comfortable with experts over the past century, experts have gained the right to assist the jury on almost every issue. As Part III shows, the only surviving remnant of the province-of-

8. Of course, many courts have determined that polygraph analysis does not comport with the *Daubert* standards, although some courts have determined that it does if the proper procedures are followed. *See infra* notes 152–56 and accompanying text. For the most part, this Article will set aside the question of reliability and ask whether the province of the jury prohibition should apply to bar testimony even if the testimony has been found to be reliable under *Daubert.*

9. *See, e.g.*, Williams v. Gen. Motors Corp., No. 93 C 6661, 1996 U.S. Dist. LEXIS 19524 (N.D. Ill. 1997).

10. *See infra* notes 114–27 and accompanying text.

11. *See infra* notes 15959–76 and accompanying text.

12. *See infra* notes 17–33 and accompanying text.

13. *See infra* notes 34–80 and accompanying text.

the-jury prohibition involves experts on credibility.[14] Part IV discusses the two categories of credibility experts: eyewitness experts, who have recently gained acceptance in most courts, and polygraph evidence, which is the current (and perhaps final) battleground for the admissibility of evidence that was once thought to invade the province of the jury.[15] Finally, Part V discusses and refutes the numerous justifications for maintaining the prohibition on testimony that infringes on the province of the jury.[16]

II. THE RISE OF THE EXPERTS

The history of expert testimony, broadly viewed, inexorably leads towards enlarging the permissible scope of expert testimony. In ancient common law, "opinion testimony" was never discussed in the case law for the simple reason that it never occurred to the courts to allow such a thing.[17] The requirement of personal knowledge was well-established by the seventeenth century,[18] and an early evidence hornbook from the nineteenth century noted that it "has been said that a witness must not be examined in chief as to his *belief* or *persuasion* but only as to his *knowledge* of the facts."[19] However, during this same period courts used "skilled witnesses" to help resolve technical questions; these witnesses generally would not testify in front of a jury but rather would give an opinion to the judge, who would then instruct the jury accordingly.[20] By

14. The "province-of-the-jury" prohibition on credibility experts is well documented in Mark S. Brodin, *Behavioral Science Evidence in the Age of* Daubert: *Reflections of a Skeptic*, 73 U. CIN. L. REV. 867, 916–17 (citing half a dozen cases that maintain the bar on credibility experts). Professor Brodin himself supports this prohibition, noting that:

> It is axiomatic that assessing the credibility of witnesses is the sole prerogative of the jury. Indeed, it has been said that the genius of the jury trial system is to have twelve laypersons perform this task, each bringing his or her common sense and experience to the table, rather than relying on a single judge.

Id.

15. *See infra* notes 81–178 and accompanying text.

16. *See infra* notes 179–246 and accompanying text.

17. 7 JOHN HENRY WIGMORE, WIGMORE ON EVIDENCE § 1920 (2d ed. 1923).

18. *Id.* § 657. In a seventeenth century case Lord Coke wrote that "it is no satisfaction for a witness to say that he "'thinketh'" or "'persuadeth himself' . . . . " *Id*. § 1917 (quoting Adams v. Canon, Dyer 53b (1622)).

19. THOMAS STARKIE, EVIDENCE 173 (1824).

20. *See* 7 WIGMORE, *supra* note 17, § 1917. Professor Thayer cites a number of colorful examples of "skilled witnesses" in his 1900 Evidence hornbook, including a case from 1353 in which an appellate court asked surgeons to "inform the court as to whether the wound was mayhem or not," and a case from 1493 in which a court relied upon a precedent where a party had incurred a legal duty to pay "five pounds of fine gold" and "masters of grammar were sent for to advise what the Latin was for

the end of the eighteenth century, courts were allowing these skilled witnesses to testify directly to the jury, causing a conflict with the long-standing requirement of personal knowledge.[21] To resolve this conflict, courts set out two requirements for expert testimony: first, that the witness was a person of skill in the particular subject, and second, that "the jury would really be aided by [the expert's] opinion."[22] These two eighteenth century requirements have remained constant (though they have been refined); indeed, they formed the basis of Rule 702 of the Federal Rules of Evidence[23] and the subsequent *Daubert* doctrine set out by the Supreme Court in 1993.[24]

As the twentieth century progressed, societal changes helped accelerate the acceptance of experts in the courtroom. Facts in issue became more and more complex, and courts and juries consequently relied more often—and more heavily—on expert witnesses to illuminate the facts in issue.[25] This societal change combined with the liberalizing trend towards giving the jury more information[26] to open up courts' attitudes towards experts generally.[27] By the end of the twentieth century, cases that did *not* utilize expert testimony were unusual; one study found that 86% of all civil trials within a particular jurisdiction used experts, with an average of 3.3 experts per trial.[28]

The broad acceptance of experts was codified with the promulgation

'fine.'" JAMES BRADLEY THAYER, A SELECTION OF CASES ON EVIDENCE 672 (2d ed. 1900).

21. *See* 7 WIGMORE, *supra* note 17, § 1917.

22. *Id.* Wigmore cites a case from 1807 in which ship surveyors were allowed to testify, over the objection of one of the parties, as to the seaworthiness of a vessel based only on reading a deposition of the facts; the Lord Chief Justice upheld the admissibility of the testimony, stating that "[w]here there was a matter of skill or science to be decided, the jury might be assisted by the opinion of those peculiarly acquainted with it from their professions or pursuits." Beckwith v. Sydebotham, 1 Campbell 116, 117 (1807).

23. Rule 702 of the Federal Rule of Evidence states in part that that "[i]f 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 . . . . . ." FED. R. EVID. 702 (emphasis added).

24. *See* Daubert v. Merrell Dow Pharm., 509 U.S. 579, 589–92 (1993).

25. *See, e.g.*, Meredith v. United States, 238 F.2d 535, 543 (4th Cir. 1956) (in determining whether or not the defendant made "false entries" in accounting, it was necessary for the jury to understand modern accounting and banking practices; when cases involve these "complicated, technical situations," the jury should get expert help on the ultimate issue).

26. *See, e.g.*, *id.* at 543 (rejecting the "ultimate issue" rule because "the modern tendency in the law of evidence is to give the triers of facts all the light they can have").

27. *See* Edward J. Imwinkelried, *Foreword*, 30 U.C. DAVIS L. REV. 941, 941 (1997) (stating that "it is undeniable that the use of scientific evidence at trial is a growing phenomenon"); *see also* William T. Pizzi, *Expert Testimony in the US*, 145 NEW L.J. 82, 82 (1995).

28. *See* Samuel R. Gross, *Expert Evidence*, 1991 WIS. L. REV. 1113, 1119 (describing a study of 525 civil trials in California State Superior Court).

of the Federal Rules of Evidence in 1975. Rule 702 sets out the same two requirements of expert testimony that had been used for more than a century: a witness must be qualified as an expert based on "knowledge, skill, experience, training or education,"[29] and the witness's knowledge "will assist the trier of fact to . . . determine a fact in issue."[30] These experts may testify as to their opinion about any matter within the scope of their expertise; they can draw inferences based on application of their "specialized knowledge to the facts";[31] and they do not need to rely upon first-hand knowledge about the facts of the case to testify about their opinions or inferences.[32] Most importantly, the Rules themselves make no distinction based on the subject matter of the testimony. As long as it is "the product of reliable principles and methods" and the expert has "applied the principles and methods reliably to the facts of the case," the testimony is admissible, whether it concerns the distinctive marks left on a bullet when it is fired by a gun, the depreciation method used by corporations after purchasing an expensive asset, or the credibility of an eyewitness to a crime.[33] This principle of neutrality, however, has not been applied in practice, because courts still invoke the province–of-the-jury prohibition to preclude admission of certain types of expert testimony. The rest of this Article will consider where this prohibition came from, how it has been applied, and whether it can be justified.

III. THE "PROVINCE-OF-THE-JURY" PROHIBITION

A. History

Even as expert testimony has gained widespread acceptance in courts, judges have been extremely reluctant to admit one category of expertise into their courtrooms: expert testimony that somehow "infringes on the province of the jury." This term was apparently first used in the mid-1800s to preclude witnesses from drawing inferences or giving opinions about the facts of the case.[34] As stated by the first American case to

29. FED. R. EVID. 702.

30. *Id.*

31. *Id*., Advisory Committee Notes.

32. *Id*. 602, 703.

33. *Id*. 702, Advisory Committee Notes. The one exception to this principle of neutrality is Rule 704(b) regarding the mental state of a criminal defendant. For a brief synopsis of this provision's unfortunate history, as well as the extent to which the provision has been marginalized by the courts, *see infra* notes 70–80 and accompanying text.

34. Wigmore cites an English case form 1816 and an American case from 1841 as the "earliest instances" of the prohibition being mentioned in the case law. 7 WIGMORE, *supra* note 17, § 1920 &

invoke the province-of-the-jury prohibition, the "opinions of a witness are not legal testimony except in special cases; such, for example, as experts in some profession or art. . . ."[35] Thus, from the very beginning courts faced the challenge of carving out an area of opinion testimony about which experts were permitted to testify. In defining the "province of the jury," courts looked to the two requirements for expert testimony: expert testimony was admissible if the expert possessed a specialized skill in a particular subject (and testified within the scope of that skill), and if the expert's opinion could assist the jury.[36] The definition of "province of the jury" grew naturally out of these two requirements. An expert was only allowed to testify about his opinions if his specialized skill—knowledge of engineering, say, or medicine, or business—enabled him to draw conclusions from the facts more accurately than the jurors could themselves. But if the witness was merely drawing conclusions from the facts based on his own common sense, rather than some special skill, he was considered to be doing the jurors' job for them. Because his testimony was not based on specialized knowledge, he was not providing the jury with any information or insight they did not already have. Thus, the claim that an expert was invading the province of the jury was merely a shorthand method of arguing that the expert testimony was not based on the witness's expertise and therefore not helpful to the jury.[37]

The use of the "province of the jury" terminology implied that there was an additional reason for the preclusion: even if the expert *did* have special expertise and could therefore assist the jury, there were some topics that were off-limits to expert testimony. Eventually, commentators and courts saw the need to distinguish between barring witnesses because they were simply unhelpful, and barring witnesses

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35. Phillips v. Kingfield, 19 Me. 375, 379 (Me. 1841). Appropriately enough, this case involved a lay witness giving an opinion about the credibility of another witness, and the court precluded the testimony because it would expose the jury to "the prejudices, passions, and feelings of [the testifying] witness." *Id.*

36. *See supra* notes 22–24 and accompanying text.

37. Wigmore cites the following example in his treatise: in a case from 1816, a party called underwriters as expert witnesses and asked them if knowing a certain fact would have prevented them from writing a policy. The appellate court stated that such testimony was improper: "It is the province of the jury, and not of the underwriters, to decide what facts ought to be communicated. It is not a question of science, in which scientific men will think mostly alike, but a question of opinion . . . ." 7 WIGMORE, *supra* note 17, § 1917 (quoting Durrell v. Bederly, Holt N.P. 283, 28[6] (1816)). Thus, the court claimed the testimony was "in the province of the jury" not because it dealt wit a certain kind of issue or subject matter, but rather because it was *not* a "question of science," that is, a question that called for the use of the expertise of the witness. *Id*.

because they "usurped the role of the jury." Wigmore's treatise was unconditional in the need to separate the two concepts, maintaining the standard that required the expert testimony be "helpful" but debunking the "usurping the role of the jury" prohibition altogether.[38] But in many courts, confusion remained as to the true basis for the province-of-the-jury prohibition.[39]

The confusion has only been amplified by the use of the term "province of the jury" in a similar but distinct context: both trial and appellate judges are prohibited from determining witness credibility because such determinations remain within the province of the jury. In fact, the phrase "invading the province of the jury" was originally used not to limit the admissibility of expert testimony, but rather to describe the proper boundary between judge and jury.[40] Perhaps the most sacred

38. *See id*. (arguing that the "opinion/fact" distinction was not helpful in determining whether testimony was admissible; rather, a witness should be excluded "wherever inferences and conclusions can be drawn by the jury as well as by the witness" (emphasis removed)).

39. *See, e.g.*, Flournoy v. State, 120 So. 2d 124, 127 (Ala. 1960) (stating it was error for the witness to be allowed to testify that the money was taken from him "*by force*" because such testimony was "a conclusion on a material matter within the province of the jury, and not a matter as to which a witness may properly state a conclusion") In fact, it would be improper for a witness to state that the money was taken from him "by force," but not because the testimony concerns a "material matter within the province of the jury," *id*., but because force is a legal term of art in robbery cases and, thus, the witness would be giving a legal opinion.

40. The term "invading the province of the jury" usually refers to the actions of a trial judge or an appellate court that improperly takes issues of fact away from the jury. This has been applied to a trial court judge that issues a directed verdict when there is factual evidence sufficient for a jury to find for the opposing party. *See, e.g*., Cole v. Ralph, 252 U.S. 286, 302 (1920); Moore v. Chesapeake & Ohio Ry. Co., 340 U.S. 573, 575–78 (1951). Similarly, it has been applied to overrule trial court judges that use their jury instructions to improperly direct the jury to find certain facts or to reach a certain conclusion *See, e.g*., Hickman v. Jones, 76 U.S. 197, 201–02 (1869). It has likewise been applied to an appellate court that overturns a verdict based on the argument that there was no direct evidence of causation when such evidence did exist. *See, e.g*., Story Parchment Co. v. Paterson Parchment Paper Co., 282 U.S. 555, 566 (1931); Gallick v. Balt. & Ohio R.R. Co., 372 U.S. 108, 113–17.

Thus, for at least a century courts have been declaring that the credibility of witnesses was the "province of the jury," but only in the context of determining the interplay between the judge's instructions and the jury's decisions, not in the context of the appropriate scope of expert testimony. *See, e.g*, Chi. Union Traction Co. v. O'Brien, 976 N.E. 341, 343 (Ill. 1905) ("The question of the credibility of witnesses is exclusively within the province of the jury, and it is not the right of the court to take that question from them. Whether a witness has been impeached, is a question of fact and not of law, and when not impeached it is for the jury to determine whether he shall be believed and to what extent. The court may give to the jury general rules for their guidance, but where witnesses contradict each other as to matters of fact, and there is no impeachment of any witness, as was the case here, the law indulges no presumption that they are all telling the truth. When a witness testifies in a case, the inherent improbability of his statements may induce the jury to disbelieve him, although he is not contradicted. How much weight is to be given to his testimony depends largely upon his appearance, his manner of testifying, and all the other evidence and circumstances from which the jury may credit or discredit him. Where witnesses contradict each other, and the result of the case depends upon their credibility, it is for the jury to determine which one they will believe. The law has no rule which the

aspect of this boundary is the principle that appellate courts have no power to review jury determinations such as credibility of witnesses and the weight of the evidence.[41] Juries' special power to decide questions of credibility is part of the boilerplate standard for reviewing a jury verdict for sufficiency of the evidence. In conducting such a review, an appellate court is bound to draw all reasonable inferences in favor of the prevailing party, because it is the "province of the jury" to make all credibility determinations and weigh the evidence.[42]

In short, witness credibility is uncontrovertibly within the sole province of the jury in the context of the separation of powers between the judge and the jury. This well-established doctrine has provided unwarranted support for the rule prohibiting experts from testifying about credibility issues. On a superficial level, this step seems logical: if juries have the exclusive power to determine witness credibility vis-à-vis judges, they should have the exclusive power to determine witness credibility vis-à-vis expert witnesses. This logic is problematic, because allowing an expert to testify regarding her opinion about another witness's credibility is not analogous to allowing a trial judge to state or imply an opinion on the matter (or to an appellate court substituting its own opinion on witness credibility for the trial jury's opinion). Rather, the expert witness is merely stating an opinion that, like all expert opinions and indeed all other testimony, the jury can accept, reject, or give as much weight as it sees fit. To put it another way, an expert on credibility merely assists the jury in making credibility determinations, while a trial judge who comments on credibility or an appellate court that rules on credibility improperly supplants the jury's determination.

The United States Supreme Court has held that the prohibition against judicial comment on credibility issues does not affect the ability of expert witnesses to testify about any matter, as long as the trial judge clearly instructs the jurors that they are free to accept or reject any of the opinions given by the witness.[43] In *United States v. Johnson*, the lower court had held that an expert's testimony invaded the province of the jury because he conducted computations and drew conclusions based on

court may lay down in instructions to the jury that there is a presumption that an unimpeached witness has testified truly, and such instructions infringe upon the province of the jury to determine the credibility of the witnesses and the weight and value of their testimony." (citations omitted)); Wichita R. & Light Co. v. Dulaney, 159 F. 417 (8th Cir. 1908). This particular application of the judge/jury dividing line could easily have been one of the origins of the "witness credibility" prong of the province of the jury prohibition in the context of the scope of expert testimony.

41. *See, e.g.*, Goldman v. United States, 245 U.S. 474, 477 (1918).

42. *See, e.g.*, Knowlton v. Greenwood Indep. Sch. Dist., 957 F.2d 1172 (5th Cir. 1992).

43. United States v. Johnson, 319 U.S. 503, 519 (1943).

the disputed figures given by another witness—thus implying to the jury that the witness's figures must be correct.[44] The Supreme Court rejected this analysis, because "[n]o issue was withdrawn from the jury [and] [t]he correctness or credibility of no materials underlying the expert's answers was even remotely foreclosed by the expert's testimony or withdrawn from proper independent determination by the jury."[45] The Court later noted that:

> So long as proper guidance by a trial court leaves the jury free to exercise its untrammeled judgment upon the worth and weight of testimony, and nothing is done to impair its freedom to bring in its verdict and not someone else's, we ought not be too finicky or fearful in allowing some discretion to trial judges in the conduct of a trial and in the appropriate submission of evidence within the general framework of familiar exclusionary rules.[46]

In short, the most common use of the term "province of the jury" does not describe the inadmissibility of expert testimony; it merely defines the relationship between the judge (either trial or appellate) and the jury. As such, the concept is irrelevant to the question of the appropriate scope of expert testimony. Dean Wigmore enunciated this principle more than a hundred years ago when he noted that "[t]here is no such reason for the rule [against usurping the province of the jury], because the witness, in expressing his opinion, is not attempting to 'usurp' the jury's function, nor could he if he desired."[47]

Another closely related but logically distinct concept is the rule that juries have the exclusive right to draw legal conclusions in a case. Although experts should be allowed to testify about the ultimate issue in a case, they should not be able to draw legal conclusions or offer "opinions phrased in terms of inadequately explored legal criteria."[48] This limitation merely affects the form of the question, not the substance. To take an example from the Advisory Committee Notes, an expert cannot be asked: "Did T have sufficient mental capacity to make a will?" since that would require the expert to know and interpret the legal definition of "sufficient mental capacity."[49] However, an expert

44. *Id.* at 519.

45. *Id.*

46. *Id.* at 519–20.

47. *See* 7 WIGMORE, *supra* note 17, § 1920. Based on this rationale, Wigmore argued that "the phrase [invading the province of the jury] is so misleading, as well as so unsound, it should be entirely repudiated. It is a mere bit of empty rhetoric." *Id.*

48. FED. R. EVID. 704, Advisory Committee Notes.

49. *Id*.

could be asked: "Did T have sufficient mental capacity to know the nature and extent of his property and the natural objects of his bounty and to formulate a rational scheme of distribution?"[50] The latter question, though achieving the same result, is permissible because it does not require the expert to understand the definition of a legal term.[51] In other words, expert testimony will be inadmissible when the expert witness interprets a legal term as part of his or her answer.

Because there was no independent doctrinal justification for precluding province-of-the-jury testimony, it comes as little surprise that early courts did not provide nor follow a consistent definition of this term.[52] In practice, the province-of-the-jury prohibition has been used to bar two types of expertise: first, expert testimony that states a conclusion about an "ultimate issue" in a case;[53] and second, testimony that states a conclusion about the credibility (or lack thereof) of other witnesses.[54] As we will see, the bar on so-called ultimate issue testimony has been specifically abolished by rule and such testimony is now routinely admitted by the courts, leaving the bar on expert testimony on credibility as the last remnant of the centuries-old presumption against expert testimony.

B. Ultimate Issue Testimony

For more than a hundred years, many courts interpreted the province-

50. *Id*.

51. *Id.* Courts have applied this doctrine in cases where experts are asked to give essentially a legal conclusion. See, for example, *Owen v. Kerr-McGee Corp.*, 698 F.2d 236, 239–40 (5th Cir. 1983) for a case where an expert in petroleum engineering was not allowed to give an opinion as to the "cause" of an accident; the factual cause had already been conceded by the plaintiff and the only relevant question was the *legal* cause, i.e., was the defendant contributorily negligent. After the objection was sustained, the expert was allowed to testify as to his opinion on the factual question of whether or not the defendant's practices around the accident site were "safe practice." *Id.*

52. As noted above, the first case to invoke this doctrine stated that it applied to almost all lay opinion testimony, *see* Phillips v. Kingfield, 19 Me. 375 (Me. 1841); later courts held that it applied to any "ultimate issue" testimony—that is, testimony about "the very question which the jury are to pass upon," *see, e.g.*, Gen. Ins. Co. v. Camden Constr. Co., 154 S.E.2d 26, 28 (Ga. Ct. App. 1967); or any expert testimony that was not necessary for the juries to understand the issues on the case, *see e.g.*, Benjamin v. Street Ry. Co., 34 S.W. 590, 593 (Mo. 1896) ("It is the province of the jurors to draw all inferences and conclusions from the evidence before them. The witnesses, as a general rule, must state facts from which the jurors are to form their opinion. But when the facts are all stated, upon a subject of inquiry, if an intelligent opinion cannot be drawn therefrom by inexperienced persons, such as constitute the ordinary jury, an exception is made to the general rule, and persons who, by experience, observation, or knowledge, are peculiarly qualified to draw conclusions from such facts, are, for the purpose of aiding the jury, permitted to give their opinion.").

53. *See infra* notes 55–80 and accompanying text.

54. *See infra* notes 81–175 and accompanying text.

of-the-jury prohibition as precluding an expert from testifying about the "ultimate issue" in the case, i.e., giving an opinion on "the exact question which the jury is called upon to decide."[55] Wigmore devoted a separate section to the "ultimate issue" rule, calling it "nearly allied . . . if not merely another form" of the usurping the role of the jury prohibition.[56] As Wigmore noted, a rule barring expert testimony on the ultimate issue was "both too narrow and too broad."[57] If the expert testimony is helpful to the jury, it should be allowed even if it speaks to the ultimate issue—in fact, it is all the more probative for that reason. And if the expert testimony is not helpful to the jury, it should be excluded whether it speaks to the ultimate issue or a collateral issue.[58]

As the twentieth century progressed, courts increasingly relied on experts, and this growing reliance furthered Wigmore's cause of abolishing the "ultimate issue" prohibition, because frequently the ultimate issue itself—causation, identity, or mental state[59]—could not be resolved without the aid of experts. Courts' inability to define what was or was not an ultimate issue further weakened the rule.[60] What exactly was an "ultimate issue" in a given case? An expert's testimony that, in his opinion, the defendant was negligent or guilty beyond a reasonable doubt would certainly be inadmissible—but it would be excluded because the witness drew a legal conclusion, not because the testimony resolved a critical issue in the case.[61]

By the 1970s, the prohibition on "ultimate issue" expert testimony had all but disappeared. In 1975, when the Federal Rules of Evidence were enacted, they included Rule 704, which stated that opinion testimony "otherwise admissible is not objectionable [merely] because it embraces an ultimate issue . . . ."[62] Citing Wigmore, the Advisory

55. *See, e.g.*, Yost v. Conroy, 92 Ind. 464, 471 (Ind. 1883).

56. *See* 7 WIGMORE, *supra* note 17, § 1921.

57. *Id.*

58. *Id.*

59. *See, e.g.*, Fequer v. United States, 302 F.2d 214, 242 (8th Cir. 1962) (allowing an expert to testify as to the sanity of the defendant in a murder trial, since there is no bar to an expert testifying as to the "ultimate issue").

60. *See, e.g.*, DeVaney v. State, 288 N.E.2d 732, 736 (Ind. 1972) ("The first question one must ask is, what is an 'ultimate fact in issue'? This is certainly not clear. There are many definitions found in Black's Law Dictionary, for instance, but they are of little aid. The objective is probably the desire for concrete details upon the crucial matters in the trial. Although this goal is meritorious, its consistent application through excluding opinions on 'ultimate facts' approaches impossibility. This has resulted in the abolition of the rule in a majority of the jurisdictions.") *See also* MCCORMICK ON EVIDENCE 27 (Edward W. Cleary et al. eds., 2d ed. 1972).

61. *See supra* notes 48–49 and accompanying text.

62. FED. R. EVID. 704(a).

Committee stated that the old common law rule was "unduly restrictive, difficult of application, and generally served only to deprive the trier of fact of useful information."[63] Rule 704 was meant to sweep away the "ultimate issue" rule altogether. In the words of the Advisory Committee:

> The basic approach to opinions, lay and expert, in these rules is to admit them when helpful to the trier of fact. In order to render this approach fully effective and to allay any doubt on the subject, the so-called "ultimate issue" rule is specifically abolished by the instant rule.[64]

However, the Advisory Committee set out two explicit limitations to this rule, and Congress added a third when it amended the rule nine years later. The first limit is simply a sensible clarification that we have already discussed.[65] In abolishing the ultimate issue rule, the Advisory Committee did not mean to allow expert witnesses to offer definitions of legal terms or draw legal conclusions.[66] The second and third limitations were less sensible, however, and have muddled the otherwise clear mandate of Rule 704. According to the Notes, Rule 704 does not allow an expert to testify about an "opinion which would merely tell the jury what result to reach."[67] This limitation is allegedly based on the requirement that an opinion must be "helpful to the jury."[68] As we shall see in Part V,[69] this is an argument that courts have frequently relied upon when using the province-of-the-jury prohibition to preclude expert testimony, but ultimately the argument rests upon a flawed definition of the term "helpful to the jury."

The third limitation was added nearly a decade after Rule 704 was promulgated, when political pressures led Congress to amend the rule to prohibit "ultimate issue" expert testimony regarding the "mental state or condition of a defendant in a criminal case."[70] This amendment was the result of political pressures after would-be presidential assassin John Hinckley was acquitted by reason of insanity.[71] Not only was the

63. *Id*., Advisory Committee Notes.

64. *Id.*

65. *See supra* notes 48–49 and accompanying text.

66. *Id.*

67. *Id.*

68. *Id.*

69. *See infra* notes 182–206 and accompanying text. This limitation in Rule 704 is merely surplusage since Rule 702 already contains a requirement that all expert testimony must "assist the trier of fact" to be admissible. FED. R. EVID. 702.

70. *See* FED. R. EVID. 704 (b) (added Oct. 12, 1984).

71. *See generally Reform of the Federal Insanity Defense: Hearings Before the Subcomm. on Criminal Justice of the House Comm. on the Judiciary*, 98th Cong., 1st Sess. 150–93 (1983). The

creation of this new provision overtly political (always a clue in assessing the wisdom of a new rule of evidence), but it was also apparently meant to cure a problem that did not exist: ensuring that the determination of whether a criminal defendant was legally insane is a matter for legal fact-finders, not for experts.[72] As noted above,[73] Rule 704 already prohibited this before the 1984 amendment, because no witness—expert or otherwise—was allowed to testify about a legal conclusion.[74]

Courts have been creative in evading the rule's prohibition on the "mental state" of the defendant, and thus the 1984 amendment has done little to rehabilitate the bar on ultimate issue testimony.[75] As one appellate court candidly acknowledged, the distinction between allowing expert opinions on ultimate issues but prohibiting them when the mental state of the defendant is at issue "may appear to be a fine one,"[76] but the "mental state" prohibition has been interpreted narrowly.[77] For example, courts have allowed law enforcement experts to opine that a defendant had the intent to distribute narcotics based on the quantity and packaging of the narcotics recovered.[78]

legislation was passed in 1984. *See* Insanity Defense Reform Act of 1984 (Chapter IV of title II of the Comprehensive Crime Control Act of 1984, Pub. L. No. 98-473, tit. 2, §§ 401–406, 98 Stat. 1837, 2057–68 (codified at FED. R. EVID. 704(b) and in scattered sections of 18 U.S.C. (Supp. III 1985)).

72. *See* S. REP. NO. 98-225, at 230 (1983), *reprinted in* 1984 U.S.C.C.A.N. 3182, 3412. The Senate Judiciary Committee cited a statement by the American Psychiatric Association [APA] in support of the amendment, but the statement made it clear that the APA believed the new rule was necessary to prevent expert witnesses from testifying as to whether a defendant met the legal test for insanity. *See* Am. Psychiatric Ass'n, *Statement on the Insanity Defense* (1983), *reprinted in* 140 AM. J. PSYCHIATRY 681 (1983).

73. *See supra* notes 48–51 and accompanying text.

74. For a summary of the misguided legislative history surrounding the adoption of Rule 704(b) (and a further analysis of why it was unnecessary), see generally Anne Lawson Braswell, Note, *Resurrection of the Ultimate Issue Rule; Federal Rule of Evidence 704(b) and the Insanity Defense*, 72 CORNELL L. REV. 620, 621–23 (1987).

75. For example, some courts have looked to the legislative history of the amendment and concluded that it only applies to expert witnesses who are mental health professionals. *See, e.g.*, United States v. Gastiaburo, 16 F.3d 582, 588 (4th Cir. 1994); United States v. Lipscomb, 14 F.3d 1236, 1240–43 (7th Cir. 1994); United States v. Richard, 969 F.2d 849, 855 n.6 (10th Cir. 1992). *But see* United States v. Morales, 108 F.3d 1031, 1036–37 (9th Cir. 1997) (finding that Rule 704(b) applied to any kind of expert witness, but still limiting its reach to testimony that "state[s] an opinion or draw[s] an inference which would necessarily compel the conclusion that" a given mens rea did or did not exist).

76. United States v. Theodoropoulos, 866 F.2d 587, 591 (1989).

77. *See* Christopher Slobogin, *Psychiatric Evidence in Criminal Trials: To Junk or not to Junk?*," 40 WM. & MARY L. REV. 1, 20 (1998). (noting that Rule 704(b) has had "very little practical effect").

78. *See, e.g.*, United States v. Gomez-Norena, 908 F.2d 497, 502 (1990). The court justified this testimony by stating that the expert did not testify as to the defendant's mental state because "[a]t no time did he give his opinion of what Gomez actually thought." *Id.* at 502. The expert's actual testimony was as follows:

Even where Rule 704 was meant to have the greatest impact—mental health professionals testifying about the sanity or insanity of the defendant—the courts have consistently allowed experts to assist the jury, as long as they do not give legal opinions about the defendant's sanity or criminal intent.[79] Because this was already prohibited before the amendment, courts have wisely turned Rule 704(b) into surplusage, a mere reiteration of the ban on experts offering legal conclusions.[80]

In short, ever since experts were first permitted to testify, they infringed on the role of the jury to some extent by making inferences and drawing factual conclusions. Courts ultimately overcame their initial reluctance about experts, but the fear that experts were inappropriately doing the jury's job remained; thus, in an attempt to safeguard the key aspects of a jury's role, experts were banned from testifying about the "ultimate issue" or making judgments about credibility. The first of these prohibitions proved to be unworkable,

> PROSECUTOR: Now, taking into consideration, Special Agent Pace, the items that were seized from [Gomez's suitcase] and the other factors that you've discussed, did you form an opinion as to whether the cocaine that was in [the suitcase] was cocaine that was possessed for personal use or possessed for distribution purposes?
>
> PACE: Possession with intent to distribute.
>
> PROSECUTOR: And what is the basis of that opinion?
>
> PACE: The large amount [of cocaine], the way it was concealed, and where it was coming from."

Id. at 501–02. Thus, an opinion of the defendant's mental state based on circumstantial evidence state appears to be acceptable under Rule 704(b)—even though almost any evidence meant to prove mental state will have to be circumstantial.

There is a contrary line of case law in which courts use 704(b) to preclude the use of certain questions asked during polygraph tests, e.g. "Did you know that your co-defendant was selling drugs?" *See, e.g.*, United States v. Ramirez-Robles, 386 F.3d 1234, 1245 n.3 (9th Cir. 2004) (precluding the question asked of defendant during a polygraph test "Did you know on October 24 of last year, that Sheree was going to sell that quarter pound of methamphetamine?" because it was "expert testimony regarding the defendant's mental state") This conclusion seems questionable given the fact that other experts (such as law enforcement officials) have been permitted to use their expertise in narcotics packaging to conclude something about the defendant's mental state. In both circumstances, certified experts are testifying within the scope of their expertise about circumstantial evidence (type of packaging, biomedical responses to certain questions) to reach a conclusion about the defendant's mental state. The line of cases is better explained by courts' long-running hostility to lie detectors in general, *see infra* notes 141–73 and accompanying text.

79. *See, e.g.*, United States v. Bennett, 161 F.3d 171, 183–84 (3d Cir. 1998) (allowing factual descriptions of the defendant's mental capacity, but not an opinion as to whether the defendant possessed the required mens rea).

80. In the words of one Sixth Circuit court, the amendment does not affect "the quantum or quality of expert testimony," but rather "the style of question and answer that can be used." United States v. Cox, 826 F.2d 1518, 1524–25 (6th Cir. 1987) (citing United States v. Prickett, 790 F.2d 35, 37 (6th Cir. 1986) and quoting United States v. Mest, 789 F.2d 1069, 1071 (4th Cir. 1986)).

particularly as experts became more proficient in advising the jury about central issues in the trial, and the ultimate issue prohibition was (almost) completely abolished with the promulgation of the Federal Rules. We now turn to the final battlefield in the experts' invasion of the province of the jury: credibility determinations.

IV. CREDIBILITY QUESTIONS: THE "CORE FUNCTION" OF THE JURY

Dean Wigmore once hypothesized that if "there is ever devised a psychological test for the valuation of witnesses, the law will run to meet it."[81] History has not been kind to Wigmore's prediction; rather, the question of witness credibility is one of the few subjects in which the law has run *away* from allowing expert testimony. In fact, experts on credibility have provided the province–of-the-jury prohibition what it most conspicuously lacked in Wigmore's time: a form of doctrinal legitimacy. For the first time, courts began barring expert testimony pursuant to the province-of-the-jury prohibition for a reason other than the expert testifying outside his or her scope of expertise. Courts began to hold that a specific topic—witness credibility[82]— was so inextricably intertwined with the jury's job that nobody—not judges, not lawyers, and not experts—could offer any opinion on the matter.[83]

We have already seen how the term "province of the jury" is applied to define the boundary between the role of the jury and the role of the trial judge or appellate court.[84] In that context, witness credibility determinations are the sole responsibility of the jury. Historically, that doctrine dovetailed nicely with the original justification for the rule against experts "invading the province of the jury"—that experts could only testify about matters within their own expertise or else the testimony was not "helpful"[85]—since up until quite recently, a witness's

81. 7 WIGMORE, *supra* note 17, § 875 n.1 .

82. "Credibility" in this context should be interpreted broadly as meaning not only sincerity but also accuracy of memory and perception—that is, whether or not a witness is "worthy of belief." *See* BLACK'S LAW DICTIONARY 331 (5th ed. 1979) (defining a "credible witness" as one who is "worthy of belief"). *See also* BRYAN A. GARDNER, DICTIONARY OF MODERN LEGAL USAGE (2d. ed 1995) (defining "credible" as "believable").

83. This aspect of witness credibility is still cited by courts today as a reason to preclude experts from testifying about the credibility of other witnesses. *See, e.g.*, United States v. Lumpkin, 192 F.3d 280, 289 (2d Cir. 1999) (precluding expert on eyewitness reliability because he would "intrude[ ] too much on the traditional province of the jury to assess witness credibility" (citation omitted)).

84. *See supra* notes 40–51 and accompanying text.

85. *See supra* note 37 and accompanying text.

expertise generally would not extend to credibility factors.[86] Thus, assessing witness credibility involved a confluence of two factors: a question beyond the scope of a witness's expertise, and a question that went to the heart of what a jury was supposed to be doing. This confluence created a doctrinal confusion as to why an expert was not allowed to testify about witness credibility, and courts began to hold that the subject matter of witness credibility was unique—the one area of testimony where experts were not allowed to testify no matter what, because allowing such testimony would infringe on the jury's role in the fact-finding process.[87] In the past few decades, the original, valid reason for excluding this type of testimony—that it was beyond the scope of the witness's expertise—has withered away. We now have experts who are skilled (or at least claim to be skilled) in determining credibility issues.[88] Thus, the concept that credibility is a topic uniquely inappropriate for expert testimony—a concept incubated for decades by the "beyond the scope" restriction—now stands alone to justify precluding expert testimony on credibility.

The restrictions on testimony about witness credibility currently manifest themselves in two recurring areas: eyewitness reliability experts and polygraph examiners. In both cases, courts are trending towards greater admissibility, but the progress is glacial and inconsistent.

86. Psychologists have been studying perception and memory for over a hundred years, and for almost as long legal commentators have used those studies to consider the problems of relying upon eyewitness testimony. *See, e.g.*, D.S. Gardner, *The Perception and Memory of Witnesses*, 18 CORNELL L.Q. 391–409 (1933) (citing medical and psychological treatises as well as empirical studies on perception and memory). However, the first recorded instance of an expert attempting to testify on issues of eyewitness reliability did not occur until the early 1970s. *See* ELIZABETH F. LOFTUS & KATHERINE KETCHUM, WITNESS FOR THE DEFENSE: THE ACCUSED, THE EYEWITNESS, AND THE EXPERT WHO PUTS MEMORY ON TRIAL 7–8 (1991).

The prominent exception to this rule, of course, is the polygraph test, which was first submitted as evidence of a witness' credibility as early as the 1920s and was famously rejected by the *Frye* case. *See* Frye v. United States, 293 F. 1013, 1013–14 (D.C. Cir. 1923).

87. *See, e.g.*, Snowden v. Singleterry, 135 F.3d 732, 739 (11th Cir. 1998) (holding that "[w]itness credibility is the sole province of the jury" and therefore allowing an expert witness to boost another witness' credibility made the trial "fundamentally unfair").

88. As noted above, "credibility" refers to sincerity, perception, and memory. There are now experts who claim they can assist the jury using their specialized skill and knowledge in each of these categories; polygraphy experts testify as to the sincerity of witnesses, while psychologists testify as to the accuracy (or lack thereof) of their perception and memory.

A. Eyewitness Reliability Experts

1. The Science

Eyewitnesses have long been acknowledged to make mistakes in perception and memory. Indeed, probing for and exposing these mistakes is one of the primary functions of effective cross-examination.[89] Likewise, psychologists have studied and categorized these inaccuracies since the beginning of the twentieth century.[90] However, over the past thirty years, empirical studies and scientific doctrines used to explain them have become far more sophisticated. These studies have been led by psychologists (and professional expert witnesses) such as Elizabeth Loftus and Robert Buckout.

These experts break eyewitness testimony down into three categories: acquisition, which consists of perceiving an event or individual; retention, which is the processing and storing of the information that was perceived; and retrieval, which entails recalling (and usually communicating to others) information that was previously perceived and retained.[91] Many of their findings are predictable, either in the specific factors that can affect a witness' reliability or the degree to which a perception or memory can be faulty. For example, in the case of perception, experiments have shown that accuracy is affected by predictable factors such as exposure time, frequency of exposure, and how important witnesses thought certain details were at the time of the perception.[92] However, accuracy is also adversely affected by non-intuitive factors, such as the existence of violence in an event, heightened levels of stress on the witness, and past experiences and cultural biases or prejudices that influence what the witness expects to see.[93] Furthermore, experiments have shown that, in general, witnesses

89. *See, e.g.*, L. TIMOTHY PERRIN, H. MITCHELL CALDWELL, & CAROL A. CHASE, THE ART & SCIENCE OF TRIAL ADVOCACY 325, 327 (2003).

90. *See* Gardner, *supra* note 86, at 391–409.

91. *See* ELIZABETH F. LOFTUS, EYEWITNESS TESTIMONY 20–109 (1996).

92. *Id.* at 23–27.

93. *Id.* at 31–36. Studies have shown that stress and other strong emotional states actually enhance perception up to a certain point, and then begin to degrade the witness' ability to perceive and/or perform. *Id.* at 33–34. One classic example of stress impeding perceptive ability is the phenomenon of "weapons focus," in which a witness in a situation where a weapon is visible is likely to focus on the weapon itself and perceive fewer details about the rest of the experience. One experiment that demonstrates both the adverse effect of high-stress situations on perception and the phenomenon of weapons focus involved subjects waiting outside a laboratory perceived an individual (the "target") entering the waiting room, speaking a single line, and leaving. In one scenario, the target was carrying a pen in his hand; in the other, the target's entry was preceded by yelling, breaking glass, and other violent

are surprisingly inaccurate when identifying an individual after having previously perceived that individual, even under the best of circumstances.[94]

Studies about the retention and ultimate recall of information have shown that memories of events, even if accurately formed, may not only fade or disappear but also be altered in numerous ways. For example, witnesses who are given post-event information about an event can begin to incorporate the post-event information into their existing memories, even if the post-event information is inconsistent with their original memory.[95] In other cases, experiments have shown that witnesses become more confident and certain of an identification as time progresses, even as their actual memory of the original perception fades.[96] Litigators have long been aware of these possibilities, which are used (and occasionally abused) when "coaching" witnesses before a trial. For example, during witness preparation a personal injury lawyer might ask an eyewitness how fast a car was going when it "smashed" into the plaintiff's car, knowing full well that the use of the word "smashed" will lead to the witness reporting (and consequently "remembering") a faster speed than if a more neutral word had been used in the question.[97] In another case, an attorney might ask the witness to review documents or prior testimony before the witness testifies about the incident to confirm the "facts" of the case in the witness's mind.[98]

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noises from an adjacent room, and the target was carrying a bloody letter opener in his hand when he entered. When the subjects were asked about the experience, those who experienced the "violent" scenario were far more likely to accurately report the item that the target had been carrying, but far less able to identify the individual from a series of photographs. C. Johnson & B. Scott, Eyewitness Testimony and Suspect Identification as a Function of Arousal, Sex of Witness, and Scheduling of Interrogation (Paper presented at the American Psychological Association, 1976).

94. In one experiment, subjects were shown four pictures of an individual for a total of thirty-two seconds, and then eight minutes later asked to pick out the individual they had perceived from a group of 150 pictures. Even given a relatively long period for perception, a relatively short time lapse between perception and recall, and laboratory conditions for the perception itself (low stress environment, adequate lighting conditions, etc.), only 58% of the subjects were able to correctly pick out the individual from the series of pictures. *See* K.R. Laughery, J.E. Alexander & A.B. Lane, *Recognition of Human Faces: Effects of Target Exposure Time, Target Position, Pose Position, and Type of Photograph*, 55 J. APPLIED PSYCHOL. 477, 477–83 (1971).

95. LOFTUS, *supra* note 91, at 54–55.

96. *Id.* at 82–84.

97. *See, e.g.*, Richard C. Wyack, *The Ethics of Witness Coaching*, 17 CARDOZO L. REV. 1, 9–12 (1995).

98. *Id.* at 38–41. Another example of post-event information altering the witness' actual memory is unconscious transference, in which a witness might be shown the face of an innocent bystander in a photo array or a line-up shortly after a crime and—because they recognize the face from the incident—unconsciously alter their original memory of the event to remember the innocent

2. Admissibility

Although seasoned litigators might be aware of these phenomena, and skilled cross-examiners may try to reveal their existence to the jury, until quite recently lawyers were barred from presenting evidence of these psychological studies to the jury. Criminal defense attorneys first began offering experts to explain the workings of perception and memory in the early 1970s,[99] and courts uniformly reacted negatively. During these early years, nearly every recorded trial court judge refused to allow eyewitness reliability experts to testify, and every appellate court upheld the refusal.[100] Courts generally cited one of two reasons for precluding the testimony: either the expert could not provide any information beyond what could be provided by cross-examination and the jurors' common sense (and therefore the testimony was not helpful),[101] or the proffered testimony impermissibly infringed on the jury's traditional role of determining credibility.[102]

In the early 1980s a few trial court judges began admitting eyewitness expert testimony, but the practice was not approved by an appellate court until 1983,[103] when the Arizona Supreme Court decided the

bystander as the actual guilty party. *Id.* at 42–52.

99. *See* LOFTUS & KETCHUM, *supra* note 86, at 7–8.

100. *See, e.g.*, United States v. Fosher, 590 F.2d 381, 382–84 (1st Cir. 1979); United States v. Watson, 587 F.2d 365, 368–69 (7th Cir. 1978); United States v. Brown, 540 F.2d 1048, 1053–54 (10th Cir. 1976); United States v. Brown, 501 F.2d 146, 148–51 (9th Cir. 1974), *rev'd on other grounds sub nom.* United States v. Nobles, 422 U.S. 225 (1975); United States v. Amaral, 488 F.2d 1148, 1152–53 (9th Cir. 1973); United States v. Collins, 395 F. Supp. 629, 635–37 (M.D. Pa.), *aff'd*, 523 F.2d 1051 (3d Cir. 1975). State courts were no more responsive; *see, e.g.*, People v. Johnson, 112 Cal. Rptr. 834, 836–37 (Cal. Ct. App. 1974); *see generally* LOFTUS, *supra* note 91, at 198.

101. *See, e.g.*, United States v. Thevis, 665 F.2d 616, 641 (5th Cir. 1982) ("[T]he problems of perception and memory can be adequately addressed in cross-examination and that the jury can adequately weigh these problems through common-sense evaluation.")." As noted below, *see infra* notes 183–205 and accompanying text, courts commonly misapply Rule 702's "helpfulness" requirement for expert testimony, either improperly stating that the subject matter must be one which the jury cannot understand without the assistance of the expert, or effectively ruling that the testimony is irrelevant if the jurors are presumed to have any intuitive knowledge of the subject.

102. For example, in the earliest reported cases involving such testimony, the trial court judge had rejected the testimony of an expert regarding "the effect of stress on perception and, more generally, regarding the unreliability of eye-witness identification" because "it would not be appropriate to take from the jury their own determination as to what weight or effect to give to the evidence of the eye-witness." *Amaral*, 488 F.2d at 1148. The appellate judge upheld preclusion. *See id*. at 1152–53.

103. In 1984 the California Supreme Court noted that "appellate decisions almost unanimously hold that rulings excluding such evidence do not constitute an abuse of discretion." People v. McDonald, 690 P.2d 709, 718 (Cal. 1984). However the *McDonald* court did note that the lack of reported cases might be misleading, since:

> Expert testimony on eyewitness identification is usually offered by the defendant. In cases in which the testimony is *admitted*, the issue will not arise on appeal: if the

seminal case of *State v. Chapple*.[104] The court found that the testimony would "assist the trier of fact" because "[w]e cannot assume that the average juror would be aware of the variables concerning identification and memory about which [the expert] was qualified to testify."[105] As for the argument that the testimony would improperly invade the province of the jury (an argument for which the court cited four state cases and one federal case),[106] the *Chapple* court simply stated that the Arizona code of evidence (like its federal counterpart) had abolished the "ultimate issue" rule and therefore such an objection was no longer valid.[107]

The next year, the California Supreme Court followed *Chapple*'s lead and approved the use of eyewitness experts in *People v. McDonald*. As in *Chapple*, the *McDonald* court swept away the objection based on the "helpfulness" requirement, finding that the proffered testimony would in fact assist the jury. The court held that although "personal experience

> defendant is convicted, he cannot complain of the admission of his own evidence; and if he is acquitted, no appeal is possible in any event. It follows that appellate courts ordinarily confront the issue only when the testimony has been *excluded*; and in all such cases appellate courts tend to affirm, because of the deference traditionally accorded to discretionary rulings of trial courts.

Id. at 718 n.10. The court went on to cite a handful of cases in which trial judges had allowed the experts to testify. *See, e.g.*, United States v. Booth, 669 F.2d 1231, 1240 (9th Cir. 1981) (noting that the trial judge had allowed the expert to testify; although the appellate court was "sympathetic" to the government's argument that the testimony was unreliable and irrelevant, the court had no jurisdiction to review the decision). Also, as of 1981, one of the most prominent eyewitness experts submitted an affidavit stating that she had been permitted to testify in thirty-four different cases, and that another prominent expert in the field had testified in twenty different cases. *See McDonald*, 690 P.2d at 718 n.10.

104. 660 P.2d 1208 (1983).

105. *Id.* at 1219–21.

106. *See* United States v. Brown, 540 F.2d 1048, 1053–54 (10th Cir. 1976), Caldwell v. State, 594 S.W.2d 24, 28–29 (Ark. Ct. App.1980); People v. Johnson, 112 Cal. Rptr. 834, 836–37 (Cal. Ct. App. 1974); Jones v. State, 208 S.E.2d 850, 852–53 (Ga. 1974), *overruled by* Johnson v. State, 526 S.E.2d 549 (Ga. 2000); Pankey v. Commonwealth, 485 S.W.2d 513, 521–22 (Ky. Ct. App. 1972), *overruled by* Commonwealth v. Christie, 98 S.W.3d 485 (Ky. 2002).

107. *Chapple*, 660 P.2d at 1219. In the wake of the promulgation of Rule 704 and its state counterparts in the mid-1970s, some courts surmised that the abolition of the "ultimate issue rule" also abolished completely the "province of the jury" rule. *See, e.g.*, United States v. Downing, 753 F.2d 1224, 1229 (3d Cir. 1985) (stating that the "clear mandate" of Rule 704 was to abolish the "province of the jury" prohibition).

As we have seen, the "province of the jury" prohibition survived Rule 704, especially as experts were offered to testify to subjects (such as witness credibility) that were so close to the jury's so-called core function. As noted above, *supra* note 102, these experts were not seen as testifying about an "ultimate issue" but rather infringing on the jury's exclusive job of judging credibility. Indeed, the federal case that *Chapple* criticizes for citing the "province of the jury" argument to exclude eyewitness expert testimony was decided in 1976, after the promulgation of Rule 704 and the abolition of the ultimate issue prohibition. *See Brown*, 540 F.2d at 1053–54.

and intuition" can guide jurors in assessing witness credibility, "other factors bearing on eyewitness identification may be known only to some jurors, or may be imperfectly understood by many, or may be contrary to the intuitive beliefs of most."[108] *McDonald* gave even less credence to the "usurping the province of the jury" argument, dismissing the phrase as "no more than a shibboleth"[109] since the jury at all times retains the power to accept or reject the expert's testimony in whole or in part.[110]

Within a year the federal appellate courts were also warming to the admissibility of experts on witness credibility. In *United States v. Downing*,[111] the U.S. Court of Appeals for the Third Circuit held that "under certain circumstances" expert testimony on witness credibility could assist the jury and therefore satisfy the "helpfulness" requirement of Rule 702.[112] The court did not specify which circumstances had to be present for the testimony to be admissible, but did note that in the case at bar, the expert's testimony on the effect of stress on perception was likely to be contrary to the jurors' intuition, and therefore "clearly would have assisted the jury."[113]

Over the past twenty years the federal appellate courts have gradually accepted eyewitness expert testimony, generally leaving the question within the discretion of the trial judge.[114] Although pockets of resistance remain,[115] the trend towards admissibility is clear, with some circuits

108. *McDonald*, 690 P.2d at 720. The court cited as examples "the effects on perception of an eyewitness's personal or cultural expectations or beliefs, the effects on memory of the witness' exposure to subsequent information or suggestions, and the effects on recall of bias or cues in identification procedures or methods of questioning." *Id.* (citations omitted).

109. *Id.* at 722 (quoting PATRICK M. WALL, EYE-WITNESS IDENTIFICATION IN CRIMINAL CASES 213 (1965)).

110. *Id.* at 722. Like *Chapple*, *McDonald* also cited the rejection of the "'ultimate issue' rule" in California as a reason to reject any argument based on the "'province' of the jury. *Id.* at 723.

111. 753 F.2d 1224 (3d Cir. 1985). *Downing* is a significant case for another reason in that it helped to lay the doctrinal foundation for the Supreme Court's *Daubert* decision in 1993. Daubert v. Merrell Dow Pharm., 509 U.S. 579, 591 (1993).

The trend towards acceptance actually began a year prior to *Downing* in *United States v. Smith*, 736 F.2d 1103 (6th Cir. 1984), in which the Sixth Circuit was poised to overrule the preclusion of an eyewitness expert but held that any potential error was harmless. *Id.* at 1105–08 ("Although we find that Dr. Fulero's expert testimony may have involved a 'proper subject,' conformed to a 'generally accepted explanatory theory' and provided 'probative value,' we conclude that its exclusion in this particular case, therefore, did not 'prejudice' the defendant to the extent of affecting the verdict and therefore was harmless.").

112. *Downing*, 753 F.2d at 1231.

113. *Id.* at 1232.

114. For an overview of the law in different circuits, see John P. Rutledge, *They All Look Alike: The Inaccuracy of Cross-Racial Identifications*, 28 AM. J. CRIM. L. 207, 218–20 (2001).

115. The Second Circuit has been the most resistant so far to such testimony. *See, e.g.*, United States v. Lumpkin, 192 F.3d 280, 289 (2d Cir. 1999) ("Fundamental to the role of juror as trier of fact is

quite favorably disposed towards allowing eyewitness experts.[116] However, two important caveats are worth noting. First, some courts have held that eyewitness experts are allowed to testify in general terms—e.g., about the effect that stress generally has on an individual's ability to perceive and remember—but may not give opinions on the credibility of specific witnesses in the case.[117] This restriction makes their testimony less probative, and it appears to contradict the general framework laid out for expert testimony in *Daubert*—the better the "fit" between the testimony and the facts of the case, the better the chance the testimony should be admitted.[118] It would make little sense for experts in most other fields to be allowed to testify generally (about a medical condition, say, or the effect of results of an epidemiological study), but then be precluded from applying their expertise to the facts of the case because their testimony would confuse or unduly influence the jury.[119] One possible reason for this restriction could be that eyewitness experts are sometimes *only* able to testify in general terms; unlike a medical expert, who might have examined the specific individual in question, some eyewitness experts have nothing to offer but broad-based studies about the effect of stress or post-event suggestion on reliability.[120]

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the task of assessing witness credibility. And, a witness's demeanor on the stand, including his or her confidence, impacts the assessment of credibility. By testifying that confidence bears little or no relationship to accuracy in identifications, Dr. Lieppe would effectively have inserted his own view of the officers' credibility for that of the jurors, thereby usurping their role.").

116. In particular, the Third Circuit and the Sixth Circuit have shown a willingness to allow such testimony. *See* United States v. Langan, 263 F.3d 613, 621 (6th Cir. 2001) ("Several courts . . . including our own, have suggested that [eyewitness expert] evidence warrants a more hospitable reception."); United States v. Smithers, 212 F.3d 306, 314 (6th Cir. 2000) ("[T]he district court abused its discretion in excluding [the eyewitness identification expert's] testimony, without first conducting a hearing pursuant to *Daubert*.").

117. *See, e.g.*, State v. Buell, 489 N.E.2d 795, 804 (Ohio 1986) ("[T]he expert testimony of an experimental psychologist regarding the credibility of the identification testimony of a *particular* witness is inadmissible . . . ."). Other courts properly find that eyewitness reliability testimony is more useful to the jury (and thus more likely to be admissible) if the expert can testify about the reliability about specific witnesses in the case. *See, e.g.*, Lewis v. State, 572 So. 2d 908, 911 (Fla. 1990).

118. *See* Daubert v. Merrell Dow Pharm., 509 U.S. 579, 591 (1993).

119. It is true that this restriction is sometimes applied to other fields of expertise; for example, experts who testify as to certain "syndromes" such as rape trauma syndrome may be permitted to testify in general terms about the symptoms of such syndromes but not give a specific opinion about whether the victim in this case was raped. Unlike testimony about witness credibility, however, testimony as to whether a victim was raped goes beyond credibility and touches on legal questions (e.g., whether the victim gave consent), which is an area experts can never be allowed to comment upon. *See supra* notes 48–51 and accompanying text.

120. *See* Chris Slobogin, *Expert Admissibility Symposium: What is the Question? What is the Answer? How Should the Court Frame a Question to Which Standards of Reliability are to be Applied? Commentary and Question: The Structure of Expertise in Criminal Cases*, 34 SETON HALL L. REV. 105, 114–16 (2003), which argues that courts tend to exclude eyewitness testimony because of its general

But even if an expert in eyewitness reliability has not conducted specific experiments on the eyewitness in question, he or she could still apply his or her expertise to provide a specific opinion in response to a hypothetical question.[121] It makes little sense for courts to allow broad generalized testimony from an expert, yet prohibit opinions about the credibility of the actual witnesses who testified in the case.[122] This curious inversion of the "fit" prong of *Daubert* shows that, for all the progress that has been made towards admitting the testimony of eyewitness experts, the belief that juries have the exclusive duty to evaluate witness credibility still precludes relevant and helpful evidence.

The second caveat to the trend towards greater admissibility is that most courts will only allow the testimony under "narrow circumstances"—generally when certain factors are present that render the eyewitness identification more unreliable than usual. Examples of these special circumstances include identifications that are cross-racial,[123] that occurred a long time after the event,[124] that were based on an incident that caused the witness great stress,[125] or that occurred after a suggestive photo-spread identification.[126] But absent some extra reason to doubt the identification, most courts have held that jurors' "common sense" and the adversary's "skillful cross-examination" are sufficient to expose any weaknesses in the testimony.[127] The contribution of eyewitness experts might be greater under these narrow circumstances, both because the level of unreliability has increased[128] and because the

nature, and if courts "dogmatically adhere to the *Daubert* trilogy's focus on fit," trial judges will continue to preclude such testimony on the grounds that it is general and intuitive and therefore provides almost no assistance to the jury in making their determination. *Id.* at 114–15.

121. Like other experts, eyewitness reliability experts are sometimes given the facts of the actual case as a "hypothetical" and then asked to give their opinion as to how accurate an eyewitness would be under the hypothetical situation. *See, e.g.*, United States v. Smith, 736 F.2d 1103, 1106 (6th Cir. 1984).

122. One reason suggested by commentators is that while the social science (and error rate) regarding the general science of eyewitness accuracy is relatively well-developed, experts cannot guarantee the same level of reliability (and cannot provide error rate data) for specific testimony about the accuracy of any given witness. *See* Slobogin, *supra* note 120, at 116. This perceived lack of reliability will perhaps diminish as experts in the field become more accustomed to applying their expertise to specific witnesses in specific situations.

123. *See Smith*, 736 F.2d at1106.

124. *See* United States v. Sebetich, 776 F.2d 412, 418–19 (4th Cir. 1985).

125. *Id.*

126. *Smith*, 736 F.2d at 1106.

127. S*ee* United States v. Harris, 995 F.2d 532, 535 (4th Cir. 1993).

128. *See, e.g.*, LOFTUS, *supra* note 91, at 136–42 (citing experiments that show a much lower rate of accuracy for cross-racial identification than intra-racial identification); 23–24 (noting the effect of the passage of time between perception on recall on accurate reporting); 33–36 (discussing the effect of stress on a witness' perception); 142–52 (describing examples of "[u]nconscious [t]ransference," when a

testimony is more likely to be counterintuitive.[129] But unless we assume that every jury is familiar with the psychological experiments and scientific conclusions about factors that affect eyewitness reliability, we should conclude that eyewitness reliability experts have something probative to say about nearly *every* eyewitness identification.[130] Once again, we see in these extra restrictions the signs of the deep-seated reluctance to allow these experts to intrude into an area—witness credibility—where the jury supposedly has exclusive jurisdiction.

B. Polygraphy Examiners

1. The Science

Polygraph machines are designed to measure the subject's physiological reactions to certain questions,[131] under the theory that a person who is lying will produce different physiological responses than a person who is telling the truth. Most machines record the subject's respiratory activity (by wrapping a pair of rubber tubes around the subject's chest and abdomen), sweat gland activity (by attaching metal plates to the subject's fingertips to measure electrical resistance), and cardiovascular activity (by attaching a blood pressure cuff to the arm).[132]

The interrogation technique varies depending on the examiner.[133]

witness sees a suspect in a line-up or show-up and ends up "remembering" the suspect from the actual incident itself).

129. It is true that under some of these circumstances the testimony of the witness will tend to be contrary to the intuition of the jurors (e.g., it might be true that many individuals believe that a stressful event results in more accurate perception and recall), but it is unclear why this should matter for admissibility. The idea that the testimony must be counterintuitive in order to be admissible seems to be an echo of the (incorrect) concept that in order to be helpful, the testimony must be beyond the ken of the ordinary juror. *See infra* notes 185–206 and accompanying text.

130. It could be argued that the probative value of the evidence is diminished if the conclusions by the expert are not counter-intuitive. Thus, if an expert is testifying to something that is self-evident, such as the fact that memory becomes less accurate as time passes, the probative value might be so slight that the evidence should be excluded under Rule 403 as a waste of time. Courts should still keep in mind that even the most "self-evident" conclusions still carry some probative value; for example, testimony about studies that provide a quantitative measure of how severely memory deteriorates during a given lapse in time might assist jurors even if they already possessed a rough intuition as to the effect of time lapse on memory.

131. The word "polygraph" literally means "many writings," since the machine measures multiple physiological activities and records them onto a chart.

132. *See* Paul C. Gianelli, *Polygraph Evidence: Post*-Daubert, 49 HASTINGS L.J. 895, 903 (1998). A digital polygraph records the respiratory activity and the cardiovascular activity with transducers, which convert the energy of the displaced air into electronic signals.

133. The examination consists of three parts. During the pre-test period the examiner talks with the subject for approximately an hour to record medical information, profile the subject, and discuss the

Early polygraphy examiners used the "relevance/irrelevance" method. This method consists of the examiner asking both irrelevant questions (to establish the subject's physiological reactions to truthful reactions) and relevant questions about the crime or incident under investigation.[134] The reactions to the relevant questions are then compared to those from the irrelevant questions. The "control question" method, generally thought to be an improvement on the relevance/irrelevance method, asks an irrelevant question that is intended to force a reaction in an innocent subject, either by leading them to lie or forcing them to admit to a prior wrongdoing (for example: "Have you ever stolen anything in your life?").[135] The control method theorizes that an innocent person will react more strongly to the control question, while a guilty person will react more strongly to the questions relevant to the crime or incident under investigation.[136] Finally, the "guilty knowledge" test involves asking multiple choice questions about the crime or incident under investigation, with certain answers containing confidential details that would theoretically be known only to the perpetrator (for example: "What was taken from the body of the victim after the killing? (A) A wallet; (B) A ring; (C) A necklace; (D) A bracelet").[137] The guilty knowledge test rests on the theory that the true guilty party would react more strongly when he or she heard the answer containing accurate details about the crime, whereas the innocent subject, not knowing which answer contained such accurate information, would have the same

topic of the examination. During this period the examiner drafts the specific questions to be asked and discusses them with the subject. The second period is the test itself: about ten questions, only three or four of which are related to the topic at hand. The third part of the examination consists of analysis of the data, during which the examiner gives the subject an opportunity to explain results to certain questions, and (in some cases) attempts to elicit a confession from the subject if the analysis reveals deceptive behavior. *Id.* at 904–05.

134. 2 MODERN SCIENTIFIC EVIDENCE: THE LAW AND SCIENCE OF EXPERT TESTIMONY § 19-2.1.2[1], at 448–49 (David L. Faigman et al. eds., 2002). *See also* Charles R. Honts & Mary V. Perry, *Polygraphy Admissibility*, 16 LAW & HUM. BEHAV. 357, 371–72 (1992). Because subjects might show increased anxiety when confronted with relevant questions whether the subject is guilty or not, this method is subject to much criticism and is no longer widely used. *Id.* at 375.

135. 2 MODERN SCIENTIFIC EVIDENCE, *supra* note 134, § 19-2.1.2[2], at 449–50. *See* JOHN E. REID & FRED E. INBAU, TRUTH AND DECEPTION 28 (2d ed. 1977).

136. *See* John E. Reid, *A Revised Questioning Technique in Lie Detection Tests*, 37 J. CRIM. L., CRIMINOLOGY & POLICE SCI. 542 (1947). A variant of the "control question" method is the "directed lie" control question method, in which the subject is told to lie in response to the control question about prior wrongdoing. *See* 2 MODERN SCIENTIFIC EVIDENCE, *supra* note 134, § 19-2.1.2[2], at 449–50; Charles R. Honts & David C. Raskin, *A Field Study of the Validity of the Directed Lie Control Question*, 16 J. POLICE SCI. & ADMIN. 56 (1988).

137. 2 MODERN SCIENTIFIC EVIDENCE, *supra* note 134, § 19-2.1.2[4], at 450–51.

reaction to all the answers proposed.[138]

As the latter two methods demonstrate, a polygraph machine is technically not a "lie detector," since the goal of the examiner is not to determine if the subject is lying in response to certain questions, but to test for either a guilty conscience (in the case of the control question method) or recognition of incriminating details (in the case of the guilty knowledge method).[139]

In a sense, then, the arguments against "credibility experts" are somewhat misplaced. In many cases, the polygraphy experts are not offering their opinion about whether the subject was truthful during the interview. Rather, they are describing reactions on the part of the subject that led them to believe the subject had a guilty conscience. This evidence is analogous to testimony from a police officer that the defendant fled the scene, which is meant to prove a guilty conscience,[140] or testimony from a friend that the defendant told her certain confidential details of the crime, which is meant to prove the defendant had intimate knowledge of the incident. Of course, the difference in the case of polygraphy experts is that the witness is allowed to give an opinion about whether the subject of the test had a guilty conscience or possessed knowledge of intimate details, but this is due to the level of expertise required to interpret the physiological reactions that the machine records. In this sense, polygraphy examiners are not "credibility experts" but rather "state of mind experts," because they claim to be able to interpret physiological reactions to certain stimuli in order to reach conclusions about the mental state or knowledge possessed by the subject.

2. Admissibility

Polygraph tests must overcome a difficult legacy in gaining admissibility because they were rejected by the seminal case of *Frye v United States*,[141] which for seven decades set the standard for admissibility of scientific evidence. The *Frye* court held that expert

138. *Id.* *See also* James R. McCall, *Misconceptions and Re-Evaluation—Polygraph Admissibility after* Rock *and* Daubert, 1996 U. ILL. L. REV. 363, 412–13.

139. Of course, these reactions on the part of the subject might lead a polygraph examiner to *conclude* that the subject must be lying (or telling the truth) about being guilty, but in that sense *any* evidence that points towards a guilty conscience (such as fleeing from the police or lying to the police about an alibi) could lead a witness or a juror to conclude that the subject was lying about their involvement in the crime.

140. *See, e.g.*, United States v. Eggleton, 799 F.2d 378, 380–81 (8th Cir. 1986).

141. 293 F. 1013 (D.C. Cir. 1923).

testimony should only be accepted by a court if the science or methodology upon which it was based had "gained general acceptance" from the scientific community, and concluded that polygraph tests did not meet this standard.[142]

For the next fifty years nearly every court, state and federal, followed *Frye* not only by applying its test but also by using the test to exclude polygraph evidence when it was offered at trial.[143] The result was a per se ban on allowing these tests throughout the American court system,[144] purely on scientific and reliability concerns.[145] A few judges expressed concerns about polygraphs invading the province of the jury prior to the 1970s,[146] but the issue of the province of the jury was understandably not discussed since all such evidence was banned on reliability grounds.

In the 1970s and early 1980s, three state appellate courts and two federal trial courts re-evaluated the per se ban and allowed the use of polygraphs under certain conditions.[147] In every case, the courts in

142. *Id.* at 1014.

143. For a detailed legal history of the admissibility rulings on polygraphs, see generally Edward J. Imwinkelreid & James R. McCall, *Issues Once Moot: The Other Evidentiary Objections to the Admission of Exculpatory Polygraph Examinations*, 32 WAKE FOREST L. REV. 1045, 1051–56 (1997); Paul C. Giannelli, *Truth & Its Rivals: Evidence Reform and the Goals of Evidence Law, Panel 7—What if the Polygraph Really Does Work?*, 49 HASTINGS L J. 895, 900–03 (1998).

144. Imwinkelreid & McCall, *supra* note 143, at 1051. *See, e.g.*, People v. York, 344 P.2d 811 (Cal. Ct. App. 1959); People v. Boney, 192 N.E.2d 920 (Ill. 1963); State v. Bohner, 246 N.W. 314 (Wis. 1933); People v. Becker, 2 N.W.2d 503 (Mich. 1942); Hawkins v. State, 77 So. 2d 263 (Miss. 1955); State v. Hollywood, 358 P.2d 437 (Mont. 1960); Parker v. State, 83 N.W.2d 347 (Neb. 1957); State v. Foye, 120 S.E.2d 169 (N.C. 1961); State v. Emery, 142 A.2d 874 (N.J. 1958); Looper v. State, 381 P.2d 1018 (Okla. Crim. App. 1963); Commonwealth *ex rel.* Hunter v. Banmiller, 169 A.2d 347 (Pa. Super. Ct. 1961); Grant v. State, 374 S.W.2d 391 (Tenn. 1964); Placker v. State, 350 S.W.2d 546 (Tex. Crim. App. 1961); Davis v. State, 308 S.W.2d 880 (Tex. Crim. App. 1958); Zupp v. State, 283 N.E.2d 540 (Ind. 1972).

145. *See, e.g.*, Marks v. United States, 260 F.2d 377, 382 (10th Cir. 1959) (following the lead of a "considerable number of courts" and adopting the *Frye* language that rejected polygraphs). *See also* United States v. Ridling, 350 F. Supp. 90, 93–94 (E.D. Mich. 1972) (reviewing dozens of prior state and federal cases that rejected polygraph tests, and concluding that they were all based on the "unreliability of the polygraph").

146. *See, e.g.*, United States v. Stromberg, 179 F. Supp. 278, 280 (S.D.N.Y. 1959). The *Stromberg* judge expressed concern that allowing polygraphs would be an admission that the jury system is "outmoded":

> The most important function served by a jury is in bringing its accumulated experience to bear upon witnesses testifying before it, in order to distinguish truth from falsity. Such a process is of enormous complexity, and involves an almost infinite number of variable factors. It is the basic premise of the jury system that twelve men and women can harmonize those variables and decide, with the aid of examination and cross-examination, the truthfulness of a witness.

Id.

147. In 1972, the U.S. District Court for the Eastern District of Michigan became the first

question rejected decades of precedent because they concluded that the polygraph had become more reliable and had achieved a minimum level of general acceptance in the scientific community.[148] Predictably, as courts began to overcome the unreliability objection for polygraphs, some judges questioned whether polygraph testimony would infringe on the jury's exclusive role in determining credibility. For example, when the Supreme Judicial Court of Massachusetts decided to allow polygraphs in limited circumstances, three of the justices dissented, stating that "[t]he jury's historic function as the finder of fact and their related responsibility to determine the credibility of witnesses may be replaced by the polygraph machine."[149] The Tenth Circuit reiterated its opposition to polygraph evidence the next year by stating that allowing such testimony would "deprive the defendant of the common sense and collective judgment of his peers, derived after weighing facts and considering the credibility of witnesses, which has been the hallmark of the jury tradition."[150]

These arguments were never fully developed during this period because most of the cases that accepted polygraphs were later overruled.[151] Before the province-of-the-jury question could be

recorded federal court to admit polygraph tests at trial. *Ridling*, 350 F. Supp. at 99. As a prerequisite to admissibility, the court set out certain conditions regarding the qualifications and appointment process for the polygraph expert. A trial court in the District of Columbia followed suit a few months later. United States v. Zeiger, 350 F. Supp. 685 (D.D.C.), *rev'd*, 475 F.2d 1280 (D.C. Cir. 1972) (per curium). The Supreme Judicial Court of Massachusetts was the first state high court to allow polygraph evidence at trial, *see* Commonwealth v. A Juvenile (No. 1), 313 N.E.2d 120, 124 (Mass. 1974); in 1975, New Mexico followed suit, *see* State v. Dorsey, 539 P.2d 204, 205 (N.M. 1975); and a California appellate court approved their use in 1982, *see* Witherspoon v. Superior Court, 183 Cal. Rptr. 615, 616 (Cal. Ct. App. 1982).

148. *See, e.g.*, *Zeiger*, 350 F. Supp. at 688 ("Today, polygraphy has emerged from that twilight zone into an established field of science and technology.").

149. *A Juvenile (No. 1)*, 313 N.E.2d at 136 (Quirico, J., dissenting).

150. *See, e.g.*, United States v. Alexander, 526 F.2d 161, 168 (8th Cir. 1975).

A related but somewhat distinct concern was that the scientific (or psuedo-scientific) nature of the evidence might overwhelm the jury, causing jurors to give the testimony more probative value than it was actually worth and thus running afoul of Rule 403. The judge in the *Ridling* court, for example, cited this as a legitimate concern in admitting polygraph evidence. *Ridling*, 350 F. Supp. at 95–96. However, the judge rejected this argument, asserting that such scientific expertise was highly relevant, and analogized it to radar detectors, breathalyzers, blood tests, voice prints, and fingerprint evidence. In other words, polygraphs were not placed in a special category because they dealt with questions of credibility.

Likewise, the trial judge in *Zeiger* expressed similar concerns, but concluded that observing certain safeguards the presentation of the expert's findings to the jury would be sufficient to overcome any Rule 403 issue. *Zeiger*, 530 F. Supp. at 690–91.

These objections are discussed at length *infra* notes 208–227 and accompanying text.

151. The district court in *Zeiger* was overruled per curium by the D.C. Circuit, *see* United States v. Zeiger, 475 F.2d 1280 (D.C. Cir. 1972), while the *Ridling* decision was never appealed and thus never

sufficiently addressed, polygraphs had to overcome the question of reliability, and as of 1989 every federal circuit court to have considered the matter found polygraph tests inadmissible as evidence of a witness's credibility.[152] However, in that year the Eleventh Circuit (in an en banc decision) re-assessed the reliability of polygraph tests[153] and opened the door to admitting polygraph evidence to impeach or corroborate witnesses.[154] Four years later the seminal case of *Daubert* changed the standards for evaluating expert testimony,[155] essentially requiring trial judges to determine reliability rather than rely upon the judgment of the scientific community.[156] After *Daubert*, six federal circuits have re-

set any binding precedent. Meanwhile California overruled its appellate court by statute, *see* CAL EVID. CODE § 351.1 (West 2005), and Massachusetts' Supreme Judicial Court overruled its own precedent, *see* Commonwealth v. Mendes, 547 N.E.2d 35 (Mass. 1989). During roughly the same period, the Court of Military Appeals issued a decision allowing polygraph evidence at trial, *see* United States v. Gipson, 24 M.J. 246, 253 (C.M.A. 1987), and a few years later this decision was overruled by statute, *see* MIL. R. EVID. 707. The lone exception to this reversal was the state of New Mexico, which codified the court decision allowing polygraphs in its rules of evidence. *See* N.M. R. EVID. 11-707.

152. *See* United States v. Bando, 244 F.2d 833, 841 (2d Cir. 1957) (dicta); United States v. Masri, 547 F.2d 932, 936 (5th Cir. 1977); United States v. Mayes, 512 F.2d 637, 648 n. 6 (6th Cir. 1975); United States v. Sweet, 548 F.2d 198, 203 (7th Cir. 1977); United States v. Smith, 552 F.2d 257, 260 (8th Cir. 1977); United States v. Alexander, 526 F.2d 161 (8th Cir. 1975); United States v. Benveniste, 564 F.2d 335, 338 (9th Cir. 1977); United States v. Russo, 527 F.2d 1051, 1058–59 (10th Cir. 1975).

A few circuits allowed polygraphs for a very limited purpose. For example, the Third and Seventh Circuits allowed such evidence if it rebutted a claim by the defendant that his confession was the result of coercion. United States v. Johnson, 816 F.2d 918, 923 (3d Cir. 1987); United States v. Kampiles, 609 F.2d 1233, 1245 (7th Cir. 1979). The Tenth Circuit allowed evidence that the defendant failed a polygraph test in order to explain why the police detective had not conducted a more thorough investigation. *See* United States v. Hall, 805 F.2d 1410 (10th Cir. 1986). In none of these cases were polygraphs admitted to prove the truth or falsity of a witness' testimony; rather, they were relevant to the "state of mind" of the defendant or government agents during the investigation and interrogation of the defendant. *See, e.g.*, United States v. Bowen, 857 F.2d 1337, 1341 (1988).("It is well settled in this circuit that polygraph evidence is disfavored and cannot be introduced into evidence to establish the truth of the statements made during the examination. Thus, if the evidence is being offered to prove the truth or falsity of the polygraph results, then the evidence is inadmissible." (citation omitted)). Given the limited probative value assigned to polygraphs, it was obviously difficult for those offering the evidence to survive a Rule 403 objection. *See id.* at 1341–42.

153. For example, the court cited studies that showed the tests had a ninety-two percent accuracy rate. United States v. Piccinonna, 885 F.2d 1529, 1533 n.12 (11th Cir. 1989).

154. *Id.* at 1536. The court acknowledged that the level of reliability of any given polygraph test was dependent upon the facts of each case, and thus gave the trial judge discretion to review the polygraph testimony and admit or deny the evidence based on the requirements of Rule 702. *Id.*at 1536–37. The court realized it was breaking new ground, though it overstated the case when it claimed that "[a]bsent a stipulation by the parties, we are unable to locate any case in which a court has allowed polygraph expert testimony offered as substantive proof of the truth or falsity of the statements made during the polygraph examination." *Id.* at 1535.

155. Daubert v. Merrell Dow Pharm., 509 U.S. 579 (1993).

156. *Id.* at 592–93.

evaluated the reliability (and the admissibility) of polygraph evidence,[157] and a handful of states have concluded that under *Daubert*, polygraph evidence is admissible at the discretion of the trial court judge.[158]

Despite these developments, many federal circuits and most states maintain an absolute ban on admissibility,[159] and even in the jurisdictions where admissibility is discretionary, trial court judges rarely admit the evidence in practice.[160] In evaluating the history of polygraph admissibility, one concludes that courts lag dramatically behind the rest of the country in accepting this new technology,[161] and the courts' reluctance is based on something other than legitimate reliability concerns. Polygraph tests are now widely used throughout the lay world.[162] They are common tools of law enforcement[163] and the reported cases show numerous instances of defense attorneys submitting them to courts to corroborate their clients' stories.[164] Outside of the legal arena, polygraph tests are arguably more commonly used than fingerprints or handwriting analysis, two forensic methods that have long been accepted by the courts.[165] In short, much of the world outside

157. United States v. Posado, 57 F.3d 428, 434 (5th Cir. 1995), United States v. Beyer, 106 F.3d 175, 179 (7th Cir. 1997); United States v. Williams, 95 F.3d 723, 728–30 (8th Cir. 1996); United States v. Cordoba, 104 F.3d 225, 227 (9th Cir. 1996); United States v. Call, 129 F.3d 1402, 1404–05 (10th Cir. 1997); United States v. Gilliard, 133 F.3d 809 (11th Cir. 1998).

158. *See, e.g.*, State v. Crosby, 927 P.2d 638, 642–43 (Utah 1996); State v. Porter, 698 A.2d 739 (Conn. 1997); Lee v. Martinez, 96 P.3d 291, 306 (N.M. 2004).

159. *See* 2 MODERN SCIENTIFIC EVIDENCE, *supra* note 134, § 19-1.2, at 431–33.

160. *Id.* at 433.

161. Professor James McCall, who has written extensively on polygraph admissibility, notes "[s]everal unarticulated reasons" why most courts preclude the use of unstipulated polygraph evidence: distrust that a machine could effectively do what no human has been able to do throughout history; discomfort with an "invasion of the inner workings of a person's mind"; and an institutional reluctance to accept anything that makes "certain functions of present day judges and lawyers less important to the fact-finding process." McCall, *supra* note 138, at 370.

162. Applicants for positions at many government agencies, from the CIA to the Department of Energy, are required to undergo a polygraph examination. Many existing government employees are required to undergo periodic testing; in 1993, for example, the Department of Defense alone conducted nearly eighteen thousand tests on its employees. *See, e.g.*, William G. Iacono & David T. Lykken, *The Scientific Status of Research on Polygraph Techniques: The Case Against Polygraph Tests*, *in* 2 MODERN SCIENTIFIC EVIDENCE, *supra* note 134, § 19-3.0, at 529. *See also* United States v. Scheffer, 523 U.S. 303, 323–24 & n.7 (1998) (Stevens, J., dissenting) (noting that the Department of Defense, which was urging the Supreme Court to uphold a blanket ban on polygraphs in military courts, conducted more than 400,000 polygraph tests on its own employees in the preceding sixteen years).

163. *See* David C. Raskin, *The Polygraph in 1986: Scientific, Professional, and Legal Issues Surrounding Applications and Acceptance of Polygraph Evidence*, 1986 UTAH L. REV. 29, 33–34 (1986).

164. *See, e.g.*, United States v. Scheffer, 523 U.S. 303, 306 (1998); Lee v. Martinez, 96 P.3d 291, 293 (N.M. 2004).

165. *See, e.g.*, United States v. Havvard, 260 F.3d 597, 600–01 (7th Cir. 2001) (fingerprints

the courtroom has already accepted polygraph tests as a useful (though obviously not foolproof) tool for gauging a person's credibility. And yet one of the fora where a person's credibility is of the utmost importance has been lukewarm—if not downright hostile—towards the technology.[166]

Of course, widespread acceptance of a technology among the lay population does not mean that judges should admit the technology into the courtroom, but polygraphs also stand up rather well under the *Daubert* criteria.[167] Although most courts have concluded that the technique has not been "generally accepted" by the relevant scientific community,[168] at least one survey shows that a majority of psychologists find the technique to be reliable and more accurate than other psychological evaluations that are routinely accepted by courts, such as opinions on parental fitness, dangerousness, or insanity.[169] Moreover, polygraphs appear to pass the other aspects of the *Daubert* test: standards for the technique have been promulgated;[170] its accuracy can

admissible under *Daubert*); United States v. Velasquez, 64 F.3d 844, 850 (3d Cir 1995) (handwriting analysis admissible under *Daubert.*).

166. *See, e.g.*, James R. McCall, *The Personhood Argument Against Polygraph Evidence, Or "Even If the Polygraph Really Works, Will Courts Admit the Results?"*, 49 HASTINGS L.J. 925, 927 (1998) (describing the history of polygraph admissibility in American courts as "a judicial search for 'plausible legal objections' to keep the court free of polygraph evidence" (internal quotations and citations omitted)). Robin D. Barovick, Comment, *Between* Rock *and a Hard Place: Polygraph Prejudice Persists After* Scheffer, 47 BUFFALO L. REV. 1533, 1584 (1999) (concluding that "[d]espite *Daubert's* clear mandate to assess scientific expert testimony according to more liberal evidentiary rules, prejudice against the polygraph, evidenced in *Scheffer*, retains a stranglehold on the evidentiary process").

167. *Daubert v. Merrell Dow Pharmaceuticals* listed five factors in determining whether a particular science or technology was "reliable" (and thereby admissible): whether the technique has been tested; whether it is subject to peer review and publication; the error rate of the technique; whether standards exist for the procedure; and whether it has attained general acceptance by the relevant scientific community. 509 U.S. 579, 593–94 (1993),

168. S*ee* United States v. Scheffer, 523 U.S. 303, 309 (1998) ("[T]here is simply no consensus that polygraph evidence is reliable. To this day, the scientific community remains extremely polarized about the reliability of polygraph techniques."); Lee v. Martinez, 96 P.3d 291, 306 (N.M. 2004) (reviewing numerous surveys made of psychologists as to the validity of polygraphs, and concluding that "we cannot conclude that the control question polygraph has been generally accepted within the scientific community").

169. *See, e.g.*, *id*. at 305 (citing Charles R. Honts et al., General Acceptance of the Polygraph by the Scientific Community 14–15 (Mar. 9, 2002) (unpublished paper presented at the meetings of the American Psychology Law Society, on file with author)).

170. Both the American Polygraph Association (APA) and the American Association of the Police Polygraphists hold their members to standards of practice. *See* APA Standards of Conduct, Am. Polygraph Ass'n, http://www.polygraph.org/standards.htm; Standards and Principles, Am. Ass'n of Police Poligraphists, http://www.policepolygraph.org/standards.htm). In addition, twenty-eight states maintain standards for licensing polygraph examiners. *See* State Polygraph Licensing Boards, Am. Polygraph Ass'n, http://www.polygraph.org/statelicensing.htm.

be tested;[171] the underlying theory and critiques of different methods are published and subject to peer review;[172] and its error rate has been measured in dozens of studies, most of which find its accuracy to vary between seventy percent and ninety percent.[173] In 2003, the National Academy of Sciences reviewed over one hundred studies on the scientific validity of the polygraph and found a median accuracy of eighty-six percent.[174] One study from more than thirty-five years ago compared the accuracy of polygraph tests with fingerprint identification, handwriting analysis, and eyewitness identification, and concluded that the polygraph test was as accurate as any of the other forensic techniques, and far more accurate than an eyewitness identification.[175]

Courts' reluctance to accept polygraph evidence can be explained in part by the inherent conservatism of the law. As the Supreme Court said in *Daubert*, courts must be more cautious than scientists in evaluating the reliability of novel scientific methods and procedures, because the inevitable correction of inaccurate theories is an integral part of the scientific method, while the application of incorrect theories during a legal case could do fatal damage to the "quick, final, and binding legal judgment" necessary in the law.[176] So courts are understandably deliberate in evaluating and accepting modern scientific theories,

171. A comprehensive report from the National Academy of Sciences (NAS) found 194 separate studies of polygraph validity. Research Council of the National Academies, The Polygraph and Lie Detection 108 (2003) [hereinafter NAS Report]. One obvious problem with testing polygraph validity is that in the laboratory, the physiological responses of truth-tellers and liars might be less intense than in the field, when the stakes are higher. On the other hand, determining accuracy in the field is difficult since there may be no way to confirm that the subject is in fact lying or telling the truth. *Id.* at 127–28.

172. The NAS Report reviewed 217 published research reports, 102 of which met the NAS' requirements for a peer-review study. *Id.*

173. *See, e.g.*, Charles R, Honts, David C. Raskin & John C. Kircher, *The Scientific Status of Research on Polygraph Techniques: The Case for Polygraph Tests*, *in* 2 MODERN SCIENTIFIC EVIDENCE, *supra* note 134, at 446, 452–62 (showing an average accuracy rate of 90% among various different laboratory studies, and 90.5% among various different field studies). *But see* William G. Iacono & David T. Lykken, *The Scientific Status of Research on Polygraph Techniques: The Case against Polygraph Tests*, *in* 2 MODERN SCIENTIFIC EVIDENCE, *supra* note 134, 483, 505–10 (questioning the validity of the studies).

174. *Id.* at 125.

175. *See* J. Widackl & F. Horvath, *An Experimental Investigation of the Relative Validity and Utility of the Polygraph Technique and Three Other Common Methods of Criminal Identification*, 23 FORENSIC SCI 596, 596–600 (1978). Out of twenty different tests (involving four different "suspects" in each group), the fingerprint expert accurately identified the "perpetrator" 100% of the time, the polygraph expert 95% of the time, the handwriting expert 94% of the time, and the eyewitness (who attempted to identify the perpetrator from four photographs shown to him two days after the event) was correct 64% of the time. *Id.* Presumably the accuracy of each of these techniques (aside from eyewitness identification) has only improved over the thirty-five years since the study was conducted.

176. Daubert v. Merrell Dow Pharm., 509 U.S. 579, 596–97 (1993).

preventing the jury from hearing a certain amount of valid technological evidence. But in the case of polygraphs, growing evidence indicates that the proffered expert testimony is reliable, and *Daubert* has given courts the opportunity—if not the duty—to re-evaluate existing presumptions about expert admissibility. As noted above, courts have taken advantage of this opportunity, because within five years of the *Daubert* decision, six federal circuits reconsidered their existing bans on polygraph admissibility.[177]

Thus, in the wake of *Daubert* and increasing evidence of polygraph reliability, we are quickly approaching the stage where reliance on the province-of-the-jury prohibition will be the only reason for precluding polygraph tests. In fact, even though many federal circuits felt compelled to abolish the per se inadmissibility rule for polygraph tests in the wake of *Daubert*, trial courts still rarely admit such testimony, in part because the evidence infringes on the province of the jury.[178] The next Part will examine the various justifications for the province-of-the-jury prohibition, and attempt to balance the danger of admitting this evidence, if any, against the benefits the evidence would provide to the jury's decision-making process.

V. ARGUMENTS FOR RETAINING THE PROVINCE-OF-THE-JURY PROHIBITION

By now, many of the reasons for abolishing the province-of-the-jury prohibition should be clear: the scope of the prohibition is difficult to define; the original reason for the prohibition (that such testimony is beyond the scope of any witness's expertise) has disappeared; and most importantly, it keeps valuable and probative information from a jury that is already engaged in the extraordinarily difficult task of reconstructing a past event by listening to various (and usually conflicting) witness accounts. Assuming that the expert testimony in question is reliable under the *Daubert* standard, why should a jury not be allowed to hear relevant information that can assist them in deciding the case?

The burden of proof rests on those who would maintain the province-of-the-jury prohibition for credibility experts for two reasons. First, as we have seen, courts and evidence codes have rejected this prohibition in every other context; thus, any argument to retain the province-of-the-jury ban must be narrowly tailored to explain why credibility is

177. *See supra* note 155 and accompanying text.

178. *See* 2 MODERN SCIENTIFIC EVIDENCE, *supra* note 134, § 19-1.2.2, at 433–34.

substantially different. Second, modern evidence codes show a strong preference in favor of admitting any evidence that is relevant to prove or disprove a material fact;[179] thus, anyone seeking to exclude probative and reliable evidence on province-of-the-jury-grounds (or any other grounds) must provide reasons for doing so.

Supporters of the prohibition have gladly accepted this burden, and have offered numerous reasons why we should maintain the province-of-the-jury prohibition, at least regarding credibility experts. Four possible arguments to meet this burden are that (1) such experts do not "assist the trier of fact," as required by Rule 702;[180] (2) testimony on a witness's credibility should be barred by Rule 403 as unduly prejudicial because it is overly persuasive;[181] (3) abolishing the prohibition would open the floodgates to "credibility experts" who may be biased or possess little actual expertise; and (4) trials will simply become battles of credibility experts, and the jury will no longer judge credibility for itself but rather just choose which "professional" judge of credibility to believe. This Part will address each of these objections in turn.

A. Using Daubert to Protect the Province of the Jury: Does this Evidence "Assist the Trier of Fact"?

The admissibility of expert testimony involves two steps under the *Daubert* rule. First, the science or methodology used by the expert must be found to be "reliable." Second, the actual expert testimony must assist the trier of fact by being a good "fit" with the facts of the case.[182]

One common objection to the admissibility of experts on polygraphy in particular is that the "science" at work—the biometrics of polygraphy,

179. *See, e.g.*, *Daubert*, 509 U.S. at 588–89 (emphasizing the "'liberal thrust' of the Federal Rules and their 'general approach of relaxing the traditional barriers to 'opinion' testimony'" (citations and internal quotations omitted)).

180. *See, e.g.*, United States v. Hudson, 884 F.2d 1016, 1024 (7th Cir. 1989) (holding that eyewitness expert testimony does not aid the jury); United States v. Call, 129 F.3d 1402, 1406 (10th Cir. 1997) (noting that polygraph testimony "is often excluded because it usurps a critical function of the jury and because it is not helpful to the jury, which is capable of making its own determination regarding credibility").

181. *See, e.g.*, United States v. Rincon, 28 F.3d 921, 926 (9th Cir. 1994) (finding that eyewitness expert testimony has a "powerful" effect on the jury" and a "potential to mislead" the jury"); State v. Shively, 999 P.2d 952, 958 (Kan. 2000) (noting the "concern about the weight a jury might place on such evidence"); United States v. Alexander, 526 F.2d 161, 168 (8th Cir. 1975) (finding that polygraphy experts are "likely to be shrouded with an aura of near infallibility, akin to the ancient oracle of Delphi").

182. *Daubert*, 509 U.S. at 593–94.

for example—is simply not reliable under *Daubert*.[183] A full analysis of this technique's reliability is beyond the scope of this Article, although as noted above, a strong argument exists that the science and method used by polygraph examiners are reliable under *Daubert*.[184] This Article merely argues that the guidelines that courts follow in determining reliability—testing, peer review and publication, error rate, general acceptance, and so on—should be applied independently of whether the testimony invades the province of the jury. In other words, the reliability of the science or methodology is a separate and distinct question that a court must address when assessing any expert testimony, and the standard used in determining reliability should be the same whether or not the expert happens to be testifying in an area traditionally reserved for the "province of the jury."

A more difficult question arises when courts defend the province-of-the-jury prohibition using the other major consideration from *Daubert*—the requirement that the testimony "assist the trier of fact."[185] This argument hinges on the proposition that the expert witness in question cannot tell the jurors anything that they cannot already determine on their own; in other words, that "common sense" is a better guide to assessing the fact in consequence than anything the expert can offer.[186] Although the argument has superficial appeal, it misinterprets the "helpfulness" requirement of Rule 702.

Prior to the codification of the Federal Rules,[187] some courts held that

183. *See, e.g.*, United States v. Black, 831 F. Supp. 120, 122 (E.D.N.Y. 1993). This has tended not to be an issue for experts in eyewitness reliability, perhaps because, in the words of one district court judge: "[T]here is no question as to the scientific underpinnings of [the] . . . testimony. They are based on experimental psychological studies, testing the acquisition of memory, retention, and retrieval of memory under different conditions." United States v. Hines, 55 F. Supp. 2d 62, 72 (D. Mass. 1999).

184. *See supra* notes 167–75 and accompanying text (arguing that polygraph experts meet most of the criteria for the *Daubert* test).

185. Rule 702 states that an expert witness may testify if his or her specialized knowledge will "assist the trier of fact to understand the evidence or to determine a fact in issue." FED. R. EVID. 702. Unlike the "reliability" prong of the *Daubert* test, the requirement that the testimony assist the trier of fact is the primary reason that eyewitness expert testimony is precluded. *See* 2 MODERN SCIENTIFIC EVIDENCE, *supra* note 134, § 15-1.3.1, at 213–18.

186. *See, e.g.*, United States v. Larkin, 978 F.2d 964, 971 (7th Cir. 1992) (finding that a jury is already aware of the possible inaccuracy of an eyewitness identification); *see also* Brodin, *supra* note 14, at 916–17 ("Courts vigilantly guard against invading the province of the jury on matters they are capable of resolving without the benefit of expert opinion, and the credibility of witnesses is such a matter.").

187. As noted at *infra* note 192 and accompanying text, Rule 702 clarified the requirement that expert testimony must "assist the trier of fact." Rule 704 also helped to lower the standard for "assisting the jury" by abolishing the "ultimate issue" prohibition; *see, e.g.*, United States v. Watson, 587 F.2d 365, 369 n.5 (refusing to follow earlier precedent that rejected eyewitness reliability experts because the precedents hold that such testimony "invad[es] the province of the jury, [and thus] we need not rely

to be "helpful" the expert testimony must assist the jury in understanding a subject that the jury could not otherwise understand.[188] For example, in *Great Lakes Gas Transmission Co. v. Grayco Constructors*, *Inc*., the Sixth Circuit reviewed the application of the province-of–the-jury doctrine by the Michigan Supreme Court on the question of causation—specifically, an expert testified that a gas pipeline ruptured because it was struck by a piece of heavy equipment.[189] The Michigan doctrine stated that where "the subject matter of the inquiry is of such a character that it may be presumed to lie within the ordinary experience of all men of common education, whether offered by experts or lay witnesses," the testimony should be "uniformly excluded as invasive of the province of the jury."[190] The Sixth Circuit accepted this doctrine, although it found the Michigan cases inapplicable to the case at bar.[191]

The Federal Rules of Evidence rejected this definition of helpfulness in Rule 702, which states that for expert testimony to be admissible the information must "assist the trier of fact to understand the evidence *or to determine a fact in issue*."[192] Rule 702 does not require that the jury be unable to understand the issue without the help of the expert witness. An expert is considered "unhelpful" if he or she has nothing to add that

upon them in view of Rule 704 of the Federal Rules of Evidence").

188. In many jurisdictions, pre-1975 courts applied a much more stringent test for expert testimony: whether the information provided by the expert was "beyond the ken of the jury." *See* Slobogin, *supra* note 77, at 15–16. *But see* Transp. Line v. Hope, 95 U.S. 297, 298–99 ("It is upon subjects on which the jury are not as well able to judge for themselves as is the witness that an expert as such is expected to testify. Evidence of this character is often given upon subjects requiring medical knowledge and science, but it is by no means limited to that class of cases. It is competent upon the question of the value of land, or as to the value of a particular breed of horses, or upon the value of the professional services of a lawyer, or on the question of negligence in moving a vessel, or on the necessity of a jettison . . . ." (citations omitted)); U.S. Smelting Co. v. Parry, 166 F. 407, 411 (8th Cir. 1909) ("The most important qualification of the general rule before stated is that which permits a witness possessed of special training, experience, or observation, in respect of the matter under investigation, to testify to his opinion when it will tend to aid the jury in reaching a correct conclusion; the true test being, not the total dependence of the jury upon such testimony . . . ."); 7 WIGMORE, *supra* note 17, § 1918 ("[The assistance requirement] does not exclude any specific class of witnesses or all testimony on a specific subject.").

189. 506 F.2d 498 (6th Cir. 1974). *See* Washburn v. Lucas, 130 N.W.2d 406 (Mich. 1964), *superceded by statute*, MICH. R. EVID. 101, *as recognized in* People v. Berkey, 467 N.W.2d 6 (Mich. 1991); People v. Zimmerman, 189 N.W.2d 259 (Mich. 1971).

190. *Great Lakes Gas Transmission Co.*, 506 F.2d at 502.

191. *Id.* The Michigan cases involved expert opinions as to the causation of an automobile accident, "a subject for which many, if not all, of the causal factors lie within the ordinary experience of all men and women of common education." *Id.* By contrast, the Sixth Circuit case involved the possible causation of the rupture of a 3/8th inch steel pipe, which "can[not] be said to lie within the ordinary experience of most potential jurors." *Id.*

192. FED. R. EVID. 702 (emphasis added).

the jury does not already know,[193] not when the subject matter is simple enough for the jury to understand without the expert's help.

Even when courts follow the language of the rule, they still tend to selectively apply the "helpfulness" standard, raising the standard if the testimony strays too close to what they consider the province of the jury. For example, some courts that refuse to allow experts on the reliability of eyewitnesses base their decision on the grounds that the jury is perfectly capable of evaluating eyewitness testimony without the help of the expert.[194] In other words, the testimony is not precluded because the jury is able to understand the issues on its own, but rather because the jury can draw its own inferences sufficiently without the help of experts. This argument at least acknowledges the second half of the "assistance" requirement of Rule 702 (which states that expert testimony should be allowed as long as it "assists the trier of fact . . . to determine a fact in issue"),[195] but it sets the standard of admission artificially high. To see how, one must analyze the policy behind Rule 702 in more depth.

In a sense, the "assistance" requirement of Rule 702 is merely a restatement of the relevance language of Rule 401: an expert's testimony is unhelpful to the jury (and therefore inadmissible) only if it does not make any fact in consequence more or less likely. Thus, to preclude expert testimony, a court must determine that the testimony provides the jury with *no* extra information that can be used in making its factual determination. The Advisory Committee Notes to Rule 702 re-state the "assistance" test as "whether the untrained layman would be qualified to determine intelligently and to *the best degree possible* the particular issue" without the help of an expert.[196]

In theory, one can imagine an "expert" testifying to something that is

193. As Wigmore stated, an expert is "superfluous" if all the inferences and conclusions drawn by the witness can just as easily be drawn by the jury, in which case the court should say to the expert: "The tribunal is in possession of the same materials of information on this subject as yourself; thus, as you can add nothing to our materials for judgment, your further testimony us unnecessary, and merely cumbers our proceedings." 7 WIGMORE, *supra* note 17, § 1918.

194. *See, e.g.*, United States v. Hudson, 884 F.2d 1016, 1024 (7th Cir. 1989) ("[S]uch expert testimony will not aid the jury because it addresses an issue of which the jury is already generally is aware, and it will not contribute to their understanding of the particular dispute."). *See also* United States v. Thevis, 665 F.2d 616, 641 (5th Cir. 1982) (stating that the jury was able to "adequately weigh" the problems posed by perception and memory; thus implying (since the jury's common sense was "adequate") that no further assistance from experts was necessary).

195. FED. R. EVID. 702.

196. *Id*., Advisory Comm. Notes (quoting Mason Ladd, *Expert Testimony*, 5 VAND. L. REV. 414, 418 (1952)) (emphasis added). Wigmore presents an equally low standard for admissibility; only if the expert can add "nothing to our materials for judgment" or when the tribunal is being told "that which it is itself *entirely* equipped to determine without the witness' aid" should the expert testimony be precluded as unhelpful. 7 WIGMORE, *supra* note 17, § 1918 (emphasis added).

relevant to a case but that is so obvious that she provides absolutely no help to a jury—for example, an expert in automotive mechanics testifying that a car has the ability to stop, or a medical expert testifying to the number of fingers on the average person's hand. But beyond these extreme and rather absurd examples, one struggles to imagine a trial judge determining that an expert with reliable scientific or technical knowledge relevant to the case would be unable to assist the jury. In the previous examples, an expert in automotive mechanics would likely be able to testify about the process by which gasoline powers a combustion engine (assuming the question was relevant); surely every juror knows that combustion engines run on gasoline, but not to the level of detail that the mechanic can describe. Likewise, the medical expert would be allowed to testify (again assuming relevance) about the amount of pressure required to crack a bone in the skull, even though every juror presumably knows that a blow of certain strength to the skull can cause it to crack. Yet when an expert on the effect of stress on a person's perception and memory testifies about the causes and degree of decreased reliability, many judges would rule that the testimony is "unhelpful" because jurors already know that stress can affect perception and memory.[197]

An illustrative example can be found in two Ninth Circuit cases, *United States v. Cairns*[198] and *United States v. Brown*.[199] In *Cairns*, the appellate court upheld the admission of expert testimony by a "photographic identification specialist" regarding the identification of the defendant in surveillance photographs, even though jurors are perfectly able to compare images from two different photographs without expert assistance.[200] The expert in *Cairns* was allowed to testify because he was able to assist the jurors by giving them information they did not already possess. This information included, for example, comparison of the shape of the ear contours and inner folds of the ear on enlarged photographs.[201] By contrast, in *Brown*, the government sought to admit the testimony of a similar expert, but the same court precluded the proposed testimony because it would show the jurors nothing that they could not already do for themselves. The expert was only able to testify in general terms about the shape of the nose and mouth of the

197. *See, e.g.*, United States v. Larkin, 978 F.2d 964, 971 (7th Cir. 1992).

198. 434 F.2d 643 (9th Cir. 1970).

199. 501 F.2d 146 (9th Cir. 1974).

200. *Cairns*, 434 F.2d at 644.

201. *Id*.

individuals in the pictures.[202] In short, even if the *subject matter* of the testimony is found to be within the ability of an average juror to determine, an expert can still assist the jury by providing *specific facts*, *observations*, *or conclusions* within that subject matter that are not known to a jury. Only when the expert is unable to provide any specific facts beyond what the jury already knows should the testimony be considered unhelpful.

This principle is routinely applied outside the context of credibility. For example, jurors possess the ability to compare handwriting samples and determine if they were made by the same person,[203] but if an expert can guide them in making this determination, adding any observations or conclusions that the jurors did not already know, the expert testimony will be admissible under Rule 702.[204]

Of course, most experts testifying about matters within common experience—such as identifying an individual in a photograph—will not reach this stage, because they will be unable to pass the *Daubert* test of reliability.[205] When courts misinterpret the "helpfulness" requirement, their real discomfort is often with the quality of the expertise, not its helpfulness to the jury. In such cases the court should apply the first prong of the *Daubert* requirement and determine whether the witness

202. *Brown*, 501 F.2d at 149. The case was remanded to the trial court to hold a hearing to determine whether "the facts offered [by the expert] are beyond the jury's common experience." *Id*. *See also* United States v. Green, 525 F.2d 386, 391–92 (8th Cir. 1975) (distinguishing the *Brown* precedent because the instant case did not involve an expert comparing the defendant's face to a face in a photograph, but rather an expert comparing the defendant's clothing to clothing in a photograph. Since everyday jurors would not have the experience to note the similar details of the clothing, the expert testimony was permissible).

203. *See* FED. R. EVID. 901(b)(3) (allowing authentication or identification of a piece of evidence through "comparison by the trier of fact . . . with specimens which have been authenticated").

204. *See, e.g*., United States v. Paul, 175 F.3d 906, 909–10 (11th Cir. 1999).

205. This method of analysis was used appropriately by the First Circuit in United States v. Fosher, 590 F.2d 381 (1st Cir. 1982). In *Fosher* the court upheld the trial court's conculsion that under Rule 702's standard, the proffered expert testimony on eyewitness reliability "either has not reached, or perhaps cannot reach a level of reliability such that scientific analysis of a question of fact surpasses the quality of common sense evaluation inherent in jury deliberations." *Id.* at 383. Thus, the expert testimony on eyewitness reliability would not be "helpful" because the "proof offered to add to [the jurors'] knowledge must present them with a system of analysis that the court, in its discretion, can find reasonably likely to add to common understanding of the particular issue before the jury." *Id.*

The *Fosher* court had to perform some damage control on the opinion of the district court below, which had said that expert's testimony would have invaded the "province of the jury." In a footnote the circuit court explained that "[i]n saying that the expert would invade the province of the jury, we think the trial court was stating that the issue was not a proper subject of expert testimony under F[ED]. R. EVID. 702, that is, a subject beyond the ken of the ordinary juror and reliably analyzed by modern science." *Id.* at 384 n.1.

has reliable, demonstrable expertise in this area. As noted above,[206] a *Daubert* hearing on reliability is always the first inquiry a court must make, and a witness should be certified as an expert only if the witness has specialized knowledge, skill, experience, training, or education.

B. Rule 403 Objections: Is Credibility "Different"?

Another objection that courts use to support the province-of-the-jury argument posits that the expert's testimony on issues of liability, guilt, or credibility will carry too much weight for the jury.[207] These courts will concede that, just like character evidence used to prove propensity, the expert testimony in question has some probative value. But they conclude that jurors will be dazzled and overpowered by the qualifications of the expert and the scientific sheen of the technique and give the testimony more weight than it deserves. In the words of one court, the testimony is "likely to be shrouded with an aura of near infallibility, akin to the ancient oracle of Delphi."[208]

Numerous empirical studies have concluded that this assumption is not correct and that juries are not unduly influenced by polygraph evidence, particularly when they are also provided with information and testimony about the fallibility of polygraphs.[209] But the empirical question of whether credibility experts carry too much weight with

206. *See supra* notes 181–83 and accompanying text.

207. *See, e.g.*, United States v. Ramirez-Robles, 386 F.3d 1234, 1246–48 (9th Cir. 2004) (upholding the district court's preclusion of a polygraph test on Rule 403 grounds because the testimony would be "highly influential"); United States v. Benavidez-Benavidez, 217 F.3d 720, 725 (9th Cir. 2000) (upholding preclusion of polygraph test of 403 grounds because of the "special risk that the jury might give excessive weight to the polygrapher's conclusions").

208. United States v. Alexander, 526 F.2d 161, 168 (8th Cir. 1975). Many courts have concluded that the strong weight that jurors would be likely to give polygraph evidence means that courts should be especially cautious in evaluating their reliability, perhaps requiring a higher standard of reliability for admissiblity. *See, e.g.*, United States v. Posado, 57 F.3d 428, 435 (1995) ("[T]he traditional objection to polygraph evidence is that the testimony will have an unusually prejudicial effect which is not justified by its probative value, precisely the inquiry required of the district court by Rule 403."); People v. Leone, 255 N.E.2d 696, 700 (N.Y. 1969) ("We are all aware of the tremendous weight which such tests would necessarily have in the minds of a jury. Thus, we should be most careful in admitting into evidence the results of such tests unless their reasonable accuracy and general scientific acceptance are clearly recognized."); United States v. Toledo, 985 F.2d 1462, 1470 (10th Cir. 1993) (noting that "[t]he credibility of witnesses is generally not an appropriate subject for expert testimony").

209. *See, e.g.*, Ann Cavoukian & Ronald J. Heslegrave, *The Admissibility of Polygraph Evidence in Court: Some Empirical Findings*, 4 LAW & HUM. BEHAV. 117 (1980); Stephen C. Carlson et al., *The Effect of Lie Detector Evidence on Jury Deliberations: An Empirical Study*, 5 J. POLICE SCI. & ADMIN 148 (1977); Alan Markwart & Brian E. Lynch, *The Effect of Polygraph Evidence on Mock Jury Decision-Making*, 7 J. POLICE SCI & ADMIN. 324 (1979); Robert B. Peters, *A Survey of Polygraph Evidence in Criminal Trials*, 68 A.B.A. J. 162 (1982).

jurors is ultimately unanswerable—and misses the point. There is nothing especially complicated or awe inspiring about experts in eyewitness perception or in the biomechanics of polygraphy. Courts do not routinely reject experts in the field of fingerprints, DNA, or ballistics on the grounds that the technical scientific nature of their testimony would "overawe" the jury, even though those fields involve far more complicated theoretical bases and require a much higher level of technical explanation than polygraphy or eyewitness reliability experts.

In other words, the concern that credibility testimony will carry too much weight applies to all expert testimony, and for it to be used to specifically prohibit credibility testimony depends on the premise that credibility is somehow different from other potential topics for expert testimony. It is undisputed that the jury's job is to determine credibility,[210] but more broadly the jury's job is to determine *all* the facts in the case; thus, *any* expert who concludes that a certain fact is true is infringing on the jury's job. Therefore, those who support banning expert testimony on credibility must argue that questions of credibility are qualitatively different from the other facts put before a jury.[211] We have seen how this argument has evolved from the doctrine that precluded trial judges and appellate courts from instructing or overruling the jury's determinations on witness credibility to a doctrine that forbids (or disfavors) any expert testimony to guide the jury on the subject.[212] This argument—that witness credibility is different from other factual

210. *See, e.g.*, Moore v. Chesapeake & Ohio Ry. Co., 340 U.S. 573 (1951).

211. Indeed, some courts make this assertion explicitly. *See, e.g.*, State v. Beachman, 616 P.2d 337, 339 (Mont. 1980) (finding that it is "distinctly the jury's province to determine whether a witness is being truthful").

Some argue that polygraph evidence in particular is different because it tends to prove not just identity or causation, but (if a criminal defendant is subject to the test) whether or not the defendant is in fact guilty. *See, e.g.*, United States v. Alexander, 526 F.2d 161, 169 (8th Cir. 1975) ("It may be argued that all forms of scientific evidence may have a substantial effect upon jurors and may tend to invade the fact-finding province of the jury; thus, polygraph evidence is not objectionable on this basis. However, polygraph evidence is distinguishable from other types of scientific evidence in that its scope is much broader. Scientific evidence based on ballistic analysis, fingerprint comparison, handwriting analysis, voiceprint or spectrographic analysis, and neutron activation analysis is elicited solely for the purpose of identifying either an individual or an object allegedly involved in the perpetration of a criminal act. These scientific tests do not purport to indicate with any degree of conclusiveness that the defendant who is so identified or connected with the object actually committed the crime. The jury, after receiving such expert testimony, has the additional responsibility of reviewing other facts which tend to prove or disprove defendant's connection with the crime and, if participation is shown, the jury may further be required to ascertain the defendant's mental state at the time of the crime in appropriate cases."). This is merely the "ultimate issue" objection in a more sophisticated form. One of the reasons that courts are so reluctant to accept polygraphs is that they combine expert testimony on credibility with expert testimony on the ultimate issue.

212. *See supra* notes 40–42 and accompanying text.

questions in the case because it is the exclusive realm of the jury—was recently reinforced by the U.S. Supreme Court in *United States v. Scheffer*.[213]

Edward Scheffer was an airman working as an undercover informant for the Air Force Office of Special Investigations. Based on a routine urine test, he was accused of using methamphetamine.[214] In his defense, Scheffer wished to submit the results of a polygraph test—also administered as a routine part of his job—that allegedly showed he was telling the truth when he denied ever intentionally using drugs. Although the Court of Military Appeals had earlier ruled that polygraph evidence could be admissible,[215] President George H.W. Bush overruled the court by issuing Military Rule of Evidence 707, which excluded polygraph testimony from the military courts.[216] Scheffer argued that Rule 707 violated his Sixth Amendment right to present evidence on his own behalf under *Rock v. Arkansas*.[217]

The trial judge ruled that Rule 707 was constitutional, citing three reasons that should by now be familiar. First, he held that "the President may . . . determine that credibility is not an area in which a fact-finder needs help."[218] This astonishing proclamation is merely a bolder re-statement of the doctrine that credibility determinations are the exclusive province of the jury (or other fact-finder), relying on the argument that the fact-finder could not use any help in making this determination. The trial judge also stated that the fact-finder might "give undue weight to the polygraph examiner's testimony"[219]—essentially holding that the doctrine behind Rule 403 supported Rule 707. Finally, the trial judge expressed concern that admitting credibility evidence could give way to collateral arguments about the reliability of such evidence and consume "an inordinate amount of time and expense."[220]

The case was eventually appealed to the Supreme Court, which

213. 523 U.S. 303 (1998).

214. He was charged with using methamphetamine, as well as absenting himself from the base for thirteen days and writing seventeen checks with insufficient funds. *Scheffer*, 523 U.S. at 306.

215. United States v. Gipson, 24 M.J. 246, 253 (C.M.A. 1987).

216. Military Rule 707(a) states in part: "Notwithstanding any other provision of law, the results of a polygraph examination, the opinion of a polygraph examiner, or any reference to an offer to take, failure to take, or taking of a polygraph examination, shall not be admitted into evidence." *See* Exec. Order No. 12,767, 56 Fed. Reg. 30,284 (July 1, 1991).

217. 483 U.S. 44 (1987). *Rock* set out the contours of a criminal defendant's Sixth Amendment right to introduce exculpatory evidence.

218. *Scheffer*, 523 U.S. at 307.

219. *Id.*

220. *Id.*

upheld the trial court's ruling. The primary effect of the Court's opinion was to define and limit the defendant's right to present evidence in his own defense under *Rock v. Arkansas*,[221] but in so doing the Court analyzed the propriety of admitting polygraph testimony. After concluding that "there is simply no consensus that polygraph evidence is reliable,"[222] the Court discussed a "second legitimate governmental interest" in a rule that categorically excludes polygraph evidence: "[p]reserving the jury's core function of making credibility determinations . . . ."[223] The Court noted that:

> A fundamental premise of our criminal justice system is that "the *jury* is the lie detector." Determining the weight and credibility of witness testimony, therefore, has long been held to be the "part of every case [that] belongs to the jury, who are presumed to be fitted for it by their natural intelligence and their practical knowledge of men and the ways of men."[224]

The Court also supported the trial court's other reasons for applying Rule 403 to polygraph tests. First, they are unduly persuasive, leading jurors to "abandon their duty to assess credibility and guilt," since they are "clothed . . . in scientific expertise" and possess an "aura of infallibility."[225] Second, allowing polygraphs would invite "collateral litigation" on the accuracy of the polygraph test, centered on "whether the test and control questions were appropriate [and] whether a particular polygraph examiner was qualified and had properly interpreted the physiological responses . . . ."[226]

But these arguments again prove too much. Once we have determined polygraphs to be reliable under *Daubert*, they are no different from any other kind of expert testimony. If the President (or a legislature, or a court) can preclude polygraphs because they infringe on the jury's job to determine the facts, they will be unduly prejudicial, or they will lead to collateral litigation on the accuracy of the test, *every* kind of expert testimony could be precluded for the same reasons. But

221. *Id.* at 309. The Court determined that rules of evidence that preclude a defendant from presenting exculpatory evidence are permissible if they are not "'arbitrary' or 'disproportionate the purposes they were designed to serve,'" *id.* (citation omitted), and concluded that Rule 707 served a legitimate purpose in (1) "ensuring that only reliable evidence is introduced at trial;" (2) "preserving the jury's role in determining credibility;" and (3) "avoiding [collateral] litigation." *Id.* at 309.

222. *Id.* The court cited both studies of polygraph accuracy and the inconsistent rulings by state and federal courts on the question of admissibility. *Id.* at 309–12.

223. *Id.* at 312–13.

224. *Id.* at 313 (citations omitted).

225. *Id*. at 314.

226. *Id.* at 315.

the battle to allow experts to present their opinions in court has already been fought, and the experts won the ability to testify more than a century ago. This victory was followed by the logical and inexorable (if inconsistent) broadening of that ability to every reliable field of expertise; witness credibility is simply the last such field that remains to be covered.[227]

C. Opening the Floodgates

Another possible argument for excluding experts on credibility states that allowing such testimony will open the door to hundreds of different kinds of witnesses claiming to be "credibility experts," from long-time acquaintances of the witness in question to law enforcement officers claiming to know whether a suspect is being truthful.[228] A proliferation of these "non-scientific" credibility experts could conceivably waste a lot of time telling the jury which eyewitnesses to believe, and could easily confuse a jury trying to make its own credibility determinations.

An initial response to the floodgates argument is to simply apply a bit of common sense to the issue. Just because experts are allowed to testify on a broader range of issues does not mean that attorneys will routinely use them at trial. Expert testimony is not always helpful to a case, and in some cases may do harm. Experts generally complicate a

227. A few courts have agreed that polygraph evidence is no different from other forms of expert testimony. For example, in *United States v. Ridling*, 350 F. Supp. 90 (E.D. Mich. 1972), a district court judge noted that "[i]n comparable situations, the Courts do not reject evidence—radar for speeders, fingerprints, ballistics evidence, blood tests, voice prints. The evidence is admitted for its worth, and the expert who attempts to make more from it than he should seldom survives a good cross examination." *Id.* at 95–96 (citations omitted). The court also rejected the argument that credibility was different because it was central to the case, noting:

> In the other areas of scientific opinion mentioned above, science has been helpful on central issues and the opinions have not been rejected. Speed testers establish the central issue in speeding cases. Breathalizers and blood tests establish the central issue in cases involving intoxication. The fact is that, just as in these other cases, the relevancy of the polygraph evidence is high and its use will likely protect both society and the defendant.

Id. at 96.

228. A related, but less persuasive, argument is that a court could become bogged down in collateral issues as to the qualifications of the expert or the reliability of the method used to evaluate credibility. As noted by Justice Stevens in his dissent in *United States v. Scheffer*, this argument could be used to preclude *any* expert testimony:

> Such proceedings are a routine predicate for the admission of any expert testimony, and may always give rise to searching cross-examination. If testimony that is critical to a fair determination of guilt or innocence could be excluded for that reason, the right to a meaningful opportunity to present a defense would be an illusion.

523 U.S. at 337 (Stevens, J., dissenting) (emphasis added).

trial; they almost always lengthen it and increase the amount of information that a jury must process. Thus, many lawyers seek to minimize the amount of expert testimony that is presented to a jury.[229] A study of jurors sponsored by the American Bar Association Litigation Section asked former jurors to discuss the attorneys who appeared before them. The most common criticism mentioned by the jurors was that they had received too much information during the trial.[230] Other studies have shown that testimony about witness credibility is not especially persuasive,[231] and the leading proponent of witness credibility experts concedes that jurors will (probably incorrectly) give more weight to confident eyewitness testimony than to expert testimony.[232]

The real solution to the potential problem of opening the floodgates is not self-interested restraint on the part of trial attorneys but Rule 702 itself. Before any witness can be certified as an expert and give testimony about another witness's credibility, she must prove that she has "specialized knowledge" based on "skill, experience, training, or education."[233] A long-time friend of the witness would be unlikely to possess any such specialized knowledge. But what about a law enforcement officer, perhaps a veteran police detective who has interrogated thousands of suspects and had developed an "expertise," however unscientific, in determining whether an individual was telling the truth about his criminal activity? Why would this testimony be less acceptable under Rule 702 than that of a car mechanic with no official training or schooling but with years of experience fixing automobiles? Although aggressive prosecutors might try to make this argument, it seems likely that judges—and, if it ever got to that point, juries—would be extremely skeptical of such "expertise." Unlike mechanics or other skilled tradespeople, who can demonstrate special knowledge and training on a daily basis in a practical sense, non-scientific credibility experts will be hard pressed to convince a judge that they possess a specialized knowledge that can be helpful to the jury. And even if they did, in most cases (as with the example of the veteran police detective), the witness's bias would be so transparent that the testimony would have

229. *See, e.g.*, Edward J. Imwinkelried, *A Minimalist Approach to the Presentation of Expert Testimony*, 31 STETSON L. REV. 105, 107–09 (2001).

230. Spec. Comm'n on Jury Comprehension, A.B.A. Sec. Litig., Jury Comprehension in Complex Cases (ABA 1989).

231. *See supra* note 208 and accompanying text.

232. Elizabeth F. Loftus, *Psychological Aspects of Courtroom Testimony*, *in* 347 FORENSIC PSYCHOL. & PSYCHIATRY 27, 32–33 (Fred Wright et al. eds., June 20, 1980).

233. FED. R. EVID. 702.

little impact.

But in the end, it might be necessary for a court to accept the testimony of a non-scientific credibility expert. As in the previous section, those opposed to such testimony must explain why this would harm the truth-seeking process. If a lay witness has built up twenty years of expertise interrogating suspects, and a judge determines that the witness has specialized knowledge that will assist the jury, why should the jury not hear the information? Law enforcement officers already testify about many other aspects of their investigative expertise, such as how drug deals are structured[234] or the pricing of narcotics.[235] Courts currently refuse to allow law enforcement experts to testify about such matters unless they can provide information "not within the experience of the average juror," or about criminal activity "beyond the understanding of the average layman."[236] Under this standard, law enforcement officers would not be allowed to testify about matters of credibility (surely not an issue beyond the experience or understanding of an average juror), but as noted above,[237] this is not generally the standard for the admissibility of expert testimony. If the province-of-the-jury prohibition is abolished, this higher standard likely will not survive. Of course, if a law enforcement officer strays too far into the realm of legal conclusions (giving an opinion about the guilt or innocence of a suspect, for example, or an opinion about whether a defendant's actions constituted a crime), the testimony should be inadmissible, since no witness can give an opinion as to a legal question.[238]

234. United States v. Barrow, 400 F.3d 109, 124 (2d. Cir. 2005).

235. United States v. Straughter, 950 F.2d 1223, 1232–33 (6th Cir. 1991). Generally law enforcement officers are allowed to testify as to the methods and techniques employed in a specific criminal activity. *See* United States v. Rogers, 769 F.2d 1418, 1425 (9th Cir. 1985).

236. United States v. Pearce, 912 F.2d 159, 163 (6th Cir. 1990) (internal quote and citation omitted). Courts are also reluctant to allow a law enforcement agent to testify as a "dual witness"; e.g., both as a fact witness and an expert witness, because such a procedure might confuse the jury. *See, e.g.*, United States v. Thomas, 74 F.3d 676, 682 (6th Cir. 1996), *overruled on other grounds by* Morales v. Am. Honda Motor Co., Inc., 151 F.3d 500, 515 (6th Cir. 1998).

237. *See supra* notes 193–205 and accompanying text.

238. *See, e.g.*,, United States v. Milton, 555 F.2d 1198, 1203–04 (5th Cir. 1977) (upholding the admission of law enforcement expert testimony interpreting transcripts of the defendants' conversations as certain types of betting, but showing reluctance to admit expert testimony that the defendants' activities were "'part of the gambling business,'" since such a statement may "seem more like a legal than a factual conclusion"); *see also supra* notes 48–50 and accompanying text.

D. "Professionalizing" the Fact-Finding Function of the Jury

Perhaps the most compelling argument against admitting polygraphs is that such a step represents the final step of the professionalization of fact-finding in our courts. Instead of twelve lay jurors relying upon their own experience and common sense to decide who is lying, a specialist will be brought in to run tests to determine credibility and present those findings to a jury.[239] Trials will turn into a "battle of the experts" on the issue of witness credibility,[240] and the jury will no longer independently sift through the evidence on its own, but simply decide which expert to believe and base its verdict on that expert's opinion. Unlike the "too much weight" argument, the concern is not that jurors will be overpowered by an expert's credentials and follow her lead even if it contradicts their own beliefs; rather, the concern is that jurors will become lazy—or, more accurately, disenfranchised—and therefore not bother to do the heavy lifting themselves.

A variant of this argument posits that relying on machines or scientific experts to determine credibility (or to guide the lay jury in making these determinations) lessens the dignity and "personhood" of the witnesses whose stories are being evaluated. In a concurring opinion that rejected the admissibility of polygraph evidence, one justice of the Oregon Supreme Court argued that even if a lie detector could be proven to be one-hundred percent effective, he would still argue against its admissibility, because such a machine would only "heighten the sense of unease and the search for plausible legal objections" against their admissibility.[241] According to the opinion:

> The institution of the trial, above all, assumes the importance of human judgment in assessing the statements of disputing parties and other

239. *See, e.g.*, United States v. Alexander, 526 F.2d 161, 168 (8th Cir. 1975). ("[I]n many cases where polygraph evidence is admitted, a single person, the polygraphist, will give testimony which will often be the determinative factor as to the guilt or innocence of a defendant in a jury-tried case. This would deprive the defendant of the common sense and collective judgment of his peers, derived after weighing facts and considering the credibility of witnesses, which has been the hallmark of the jury tradition."); United States v. Stromberg, 179 F. Supp. 278, 280 (S.D.N.Y.), *rev'd in part on other grounds*, 268 F.2d 256 (2d Cir. 1959) (noting that allowing polygraphs would be a concession that the jury system is "outmoded").

240. *See*, *e.g.*, United States v. Downing, 753 F.2d 1224, 1230 n.4 (citing the concern over a "'battle of the experts'" as a reason why other federal courts were reluctant to allow experts as to eyewitness reliability).

241. State v. Lyon, 744 P.2d 231, 238 (Or. 1987) (Linde, J., concurring). *See also* Michael J. Saks, *Enhancing and Restraining Accuracy in Adjudication*, 51 LAW & CONTEMP. PROBS. 262 (1988) (suggesting that the problem with polygraph tests is not that they are inaccurate but rather that they are too accurate).

> witnesses. The cherished courtroom drama of confrontation, oral testimony and cross-examination is designed to let a jury pass judgment on their truthfulness and on the accuracy of their testimony. The central myth of the trial is that truth can be discovered in no better way, though it has long been argued that the drama really serves symbolic values more important than reliable factfinding. One of these implicit values surely is to see that parties and the witnesses are treated as persons to be believed or disbelieved by their peers rather than as electrochemical systems to be certified as truthful or mendacious by a machine.[242]

In short, reliance on the polygraph—or on professional psychologists testifying about the reliability of eyewitnesses—detracts from both the symbolic values of a trial (the oath, the drama of cross-examination, the independent judgment of twelve neutral jurors) and from the fundamental nature of what it means to be a person.[243] The witness's direct testimony to the jury becomes less important, perhaps insignificant, while the experts—whether mechanical or human—tell the jury what testimony to believe. The result, according to those who would maintain a prohibition on testimony that invades the province of the jury, is not a trial by peers, but a trial by experts (or by machines) that is rubber-stamped by peers. And of course, if the argument is carried to its logical conclusion, there will inevitably be no need for the jury to do any work in determining credibility. The jury would simply accept the testimony it was advised to accept and reject the rest.[244]

But this picture is overly alarmist. Let us carry the argument to the extreme and assume that at some point every trial will feature a credibility expert—whether mechanical or human—who is conceded to be perfectly accurate. The credibility expert's conclusions might be

242. *Lyon*, 744 P.2d at 240 (Linde, J. concurring). This sense of "preserving humanity" might help to explain why courts are more willing to accept experts on eyewitness testimony (who are only questioning a witness' perception or recall abilities) than polygraph experts (who are challenging the sincerity of a witness). It could be that using a machine to challenge the integrity and truthfulness of a fellow human being robs the witness of his or her dignity to a greater extent than the use of psychological studies to question their perception or memory.

243. *Id.* at 234–39 (Linde, J. concurring) (expresses concern that increased reliance on polygraphs would "enhance people's capacity to test for truth only at the cost of diminishing their common humanity"). *But see* McCall, *supra* note 166, at 942–44 (responding to Justice Linde's "diminished humanity" argument).

244. A related concern would be a result something like the "CSI effect," named for the television shows that some prosecutors claim lead jurors to unrealistically expect airtight forensic evidence for every criminal case. *See* Kit R. Roane & Dan Morrison, *The CSI Effect*, U.S. NEWS & WORLD REP., Apr. 2, 2005. If polygraph experts became more common in court, jurors might expect to see them in every case and disbelieve any witness whose credibility was not verified by an "expert." Of course, widespread polygraph admissibility could conceivably have the opposite effect, leading jurors to expect that any argument *against* a witness' credibility has to be supported by a negative polygraph test.

delivered through live testimony, or perhaps the results of every witness's credibility test will be admitted after his testimony is completed. Even in such a world, a jury would still have plenty to do in interpreting and processing the testimony in order to reconstruct the past. For example, a criminal defendant, charged with assault and claiming self-defense, testifies (credibly) that the victim pushed him into a wall and struck him in the face. How hard was the push? How hard was the punch? Was either of these enough to justify the defendant's action in assaulting the defendant? In a personal injury case, if a corporate executive credibly testifies that she had no knowledge that the pharmaceutical in question could increase the risk of a heart attack, a jury would still have to decide if, given the circumstances, she had constructive knowledge of the danger. And juries will still have to decide the broader questions: Has the state proven its case beyond a reasonable doubt? Did the defendant act with reasonable care in performing its duty? Did the defendant's actions constitute sufficient performance under the contract? These are all genuine "jury questions," and no amount of help from experts on credibility will remove them from a jury's consideration.

In short, even if the use of credibility experts becomes widespread, and juries explicitly or unconsciously delegate the task of assessing credibility to these experts, the jury will not become superfluous or passive. Thus, all of the secondary purposes of a jury trial—the vaguely democratic notion that disputes should be settled by lay citizens and not by elitist judges; the legitimizing influence provided by a jury verdict; the cathartic effect and sense of procedural justice felt by parties and victims when their story can be told in a public tribunal—will remain intact. Abolishing the province-of-the-jury prohibition will simply mean that the jurors' role in determining credibility (a role they do not, as it turns out, play particularly well) will be diminished and perhaps eliminated.

Many may believe that this is a significant loss, that the dignity of the procedure suffers if the story of an aggrieved plaintiff, a crime victim, or a criminal defendant is evaluated for accuracy not by fellow citizens but by elite scientists, with or without the help of machines. On one level, no reply convincingly answers this concern. The issue presents a question of values, and many people undoubtedly believe that there is an inherent value in jurors evaluating credibility independent of any experts' advice. A smaller proportion of these people probably believe that this inherent value—and all of the tradition and drama that it represents in the courtroom setting—is so great that it outweighs the

increased accuracy of verdicts that might result if the lay jurors received expert guidance in making their decisions. But surely at the extreme—if we could provide every jury with a machine or a human expert that could detect lies and other inaccuracies with one-hundred percent precision—almost everyone would be willing to sacrifice the tradition and symbolism provided by a trial.[245] Once this is acknowledged, the next step is for those who wish to protect the province of the jury to conduct a cost-benefit analysis, and concede that to maintain the benefit of the traditional methods of truth-seeking they are preventing the jury from receiving useful information about the facts of the case, information that if provided would reduce the number of incorrect and unjust verdicts. The standard objection by these advocates—that there is as yet no consensus that juries who hear from the human or mechanical experts are better equipped to judge credibility than the jurors who do not—misses the point. That objection speaks to whether the credibility-detecting methods currently available are reliable and accurate, and it is dealt with quite simply: subject the credibility-detecting method to the same *Daubert* standards that all other expert testimony must satisfy. If it is unreliable or unhelpful, there is no need to assert the province-of-the-jury prohibition. But those who wish to invoke that prohibition essentially argue that even if experts in credibility were reliable and helpful—and thus, by definition, they would increase the accuracy of verdicts—they should still be kept from the jury. In the case of eyewitness reliability experts, this line seems to have already been crossed. Almost all courts and psychologists agree that experts can provide juries information about perception and memory that is helpful in making their credibility determination; thus, if these experts are prevented from testifying based on the province-of-the-jury prohibition, inevitably some juries will incorrectly believe (or disbelieve) certain witnesses, and return their verdicts accordingly. The intangible value of having a lay jury of citizens decide credibility unfettered by experts might still outweigh this decrease in accuracy (and justice), but an explicit balancing should be made.

Of course, this honest assessment goes both ways. Those who seek to further professionalize the science (or art) of credibility evaluation must recognize the cost in doing so. Even in the best-case scenario, with a

245. Though surely not everyone. As Justice Linde asks: "Would a perfect detector enhance people's capacity to test for truth only at the cost of diminishing their common humanity?" *Lyon*, 744 P.2d at 240. (Linde, J. concurring). Admittedly, the idea of an infallible machine resolving all factual disputes without any input from lay jurors is somewhat chilling, regardless of the increase in the level of justice that might be provided.

perfect credibility detector present at every trial that can guide (or control) the jury's credibility determination, the so-called "central myth of the trial"—the belief that "parties and the witnesses are treated as persons to be believed or disbelieved by their peers rather than as electrochemical systems to be certified as truthful or mendacious by a machine"[246]—is lost. This might best be termed the "sentimental" value of barring credibility experts, because it stems from our psychological or emotional desire to prevent experts from making these kinds of judgments. This is not to say that the value of such a prohibition is meaningless, just that the prohibition does not add to the intellectual task the jurors undertake—and, by excluding relevant and reliable evidence, the prohibition will detract from that task.

The sentimental value might be even more pronounced when the credibility experts err, because the mechanical or human experts will not be perfectly accurate and will certainly make mistakes. The mistakes will likely be fewer than those made by juries today (assuming again that these experts have been found to be reliable and helpful), but that might not make them easier to accept psychologically. Errors made by a jury of one's peers might be seen as more understandable and bearable than a mistake made by an elite psychologist serving as a full-time professional witness on credibility, or by a machine measuring biometric output. Just as those who support the province-of-the-jury prohibition must be honest about the potential loss to accuracy and justice, those who argue against the prohibition must acknowledge the societal and psychological costs of handing these decisions over to the experts. It is an open question about whether this sentimental cost should be given any weight in a cost-benefit analysis of the admissibility of expert testimony, either on a broad scale in fashioning rules to apply across the entire jurisdiction, or on a case-by-case basis to be considered by each judge who is considering the admissibility of a credibility expert.

VI. CONCLUSION

At its core, the debate over the province-of-the-jury prohibition involves two critical debates about our modern justice system. The first debate concerns the method we use in courtrooms to uncover the truth—specifically, how far we want to go in "professionalizing" the fact-finding process. Over the years, courts have (sometimes reluctantly) acknowledged the need for technical expertise as factual questions have

246. *Id.* (Linde, J., concurring).

become more and more complex. Now we are reaching a stage where technical expertise can provide useful guidance to even the simplest questions: Was the defendant the person who committed the crime? Did the alleged rape victim give consent? Is the eyewitness mistaken or lying? Credibility expertise is, admittedly, a tougher sell; unlike the complex fields of epidemiology, forensic science, or even accounting, the jury is able to understand these simpler issues without the use of expert assistance. But that is not the standard we have set for allowing experts to testify, nor should it be. Since the promulgation of the Federal Rules of Evidence more than thirty years ago, courts have admitted expert testimony as long as it assisted the trier of fact, not merely when the evidence was necessary for the jury to understand certain concepts. This standard properly provides the jury with every legitimate tool available to accomplish its critical yet Herculean task: reconstructing a past event and reaching an unambiguous, bright-line conclusion about whether a certain individual is at fault or guilty of a crime.

This is not to say a jury should be given every piece of relevant information. As every appellate court and code of evidence will acknowledge, many policy reasons exist for keeping out otherwise probative information. Indeed, that is why the field of evidence exists in the first place. But given modern evidence law's strong preference for admissibility,[247] the burden of proof should be on those who want to exclude the evidence. These critics must persuade us that the expert testimony is not relevant, not useful, or carries with it certain dangers or unwanted policy ramifications. Supporters of a more restrictive scope for expert testimony are ultimately unable to do so, because their argument rests mostly on historical precedent that no longer serves the interest of truth-seeking. Over the last half-century, the "province of the jury" has been narrowing as courts struggle to define and enforce the nebulous boundary of where a jury deserves assistance. The admissibility of experts on credibility determinations is the last battleground for the province-of-the-jury prohibition, and even on this front, the courts are slowly beginning to admit that experts can provide helpful testimony, whether or not the testimony is necessary for juries to understand the facts at issue. In other words, even though juries are *able* to draw their own conclusions about credibility (unlike the fields of forensics or epidemiology), courts are acknowledging that they can still

247. *See, e.g.*, FED. R. EVID. 403 (precluding relevant evidence only if its probative value is "substantially outweighed" by the danger of unfair prejudice).

benefit (and be more likely to draw accurate conclusions) by hearing expert testimony about the subject. Once this acknowledgment is made—an acknowledgment that is entirely consistent with the wording and the ideology of Rule 702—little justification exists for precluding reliable testimony about witness credibility.

On the most basic level, the best response to those who would maintain the province-of-the–jury prohibition is to ask them to justify the existence of the ban in the face of a growing reliance on experts in courtrooms around the country. Essentially, if we can determine that there are experts that can provide reliable and useful information about credibility (and the evidence suggests that we are at or very near that point), why would we want a lay jury to make these most critical decisions without any guidance? It is now past time to jettison this tradition altogether and give the juries all the available tools to carry out the immensely difficult task that we assign to them.