

1986

## Improving Expert Testimony

Jack B. Weinstein

Follow this and additional works at: <http://scholarship.richmond.edu/lawreview>



Part of the [Evidence Commons](#)

---

### Recommended Citation

Jack B. Weinstein, *Improving Expert Testimony*, 20 U. Rich. L. Rev. 473 (1986).

Available at: <http://scholarship.richmond.edu/lawreview/vol20/iss3/5>

This Article is brought to you for free and open access by UR Scholarship Repository. It has been accepted for inclusion in University of Richmond Law Review by an authorized editor of UR Scholarship Repository. For more information, please contact [scholarshiprepository@richmond.edu](mailto:scholarshiprepository@richmond.edu).

# ARTICLES

## IMPROVING EXPERT TESTIMONY

*Jack B. Weinstein\**

### I. INTRODUCTION

Our real world outside the ivory towers of academia and the courts grows more and more complex. The law's use of expert witnesses has expanded at a pace reflective of society's reliance on specialized knowledge. Hardly a case of importance is tried today in the federal courts without the involvement of a number of expert witnesses.

While our problems in the use of experts at trial have increased, the evidentiary solutions have not crystallized. To the extent that there are any ready answers, they tend to lie in the field of procedure and in the possibility of controlling experts through professional self-regulation and supervision by private associations and government.

Even more urgent in reducing the difficulties posed by the use of experts is the need to reconsider substantive law. Are we demanding more from experts than they can give? Illustrative of this concern are the problem of the insanity defense in criminal cases and the broad issue of compensation for toxic tort injury.

The very flexibility of the current rules regulating expert testimony requires judges to exercise more control in some cases. Intervention and activism here do not raise the same theoretical problems that have led to criticism of managerial<sup>1</sup> and

---

\* Chief Judge, United States District Court, Eastern District of New York; Adjunct Professor of Law, Columbia University. I am grateful for the assistance of Arie Zak, J.D., 1985, Columbia University, in preparing this article. I have generally kept footnotes to a minimum since my views are expanded upon with considerable citation elsewhere. See J. WEINSTEIN & M. BERGER, *WEINSTEIN'S EVIDENCE* (1985).

1. See, e.g., Resnik, *Managerial Judges*, 96 HARV. L. REV. 374, 424-26 (1982); E. Elliott, *Managerial Judging and the Evolution of Procedure* (Oct. 3, 1985) (unpublished; one of a series of papers for the Yale Law School Program in Civil Liability). But see Flanders, *Blind Umpires—A Response to Professor Resnik*, 35 HASTINGS L.J. 505 (1984); McGovern, *To-*

settling<sup>2</sup> judges. In run-of-the-mill cases, the attorneys will settle or try their cases without the need for substantial court intervention. But there are cases where the testimony of experts is critical and the risk of misleading the trier substantial; here more intervention and control by the judge is warranted.

### A. *Common Law History*

The need for expert assistance is not unique to our times. Experts have been at home in common law courts for a long time. In 1353, for example, surgeons were called to testify on the question whether a wound amounted to mayhem<sup>3</sup>—a mixed question of law and fact. In a fifteenth century case, grammarians were required to testify about the meaning of a Latin word.

In this early period, expert witnesses were considered to be assistants of the court. By the seventeenth century, experts began to be treated as witnesses, and by the eighteenth, the familiar common law rules governing the opinion testimony of experts began to emerge.

At one stage of the common law's development, the notion of an expert was apparently a very broad one, referring not only to technical experts but also to all people who had opinions based on specialized knowledge of some sort—including the observations of those who would today be characterized as lay witnesses. As late as last century, Greenleaf and others tended to test all opinion—whether lay or expert in the modern sense—by the criterion of helpfulness to the trier. Greenleaf was thus able to make the following statement in the same paragraph in which he discusses scientific testimony: "In an action for breach of a promise to marry, a person accustomed to observe the mutual deportment of the parties, may give in evidence his opinion upon the question,

---

*ward a Functional Approach for Managing Complex Litigation*,—U. CHI. L. REV.—(1986).

2. See Fiss, *Against Settlement*, 93 YALE L.J. 1073, 1075 (1984); E. Elliott, *supra* note 1, at 19-20; H.L. Sarokin, *Justice Rushed is Justice Ruined* (Mar. 12, 1986) (unpublished lecture given at Fourth Annual Chief Justice Joseph Weintraub Memorial Lecture, Rutgers School of Law). *But cf.*, e.g., Peckham, *A Judicial Response to the Cost of Litigation: Case Management, Two-Stage Discovery Planning and Alternative Dispute Resolution*, 37 RUTGERS L. REV. 253, 277 (1985). Much of the criticism of excessive management by judges is unfounded and based on inadequate—or no—field work. Systematic observation of what the judges and magistrates are in fact doing would, I believe, mute some of the criticism. The bar appears to favor early intervention by the court to assist in settlement. See W. Brazil, *Settling Civil Suits* (1985).

3. 9 W. HOLDSWORTH, *A HISTORY OF ENGLISH LAW* 212 (1926).

whether they were attached to each other.”<sup>4</sup> Even Wigmore in his first edition emphasized that it was “*a mistake to think of some witnesses as experts and others as non-experts.*”<sup>5</sup> Only later came the more elegant analysis distinguishing between expert and non-expert on the basis of the trier’s need for a generalized hypothesis not part of common knowledge in making inferences from the observable data.

When addressing the issue of a particular expert witness’s qualifications, the law then recognized that different qualifications should be required of different kinds of experts. The accepted rule of law was that “[t]he question in each instance is whether the particular witness is fitted as to the matter in hand. On many points the nature of the subject is such that a scientific training is indispensable; but [to reach this result courts] simply apply the general principle and require the particular sort of experience which fits the witness to acquire knowledge on the particular matter.”<sup>6</sup> In addition to applying a sort of sliding scale in addressing the qualification issue, the law was fairly lenient on the question of the qualifications of even a technical witness. It was fairly clear, for example, that a general practitioner could testify on medical issues requiring specialists’ knowledge.<sup>7</sup>

### B. *Limits on Expert Testimony under Modern Common Law*

The common law did impose some limits on expert witnesses. Among these was the rule preventing them from stating their opinion on the ultimate issue of fact.<sup>8</sup>

The required practice of basing expert opinions on hypothetical fact patterns was theoretically impeccable. It gave the courts access to the expert’s general knowledge and evidential hypothesis, but allowed the jury to make the findings of fact predicate to conclusions in the expert line of proof. As a practical matter, however, the hypothetical often resulted in so chopping up the expert’s opinion that it was of little value. It often made it impossible for experts to transmit their knowledge to a trier of fact in a helpful

---

4. 1 S. GREENLEAF, A TREATISE ON THE LAW OF EVIDENCE § 440 (3d ed. 1846 & 16th ed. 1899).

5. 1 J. WIGMORE, EVIDENCE IN TRIALS AT COMMON LAW § 555, at 668 (1904) (emphasis in original).

6. *Id.* § 556, at 669-70.

7. *Id.* § 569, at 682.

8. S. GREENLEAF, *supra* note 4, at 595.

way. It led to the well-known abuses of extensive mid-trial colloquies, interruptions and summations.

Limits on the experts' use of the kind of hearsay they normally relied upon, the unworkable "no expert opinion on an expert opinion rule,"<sup>9</sup> and limits on the use of treatises, both as evidence-in-chief and to attack credibility, added to the courts' difficulties in obtaining useful specialized information. Preventing experts from basing their opinions on information they gained as observers at trial<sup>10</sup> also had an inhibiting effect. And, of course, some courts would have been aghast at the current practice of the trier reading the experts' written reports. Overall, the common law system that prevailed earlier this century provided a theoretically sound approach to the admissibility of expert testimony that in practice was often stilted, awkward and unduly restrictive.

As our era approached, evidence law on experts took a further restrictive turn. In *Frye v. United States*,<sup>11</sup> the United States Circuit Court for the District of Columbia grafted a new restriction onto the old common law rules. In a case involving the admissibility of the results obtained from a rudimentary lie detector test, the court made a sound decision to exclude the evidence. Its statement of principle was more troubling: "[W]hile courts will go a long way in admitting expert testimony deduced from a well-recognized scientific principle or discovery, the thing from which the deduction is made must be sufficiently established to have gained general acceptance in the particular field in which it belongs."<sup>12</sup> Whatever the "general acceptance" test meant, it became clear that the *Frye* rule might block the introduction of important and useful testimony.<sup>13</sup>

---

9. *State v. David*, 222 N.C. 242, 22 S.E.2d 633 (1942).

10. See J. WEINSTEIN, J. MANSFIELD, N. ABRAMS & M. BERGER, *CASES AND MATERIALS ON EVIDENCE* 381 (7th ed. 1983) [hereinafter cited as CASEBOOK].

11. 293 F. 1013 (D.C. Cir. 1923).

12. *Id.* at 1014. Section 108 of S. 1999, recently introduced in the Senate, employs a similar test, requiring "support in peer-reviewed scientific or medical studies." S. 1999, 99th Cong., 1st Sess. § 108 (1985).

13. See Goodman & Zak, *The Heat is On: Thermograms as Evidence Under the Frye Standard*, 8 W. NEW ENG. L. REV. 13 (1986).

## II. THE FEDERAL RULES OF EVIDENCE: PROBLEMS AND SOLUTIONS

### A. *Eliminating Restrictions*

As technology advanced and expert testimony became more important in the resolution of increasingly complex litigation, unnecessary impediments became unacceptable. Following a good deal of sensible case law and practice that loosened up common law restrictions, the Federal Rules of Evidence were adopted. Substituted for the common law rules was a broadly discretionary set of guides embodied in such Rules as 102,<sup>14</sup> 403,<sup>15</sup> 702 through 706,<sup>16</sup> and 803(18).<sup>17</sup>

We all breathed a great sigh of relief. That evidence scholars had long been seeking had now come to pass.<sup>18</sup> Soon, however, as with many reforms, the secondary effects became apparent, leading many to question whether we had not created more difficult problems than the ones we had solved. We are reminded of Macaulay's retort to a plea for his support of parliamentary reform: "Reform, reform, don't speak to me of reform. We're in enough trouble already."

Most important of the new rules is Rule 702, which provides that expert testimony is admissible "[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."<sup>19</sup> The breadth of the "as-

---

14. Rule 102 provides that the rules are to be construed "to secure fairness in administration, elimination of unjustifiable expense and delay, and promotion of growth and development of the law of evidence to the end that truth may be ascertained and proceedings justly determined." FED. R. EVID. 102.

15. This rule allows for exclusion of relevant evidence if its probative value is substantially outweighed by the dangers of prejudice, confusion, misleading the jury, or waste of time. FED. R. EVID. 403.

16. These rules concern expert testimony. FED. R. EVID. 702-06.

17. Rule 803(18) provides standards for the use of learned treatises. FED. R. EVID. 803(18).

18. The Federal Rules have been adopted in the majority of states with minor modifications. Their adoption currently is being considered in Virginia, requiring resolution of the question whether the legislature or the courts should adopt them. See VA. R. ED. (Approved Committee Draft 1984) [hereinafter cited as PROPOSED VA. RULES]. That jurisdictional dispute arose in a number of other states, including Florida and Ohio, and invariably has been resolved by good sense and compromise.

19. Proposed Va. Rule 702 adds the word "reliable" before "scientific, technical or other specialized knowledge." See PROPOSED VA. RULES, *supra* note 18, Rule 702. The effect of this change is uncertain, but it would seem to make no changes in the Federal Rule as applied since it restates the balancing required by FED. R. EVID. 403. It does not represent adoption of the *Frye* doctrine, which is explicitly rejected in the Comment to Proposed Va. Rule 702. See *id.* comment.

sistance to the trier of fact" standard has encouraged courts to abandon the *Frye* standard even though the Federal Rules did not expressly reject it.

In place of *Frye*, courts are increasingly adopting a balancing test to determine admissibility of expert testimony.<sup>20</sup> According to one formulation of the balancing test, Rule 702 requires that a district court

conduct a preliminary inquiry focusing on (1) the soundness and reliability of the process or technique used in generating the evidence, (2) the possibility that admitting the evidence would overwhelm, confuse, or mislead the jury, and (3) the proffered connection between the scientific research or test result to be presented, and particular disputed factual issues in the case.<sup>21</sup>

By focusing not only on the reliability of the proposed evidence but also on the jury's probable response to it, this test authorizes the admission of various types of novel expert testimony that in theory might not have been admitted under the *Frye* doctrine strictly applied because the experts lacked the requisite scientific pedigree.<sup>22</sup> In practice, however, courts today all tend to admit the same evidence whether or not they purport to apply the *Frye* standard.

The new test has also led to the admission of opinions that are so nontechnical that they are best described as "quasi-expert," rather than expert, testimony.<sup>23</sup> It has led to a blurring of the line

---

20. Compare Berger, A Relevancy Approach to Novel Scientific Evidence, 26 *Jurimetrics Journal of Law* 245 (1986) (advocating incorporation of balancing test into Rule 702) with Starrs, *Frye v. United States* Restructured and Revitalized: A Proposal to Amend Federal Evidence Rule 702, 26 *Jurimetrics Journal of Law* 249 (1986) (advocating incorporation of *Frye* standard into Rule 702).

21. *United States v. Downing*, 753 F.2d 1224, 1237 (3d Cir. 1985); see also *United States v. Williams*, 583 F.2d 1194 (2d Cir. 1978), cert. denied, 439 U.S. 1117 (1979).

22. See, e.g., *United States v. Sebetich*, 19 Fed. R. Evid. Serv. 384 (3d Cir. 1986) (testimony on eyewitness identification); *Sprynczynatyk v. General Motors Corp.*, 771 F.2d 1112 (8th Cir. 1985), cert. denied, 106 S. Ct. 1263 (1986) (hypnotically enhanced testimony); *United States v. Ferri*, 778 F.2d 985 (3d Cir. 1985) (comparison of impressions inside defendant's shoes with footprints at scene of crime); *United States v. Metzger*, 778 F.2d 1195 (6th Cir. 1985) (thin-layer chromatography used to prove presence of explosive); see also Abney, *Expert Testimony and Eyewitness Identification*, CASE & COM., Mar.-Apr. 1986, at 26; DePaul, *The Rape Trauma Syndrome: New Weapon for Prosecutors*, NAT'L L. J., Oct. 28, 1985, at 1; Price, *Battered-Woman Syndrome: A Defense Begins to Emerge*, N.Y. L. J., Dec. 2, 1985, at 3; Martin, *Expert Opinion on Eyewitness Testimony*, N.Y. L. J., Feb. 2, 1986, at 1.

23. See *United States v. Brown*, 776 F.2d 397 (2d Cir. 1985) (police officer, testifying as

between expert testimony and lay testimony, with some courts using Rule 701—controlling the testimony of non-expert observers—to admit testimony that others would admit under Rule 702.<sup>24</sup> We seem to be returning to a flexible approach to “expert” testimony that is closer to what Greenleaf seems to have had in mind. An almost unbroken continuum of admissible opinions of laypersons, conventional experts, and new types of experts is the result.

No one can rightly object to this opening up of sources of information. As long as the balancing is properly done, it puts before the jury testimony that may assist it in reaching the proper result on the merits.

The wise judge using these new rules, along with Rule 403, can control everything and prevent prejudice. Who, however, will know who is—or will trust—the wise judge? Certainly not I, who looks each morning in the mirror at an aging head being shaved and knows how almost inexhaustible are its reserves of ignorance and bias.

The Federal Rules of Evidence made a number of other important liberalizing changes. Rule 703 provides that the facts or data on which an expert bases his opinion need not be admissible if they are of a type “reasonably relied upon by experts in the particular field in forming opinions or inferences on the subject.”<sup>25</sup> By

---

an expert on the operation of street drug dealers, stated that in his opinion the defendant was a “steerer” whose job it was to screen prospective purchasers; held admissible under Rule 702).

24. See *Eisenberg v. Gagnon*, 766 F.2d 770 (3d Cir. 1985) (litigator who had some familiarity with securities laws’ disclosure requirements testified as to adequacy of disclosures in an offering memorandum; held admissible under Rule 701); *Dallis v. Aetna Life Ins. Co.*, 768 F.2d 1303 (11th Cir. 1985) (patients treated at Bahamian cancer clinic with a treatment not approved by U.S. government or proven effective allowed to testify under Rule 701 that the treatment helped improve their condition); *Ernst v. Ace Motor Sales*, 550 F. Supp. 1220 (E.D. Pa. 1982), *aff’d*, 720 F.2d 661 (3d Cir. 1983) (police officer who arrived at scene some time after accident could testify to point of impact as either lay or expert witness).

Where the lay witness has no specialized knowledge, however, his opinion should be excluded. See *United States v. Hoffner*, 777 F.2d 1423 (10th Cir. 1985) (testimony of doctors and nurses regarding whether defendant intended to issue prescriptions for legitimate medical reasons excluded where witnesses had not observed treatment of patients or writing of prescriptions).

25. The language of the proposed Virginia Rule is slightly different, but its effect is the same as that of the Federal Rule. See PROPOSED VA. RULES, *supra* note 18, Rule 703.

The Virginia proposals, even more than the Federal Rules, stress the responsibility of the trial judge to require reliability and trustworthiness as a basis for admissibility of expert testimony.

Virginia Rule 703 provides the guidance to trial judges not found in other rules. It requires only that facts or data not otherwise admissible in evidence be the kind re-

allowing experts to rely on hearsay—provided the hearsay is sufficiently trustworthy—Rule 703 simplifies the expert witness's task, allowing him to function in court in much the same way he does outside of court.<sup>26</sup> Who decides if experts reasonably rely on such hearsay? Why, the know-it-all wise judge, who may or may not confirm his view by asking the expert, "Other experts in the field reasonably rely on the hearsay you rely on Doctor, isn't that so?"

Rule 704 abolished the old rule against expert testimony on the ultimate issue of fact.<sup>27</sup> In practice the abolition has had a limited impact since the courts prefer to keep the expert's opinion at least one step removed from the material proposition to be proved, leaving to the jury the final step.<sup>28</sup>

Other rules that do not deal directly with expert witnesses have nonetheless had the effect of increasing the utility and impact of

---

lied upon by experts in the particular area of expertise for the use that is to be made of them at trial. Unless experts do rely on facts or data outside of court, there is no reason to consider them reliable enough to be used in court. Nothing in the rule requires a proponent of expert testimony to prove that in previous cases experts have used facts or data in the way the proponent asks the expert to use them. The rule requires only that the expert use facts or data in the manner that they are used outside of court by other experts who consider the facts or data as reliable when used in this manner.

PROPOSED VA. RULES, *supra* note 18, Rule 703 comment.

26. In *Delaware v. Fensterer*, 106 S. Ct. 292 (1985), the Supreme Court held that admission of a prosecution expert's testimony despite his inability to recall the basis for his opinion did not violate defendant's sixth amendment confrontation right.

27. See, e.g., *Schaffter v. Ward*, 17 Ohio St. 3d 79, 477 N.E.2d 1116 (1985) (in case involving two-car collision, trial court's verdict reversed because court improperly excluded testimony of plaintiff's mechanical engineer regarding point of impact). *But see* *United States v. Affleck*, 776 F.2d 1451 (10th Cir. 1985) (testimony of "memory expert" excluded as unhelpful because within knowledge of jury); *United States v. Arenal*, 768 F.2d 263 (8th Cir. 1985) (police officer's testimony that all cocaine at issue probably had a common source since it was all cut with same agent excluded under Rule 702 as unhelpful because within knowledge of jury); *State v. Myers*, 382 N.W.2d 91 (Iowa 1986) (testimony that children rarely lie about sexual abuse excluded as within common knowledge of jurors); *State v. Buell*, 22 Ohio St. 3d 124, 489 N.E.2d 795 (1986) (testimony of expert on credibility of individual eyewitnesses testifying on identification excluded as within common experience of jurors).

In contrast to the issue of usurpation of the role of the jury is the issue of usurpation of the role of the judge, which arises in accounting and tax cases among others, in which lawyers provide testimony combining law and fact. See 3 J. WEINSTEIN & M. BERGER, WEINSTEIN'S EVIDENCE ¶ 704[02], at 704-15 & n.13 (1985) [hereinafter cited as WEINSTEIN'S EVIDENCE].

28. This is the effect of proposed alternative 1 of the Virginia Rule which is written somewhat more restrictively than the Federal Rule. See PROPOSED VA. RULES, *supra* note 18, Rule 704. Alternative 2 is virtually the same as the Federal Rule. See *id.*

Proposed Va. Rule 705 on "Disclosure of Facts or Data" by the expert also increases court control. See *id.* Rule 705.

expert testimony. Rules 801(a), 803(3) and 803(4), relating to hearsay, allow into evidence much more than heretofore of diagnoses and treatment. Rules 803(6) and 803(8) provide exceptions to the hearsay rule for business records and government records and reports. Since these kinds of records often provide the raw data upon which expert opinions are based, the effect of these exceptions is to allow expert witnesses to provide the trier with the evidence that forms the basis for their opinions in those cases where its introduction may be helpful in proving the case.

The 803(6) and 803(8) exceptions themselves explicitly include diagnoses and opinions, so that an expert's opinion can theoretically come in without the expert ever appearing. Of course, tactical pressures to produce the most persuasive evidence result in most instances in the use of experts' live testimony rather than their hearsay reports.

The learned treatise exception, Rule 803(18), and such exceptions as 803(17) on market and commercial reports, are also important. They make it easier for expert witnesses to educate the trier about a body of knowledge that may be unfamiliar to the layperson.

Rule 1006 allows summaries of voluminous data to be introduced into evidence despite the traditional "best evidence" rule. The federal rule provides expert witnesses such as accountants and analysts with an additional convenient and understandable way to present their data.<sup>29</sup>

Today it is not uncommon to permit experts to read all or part of their reports into the record. Many courts will sensibly mark the reports—prepared for the litigation—in evidence, so that the jury can study the document and its attendant tables, pictures and diagrams. Each juror may be given a copy of the report so that he or she can follow the testimony and study the report at leisure in the jury room as any responsible and intelligent layperson would want to.

Experts sit in court and hear all or part of the testimony. Frequently they base their reports on a summary of the facts the attorney has informally given them by telephone or letter.

The Federal Rules of Evidence and their state counterparts have

---

29. For a discussion of the interplay of Rules 803(6), 803(8), and 1006, see *MANUAL FOR COMPLEX LITIGATION* 2d, § 21.446, at 61 n.80 (1985).

thus produced an enormous loosening up of the restrictions on the admission of expert testimony, on its basis, on its form, and on the effective utilization of such testimony once admitted. This relaxation was needed to give the trier of fact convenient access to the reliable technical knowledge that is available in our modern society. As might be expected, however, the modification of the old rules has led to new difficulties.

### B. *Problems Under the Federal Rules*

An expert can be found to testify to the truth of almost any factual theory, no matter how frivolous, thus validating the case sufficiently to avoid summary judgment and force the matter to trial. At the trial itself an expert's testimony can be used to obfuscate what would otherwise be a simple case. The most tenuous factual bases are sufficient to produce firm opinions to a high degree of "medical (or other expert) probability" or even of "certainty." Juries and judges can be, and sometimes are, misled by the expert-for-hire.

The possible excesses of the current system already appear to be generating some dissatisfaction, as evidenced by Congress's recent passage of new Rule 704(b),<sup>30</sup> limiting expert testimony on the issue of a criminal defendant's mental state. In part this legislation demonstrates a revulsion over the battle of experts in insanity defense cases. This rule change seems unwise for the same reasons that the District of Columbia Circuit's prior attempts to deal with the issue by case law failed.<sup>31</sup> But the disquiet of the legislators is understandable.

New discretionary controls, consonant with the general requirements of Rules 102 and 403, may be needed to curb the potential abuses that have appeared since the adoption of the Rules.<sup>32</sup> But how can discretion be bridled in a manner predictable and fair? How can the nonexperts control the experts?

---

30. The new rule prevents an expert witness testifying on the mental state or condition of a criminal defendant from stating an opinion or inference on whether the defendant had the requisite mental constituting an element of or defense to the crime charged. FED. R. EVID. 704(b).

31. See CASEBOOK, *supra* note 10, at 358-65, 388-94.

32. See generally Carlson, *Policing the Bases of Modern Expert Testimony*, 39 VAND. L. REV.—(1986).

### C. *Procedural Changes*

Some courts have begun taking procedural steps to limit or control expert testimony. The primary actions taken to date involve supervision of the preparation of expert testimony in the pretrial stage.

Some local practice, for example, requires each party to identify the experts that it will use at trial and to provide a summary of those experts' expected testimony.<sup>33</sup> A number of federal judges require that parties provide a glossary of terms that their experts will use at the trial.<sup>34</sup> Intended primarily to assist the reporters to take testimony accurately, the definition of terms—particularly if the experts can agree on them—can be used by the judge in preparing for the trial.<sup>35</sup> While I have not yet tried it, I would be ready to order that a list of exotic terms with definitions be furnished for each of the jurors as part of his or her notebook in a complex case.

Joint pretrial meetings between the judge and key expert witnesses are becoming more frequent.<sup>36</sup> The presence of each side's experts at the other side's experiments is also encouraged.<sup>37</sup> Some courts require that each side list before trial those learned treatises admissible under Rule 803(18) and other hearsay that it intends to rely upon at trial.<sup>38</sup>

More might be done. The possibilities include the following: First, further improvements in pretrial procedure should be considered. The Special Committee on Empirical Data in Legal Decision Making of the Association of the Bar of the City of New York has made a number of useful recommendations regarding control

---

33. See PANEL ON STATISTICAL ASSESSMENTS AS EVIDENCE IN THE COURTS, *THE EVOLVING ROLE OF STATISTICAL ASSESSMENTS AS EVIDENCE IN THE COURT* 362 [hereinafter cited as *ASSESSMENT PANEL*].

34. See *MANUAL FOR COMPLEX LITIGATION* 2d § 22.31 (1985).

35. In most instances terminology in the field is sufficiently standard that agreement as to the definition of terms can be obtained, and the trier will be able to more readily follow the testimony. In those occasional instances where agreement cannot be reached, a separate glossary by each side is possible.

36. This is the practice in my court, and discussion of the issue with other judges indicates that other judges do this as well.

37. See *Hall v. General Motors Corp.*, 647 F.2d 175 (D.C. Cir. 1980); see also Jaffee, *Of Probativity and Probability: Statistics, Scientific Evidence, and the Calculus of Chance at Trial*, 46 U. PITT. L. REV. 925, 1077 & n.202 (1985).

38. See, e.g., the standard civil pretrial order, at paragraph 4, and the standard criminal pretrial order, at paragraph 11, used in my court.

of statistical evidence. These include proposals that a party offering data or data analysis at trial be required, at each stage of discovery, to provide the opposing party with all the underlying records from which the data were collected;<sup>39</sup> that a party offering data or data analyses at trial make available for conferences with other parties the personnel that compiled the data;<sup>40</sup> that parties attempt to agree on a database well before trial;<sup>41</sup> and that parties be required to object to their opponent's experts' analysis before trial.<sup>42</sup> In a similar vein, it has been suggested that parties be compelled to reveal the names of all experts they have hired or consulted even if they will not be testifying at trial.<sup>43</sup> Amendment of Rule 26 of the Federal Rules of Civil Procedure to more readily permit the taking of depositions of non-testifying experts might also be helpful.<sup>44</sup>

*In limine* rulings are increasingly being utilized. They are useful because they give the parties pretrial directions. Yet some courts are reluctant to make early rulings lest trial developments lead an appellate court to conclude that the trial judge was too hasty. There are some counter-movements to protect the trial court from reversal on decisions made on less than all the required data. The Supreme Court's recent Rule 609 ruling in *Luce v. United States*,<sup>45</sup> requiring the defendant to take the stand to preserve his objection to an *in limine* ruling, reflects appellate concern for the trial judge's problems in this context.

The objective of all these suggested modifications to current procedure is to subject expert testimony to more informed scrutiny by the opposition's experts and lawyers. Ours is an adversarial system, and it is therefore quite proper for us to stress sharpening the adversaries' weapons as a means of improving the functioning of the

---

39. See ASSESSMENT PANEL, *supra* note 33, at 360; see also MANUAL FOR COMPLEX LITIGATION 2d § 21.481, at 83-84 (1985).

40. See ASSESSMENT PANEL, *supra* note 33, at 360.

41. See *id.* at 351; MANUAL FOR COMPLEX LITIGATION 2d § 33.12 (1985).

42. See ASSESSMENT PANEL, *supra* note 33, at 364.

43. See *id.* at 241; see also *In re "Agent Orange" Prod. Liab. Litig.*, 105 F.R.D. 577 (E.D.N.Y. 1985).

44. Under current laws, discovery of a non-testifying expert may be compelled only upon a showing of exceptional circumstances. See *Kuster v. Harner*, 109 F.R.D. 372 (D. Minn. 1986); see also *Eliassen v. Hamilton*, No. 81 Civ. 123 (N.D. Ill. July 16, 1986) (under Fed. R. Civ. P. 26(b)(4), defendants were entitled to depose a nontestifying expert but could only inquire into the facts known to and opinions held by the expert prior to the expert's firm being retained by the plaintiffs).

45. 105 S. Ct. 460 (1984).

courts. Such reforms avoid some of the hazards of unlimited discretion which leads to surprise at trial and which requires over-preparation for eventualities which will not come to pass.

Minitrials and other like devices which permit a preliminary test of judge and jury reaction to proposed expert testimony may be useful in complex cases. In bench trials, I from time to time use a technique of swearing all the experts, seating them at the table together with counsel and the judge, and engaging them in recorded colloquy under court directions. These discussions have sometimes produced a more reasonable attitude by the experts and considerable narrowing of disagreement among them.

The possible use of alternative dispute resolution techniques in highly technical cases needs to be explored. Arbitration by panels of technical experts—a latter-day version of the common law's special jury—is a possibility that deserves, and seems to be receiving, favorable attention.<sup>46</sup>

#### D. *Control by Outside Agencies*

The formulation and enforcement of ethical standards for expert witnesses might help to curb current abuses.<sup>47</sup> The Panel on Statistical Assessments as Evidence in the Courts of the National Academy of Sciences is considering two broad recommendations regarding ethical standards. First, the Panel may recommend "that professional organizations develop standards for expert witnesses in legal proceedings who use statistical assessments with respect to (i) procedures required to ensure reliability in connection with frequently used statistical techniques, (ii) disclosure of methodology, and (iii) disclosure of aspects that may raise ethical considerations."<sup>48</sup> The Panel also is considering a recommendation "that statistical experts who consult or testify in litigation maintain the degree of professional autonomy required by independent scientific research."<sup>49</sup> Precisely how these recommendations would be imple-

---

46. See Wessel, *Alternative Dispute Resolution for the Socioscientific Dispute* 1 J. L. & TECH. 1, 2-3 (1985); NYHART & HEATON, PROCEEDINGS OF THE TASK FORCE WORKSHOP ON DISPUTES INVOLVING SCIENCE AND TECHNOLOGY, IN CORPORATE DISPUTE MANAGEMENT 389 (1982); see also Luneburg & Nordenberg, *Specially Qualified Juries and Expert Nonjury Tribunals: Alternatives for Coping with the Complexities of Modern Civil Litigation*, 67 VA. L. REV. 887 (1981).

47. See Wessel, *supra* note 43, at 17-18.

48. ASSESSMENT PANEL, *supra* note 33, at 233.

49. *Id.* at 235.

mented is unclear.

In addition, it may be helpful to devise some sort of professional licensing system to certify expert witnesses as being qualified to testify in a given field. Such a system would be analogous to board certification of medical specialists. We must be careful, however, to avoid establishing such high standards for expert witnesses that we end up in some cases without any witnesses who are qualified to—or who will—testify.<sup>50</sup> This situation existed at one time in the medical malpractice field. The result was that people with arguably valid claims for mistreatment could not prove them.

Where a state-licensed expert gives an unprofessional opinion on the stand, he or she should be subject to state discipline.<sup>51</sup> I have had medical testimony before me that was shockingly suspect. Had a lawyer given equivalent misleading information I would have brought the matter to the attention of the disciplinary authority. What realistic threat exists against doctors? As to unlicensed economists or statisticians, the matter is now hopeless.

### E. *Substantive Reform*

In some cases the substantive law places too heavy a burden on experts.<sup>52</sup> Modification of that law is needed to reduce expert witness tensions. Eliminating the insanity defense so that only mens rea would be determined by the jury and insanity, as we now know it, would be an element of treatment seems to some worth considering. Many toxic tort damage cases can not reasonably be tried by asking experts to say that a particular claimant more probably than not was damaged by a particular chemical from a particular company.<sup>53</sup> We are in the process of considering changes to sub-

---

50. Cf. *Dawsey v. Olin Corp.*, 782 F.2d 1254 (5th Cir. 1986) (expert biochemist may testify regarding effects of phosgene on humans, even though not a medical doctor).

51. Efforts are currently underway in Florida and New York to pass new medical malpractice laws providing for disciplining doctors who give unprofessional testimony. See *Tainted Testimony*, *American Lawyer*, Apr. 1986, at 115.

52. A related problem is the tendency of judges in certain types of cases to place too much reliance on expert testimony instead of relying on their own common sense. This may be occurring in child custody cases. See *Okpaku, Psychology: Impediment or Aid in Child Custody Cases?*, 29 *RUTGERS L. REV.* 1117 (1976).

53. See *Rosenberg, The Causal Connection in Mass Exposure Cases: A "Public Law" Vision of the Tort System*, 97 *HARV. L. REV.* 849 (1984); *Weinstein, Preliminary Reflections on the Law's Reaction to Disasters*, 11 *COLUM. J. ENVTL. L.* 1 (1986) [hereinafter cited as *Law's Reaction to Disasters*]; *Weinstein, The Role of the Court in Toxic Tort Litigation*, 73 *GEO. L.J.* 1389 (1985) [hereinafter cited as *Role of the Court*]. See generally *M. GOUCH, DIOXIN, AGENT ORANGE: THE FACTS* 21-24 (1986) (discussing the difficulties inherent in at-

stantive-procedural law to meet this kind of problem.

Changing burdens of proof can help to take some pressure off of expert witnesses. The elimination of contributory negligence as a complete defense made expert testimony less crucial and created some room for play in the joints by eliminating the all-or-nothing effect of a plaintiff's negligence. In this case, the burden of proof was altered in fact if not in theory. In both the workers' compensation and social security areas, whether the probability is over fifty percent or under fifty percent is similarly not critical. In the Agent Orange cases, it was suggested that the burden of proof could be altered by looking at the plaintiffs as a class and asking whether the class as a whole had been harmed in a statistically significant way, rather than asking whether a particular plaintiff had more likely than not been harmed by a particular defendant.<sup>54</sup>

Similar approaches to burdens of proof and substantive law may work in other areas such as the insanity defense and medical malpractice. In the case of insanity, expert testimony might be made less crucial, as already mentioned, by making the insanity issue relevant only to the question of punishment, not guilt or innocence.

In the area of medical malpractice, expert testimony might not be as critical if we relaxed the plaintiff's burden of proof, while simultaneously curtailing recoveries for pain and suffering to reduce the burden on doctors and malpractice insurers.<sup>55</sup> A full program of medical and disability benefits for all could eliminate much of this last kind of proof problem. Shifting the emphasis in malpractice cases, for example, to full social insurance and more effective state and peer disciplining of doctors would reduce malpractice expert problems.<sup>56</sup> Such proposals for substantive reform may seem like pie-in-the-sky, but workers' compensation and automobile no-fault liability statutes indicate that, given the serious is-

---

tempting to scientifically determine whether a particular substance affects humans).

54. See *In re "Agent Orange" Prod. Liab. Litig.*, 597 F. Supp. 740, 816-43 (E.D.N.Y. 1984); THE INSTITUTE FOR HEALTH POLICY ANALYSIS, CAUSATION AND FINANCIAL COMPENSATION (1986) [hereinafter cited as HEALTH POLICY ANALYSIS]; Weinstein, *Law's Reaction to Disasters and Role of the Court*, *supra* note 53.

55. A bill recently introduced by Senator Danforth, S. 1999, 99th Cong., 1st Sess. § 205(d)(2) (1985), follows this approach, allowing a plaintiff to recover limited damages if he can prove that the defendant's actions caused the incidence of injury to increase by 30% over the injury rate that would otherwise be expected.

56. See Weinstein, *Law's Reaction to Disasters*, *supra* note 53, at 33-36. *But see* Law Scope, *Bitter Medicine*, A.B.A.J., Apr. 1, 1986, at 20 (ABA House of Delegates rejects call for modification of traditional tort system in medical malpractice cases).

sue of insurability at a reasonable cost in a number of tort fields today, substantive-procedural changes are not impossible.

Substantive reform will not solve all problems with experts. The problems remain endemic and nagging. By far the most difficult day-to-day frustrations with experts in federal courts arise in evaluating social security disability cases. Substantive standards as well as an unsatisfactory procedure system compound the difficulties. The question of when a *particular* person should be deemed disabled and placed on early retirement will not, I think, be made much easier to answer by any change in the articulated standard.<sup>57</sup>

If adequate control is impossible, it may be necessary to cut back on expansion of tort liability in a variety of ways. The expansion of substantive bases of liability *plus* the ease in proof has helped create what some contend is an almost intolerable situation in fields such as manufacturers' and municipal liability, toxic torts, and malpractice. It is certainly time to consider changes in the substantive law of toxic torts.<sup>58</sup>

#### F. *Equalization of Poor Persons' Access to Experts*

Other reform possibilities will require greater assumption of responsibility for implementing institutional changes in the courts. First, there is a problem of redressing the mismatch that results when one party has access to experts and the other party does not.<sup>59</sup> In *Ake v. Oklahoma*,<sup>60</sup> the Supreme Court held that an indigent criminal defendant is entitled to a state-provided psychiatrist to examine him and assist in the preparation of an insanity defense once a threshold showing that such assistance might be helpful is met.<sup>61</sup> And in another case, the Supreme Court ruled that, in a quasi-criminal paternity suit brought by the state, the state must pay for blood tests.<sup>62</sup> But no such assistance is available as of right

---

57. See Weinstein, *Equality and the Law: Social Security Disability Cases in the Federal Courts*, 35 SYRACUSE L. REV. 897 (1984).

58. See HEALTH POLICY ANALYSIS, *supra* note 54.

59. See ASSESSMENT PANEL, *supra* note 33, at 240-43.

60. 105 S. Ct. 1087 (1985). On retrial, Ake was again found guilty; however, the jury in the second trial sentenced him to life imprisonment, unlike the first jury which sentenced him to death. N.Y. Times, Feb. 14, 1986, at A1, col. 1.

61. 105 S. Ct. at 1097; *cf.* SEC v. Whiteman, 613 F. Supp. 48, 49-50 (D.D.C. 1985) (witness testifying at SEC investigative proceeding has right under Administrative Procedure Act to assistance of an expert accountant, in addition to assistance of counsel).

62. *Little v. Streater*, 452 U.S. 1 (1981). *But see* *United States v. Brewer*, 783 F.2d 841 (9th Cir. 1986) (18 U.S.C. § 3006 (A)(e)(1), which requires court to authorize necessary de-

to an indigent litigant in a civil suit.<sup>63</sup> Some kind of assistance for indigent litigants, either pro bono or paid for by the government, is needed.

The Eastern District Litigation Fund was established to help meet this last problem in my court. It provides some money for expenses incurred by attorneys appearing pro bono for indigent litigants who need expert testimony.<sup>64</sup> A case that came before me recently provides an example of how the fund works, and also demonstrates how essential expert medical testimony can be. The plaintiff would have been eligible for Social Security benefits based on her medical condition, which met objective standards of disability. She was living on welfare, however, and was being treated at clinics which, pursuant to their normal practice, would not give her a satisfactory letter attesting to her disability. I gave the plaintiff \$250 from the litigation fund to enable her to procure an examination and a letter from a consulting physician.<sup>65</sup>

Funds such as the one in my district cannot, unfortunately, provide a complete solution. We need voluntary panels of experts such as medical doctors, statisticians, and the like, to provide assistance to the indigent and the lower middle class.

### G. *Rule 706 and Masters to Assist Courts*

Even when both parties can afford experts and have actually hired them, the issues in some cases may remain so muddled that the trier of fact needs more even-handed expert assistance. This problem is one that has been noted before. Learned Hand wrote about it in 1901,<sup>66</sup> when he proposed a solution strikingly similar to modern Rule 706 which allows the court to appoint its own expert witnesses.<sup>67</sup>

---

fense services for indigent defendants, does not require court to appoint expert on defects in eyewitness identification).

63. *Cf. International Woodworkers of America v. Champion Int'l Corp.*, 790 F.2d 1174 (5th Cir. 1986) (en banc) (fees of expert witnesses are taxable as costs only in the amount specified in 28 U.S.C. § 1821).

64. A number of federal courts use their attorney admission fees to fund such programs and to pay the attorneys' expenses.

65. *Mason v. Heckler*, CV-85-1994 (E.D.N.Y. Jan. 24, 1986).

66. Hand, *Historical and Practical Considerations Regarding Expert Testimony*, 15 HARV. L. REV. 40 (1901).

67. See T. WILLGING, *COURT-APPOINTED EXPERTS* (Federal Judicial Center 1986); HEALTH POLICY ANALYSIS, *supra* note 54, at 10; Jaffee, *supra* note 37, at 1056 and n.174; MANUAL ON COMPLEX LITIGATION 2d § 21.5 (1985); Altschuler, *Mediation With a Muger: The Shortage*

Judges have generally been reluctant to exercise their Rule 706 powers. The establishment of regional and national panels of experts in certain areas of expertise needs to be explored.<sup>68</sup> Perhaps if neutral experts from panels were more readily available, judges would be more likely to turn to them for help.

Use of technical masters to supervise discovery and preparation of expert testimony is also possible. We will, I believe, see an expansion of the use of special masters for this purpose as well as for settlement and control of general discovery.

An important distinction exists in the relative ability of trial and appellate courts to induce the production of technical evidence superior to that provided by the parties. Trial courts are able, through the means just discussed, to develop new evidence. Appellate courts, in contrast, must rule on the record developed at trial and hence are unable, except through limited and sometimes hazardous reliance on judicial notice, to improve upon the parties' attempts to adduce technical evidence.<sup>69</sup>

#### H. *Scientific Studies for Governmental and Other Agencies*

A Rule 706 expert is incapable of conducting the expensive studies frequently needed in modern litigation. For example, in the swine flu, Agent Orange, DES, toxic shock syndrome, and asbestos cases, the requisite studies cost millions of dollars, and some took years to conduct. Where cases involve many plaintiffs or serious public issues, effective court control requires that scientific studies

---

*of Adjudicative Services and the Need for a Two-Tier Trial System in Civil Cases*, 99 HARV. L. REV. 1808, 1848 (1986).

The Virginia Committee saw no need for such a rule "at this time," citing as justification for its decision the "absence of a tradition of court-appointed experts, combined with the absence of any strong push for increased use of [such] experts." PROPOSED VA. RULES, *supra* note 18, Rule 706 comment.

68. S. 1999, 99th Cong., 1st Sess. (1985), recently introduced by Senator Danforth, provides for creation of a "National Toxic Health Effects Panel" to conduct scientific inquiries to resolve issues of causation. See also Trubatch, *Informed Judicial Decisionmaking: A Suggestion for a Judicial Office for Understanding Science and Technology*, 10 COLUM. J. ENVTL. L. 255 (1985).

The Alabama Supreme Court has created a special panel of experts to assist the court in deciding appeals of public utility ratemaking cases from the public utility commission. See Weinstein, *Warning: Alternative Dispute Resolution May be Dangerous to Your Health*, LITIGATION, Spring 1986, at 5.

69. For a discussion of the difficulties produced by appellate review of scientifically based administrative decisions, see Davis, *The "Shotgun Wedding" of Science and Law: Risk Assessment and Judicial Review*, 10 COLUM. J. ENVTL. L. 67 (1985).

be conducted as promptly as possible by impartial agencies.<sup>70</sup> In many instances, the Centers for Disease Control will in the normal course of its work produce acceptable data. Other studies will be produced by eminent scientists, such as Dr. Selikoff in the asbestos cases, or by special public funding as in the Agent Orange cases. Who pays for these studies is a question vital to the proper handling of these matters.

### I. *Stronger Control by Courts*

When all else fails—when neither improved pretrial procedures nor strengthened ethical codes succeed in terminating litigation in which one party's position is grounded solely on specious expert testimony—it may be the task of the judge to do what the adversarial process and professional ethics have failed to do.<sup>71</sup> This is

---

70. See *supra* note 68. Speed is of the essence because it may be necessary to delay the start of trial until the studies are completed.

71. See HEALTH POLICY ANALYSIS, *supra* note 54, at 26 (endorsing “[r]obust judicial management of scientific factfinding”). The Report of the Tort Policy Working Group on the Causes, Extent and Policy Implications of the Current Crisis in Insurance Availability and Affordability summed up the problem and suggested a solution, as follows:

*Recommendation No. 2: Base causation findings on credible scientific and medical evidence and opinions.*

One of the most pernicious developments in tort law has been the extent to which causation findings are based on fringe scientific or medical opinions well outside the mainstream of accepted scientific or medical beliefs. Increasingly, juries are asked to make difficult decisions about highly complicated issues of science and medicine. Unfortunately, the personality and demeanor of expert witnesses often may be more critical in making such determinations than decades of evolving scientific and medical investigation and thought.

This problem has resulted in the growing perception that the tort system often is wholly arbitrary in allocating liability in cases involving difficult issues of science and medicine. This is a particularly problematic situation in toxic tort and drug liability cases . . . .

There are a variety of reasons for this problem:

Many judges do not have the training or inclination to understand complicated scientific and medical concepts, and are unwilling or unable to devote the time and energy needed to educate themselves in a complex body of knowledge.

In order not to deprive plaintiffs of their opportunity for compensation, many courts allow plaintiffs to take whatever scientific or medical views they may have—however incredible—to the jury.

Many in the legal system do not appreciate how credible scientific and medical views develop, and the degree to which legal decisionmaking is a poor vehicle for developing such views.

There often is an understandable frustration with the fact that science and medicine frequently cannot offer the kind of certainty that the legal decisionmaking mechanisms strive to obtain.

The inability of the tort system to deal credibly with complicated scientific and medical issues strikes at the very heart of the ability of tort law to deal with the growing

strong medicine. It impinges on our constitutional notion of the right to a jury trial. And, as I have already indicated, I share the concern with placing more power and discretion in the "unlearned" court.

## 1. Summary Judgment and Directed Verdicts

The use of summary judgment in highly technical litigation may have to be expanded to prevent the enormous waste of resources caused by taking baseless or overwhelmingly strong cases to trial.<sup>72</sup>

---

number of cases involving highly complicated scientific and medical issues. While there are no easy answers, there are several remedial actions that the Working Group recommends:

Greater deference must be paid to government agencies and certain private institutions that have devoted decades of attention and millions of dollars to researching and trying to assess the value of medical and scientific developments. Where such agencies and institutions have determined that particular products, services or techniques are safe or socially beneficial, courts should tread very carefully in overruling those judgments through the vehicle of tort law. Lay juries are a very poor mechanism for second-guessing the judgment of established mainstream scientific and medical views. Other legal mechanisms for determining those views, such as rulemaking and licensing proceedings, generally are far superior in making credible determinations involving complicated issues of science and medicine.

Courts must be more aggressive in determining the credibility of scientific and medical evidence and opinions before trial, and not simply allow parties to present any theory to the jury. Appellate courts, in turn, should give trial courts greater latitude in making such decisions in early stages of litigation. Judges, where feasible, should receive training on basic methods of scientific, medical and statistical analysis so that they can make such determinations. If necessary, impartial masters with appropriate training should be used for this purpose.

Studies and opinions that have not been subjected to the peer review process should be presumed invalid. Where peer review has taken place, judges (or masters, where appropriate) should acquaint themselves with the results of such review.

Courts must learn to accept the reality of uncertainty. They must understand that the fact that some degree of uncertainty always exists does not mean that every scientific or medical belief is as credible as the next. Judges and legislators must not try to "force" scientific certainty where such certainty simply is not possible. Attempts to do so through burden-shifting, presumptions or by requiring agencies to issue scientific "findings," simply create a misleading and deceptive gloss of scientific certainty that in fact does not exist. Ultimately, the legal system must accept the fact that some things are unknown, and, given existing methods and data, perhaps unknowable for the foreseeable future.

*Id.* at 62-64 (footnotes omitted).

72. See, e.g., *In re "Agent Orange" Prod. Liab. Litig.*, 611 F. Supp. 1223 (E.D.N.Y. 1985); *In re "Agent Orange" Prod. Liab. Litig.*, 611 F. Supp. 1267 (E.D.N.Y. 1985). The Supreme Court seems prepared to strengthen the trial judge's hand. See *Celotex Corp. v. Catrett*, 54 U.S.L.W. 4775 (U.S. June 25, 1986) (defendant is entitled to summary judgment under Rule 56 where plaintiff is unable to produce evidence on an essential element of his claim); cf. *Anderson v. City of Bessemer City*, 105 S. Ct. 1504 (1985) (requiring deference to trial court's finding of facts).

Under the Federal Rules of Evidence, a judge can exclude expert testimony and thus grant summary judgment in one of two ways. First, there is Rule 703, which allows an expert to base his opinion on the type of evidence reasonably relied upon by experts in his field. In some cases, examination of the basis of an expert's opinion reveals that it is supported by no reliable evidence at all. In such cases exclusion of the expert's opinion under Rule 703 and a grant of summary judgment to the opposing party might be appropriate.<sup>73</sup> In other cases, an expert's opinion is supported by *some* credible evidence, but further investigation reveals that there is other, much more persuasive evidence available which undermines the expert's opinion and which the expert is ignoring. In these cases, the court might exclude the expert's testimony either under Rule 702, as not being helpful to the trier of fact, or under Rule 403, as being likely to mislead the jury.<sup>74</sup> Both the reasoning and the result are much the same regardless of which rule is used.

Judgments notwithstanding the verdict or directed verdicts may need to be used more.<sup>75</sup> Obviously, summary judgment is more ef-

---

73. See, e.g., *Fontenot v. Upjohn Co.*, 780 F.2d 1190 (5th Cir. 1986) (summary judgment granted for defendant where no evidence introduced to prove that progesterone manufactured by defendant could cause birth defect); *American Key Corp. v. Cole Nat'l Corp.*, 762 F.2d 1569 (11th Cir. 1985) (exclusion of witness and grant of summary judgment in antitrust case); *KN Energy, Inc. v. Great Western Sugar Co.*, 698 P.2d 769 (Colo.), cert. denied, 105 S. Ct. 3489 (1985) (exclusion of witness and grant of partial summary judgment in breach of contract claim). But see *Bulthuis v. Rexall Corp.*, 777 F.2d 1353 (9th Cir. 1985) (expert opinion not accompanied by underlying facts may defeat a summary judgment motion).

74. See, e.g., *In re "Agent Orange" Prod. Liab. Litig.*, 611 F. Supp. 1223, 1253, 1255-56 (E.D.N.Y. 1985); *In re "Agent Orange" Prod. Liab. Litig.*, 611 F. Supp. 1267, 1281-83 (E.D.N.Y. 1985). Cf. Cairns, *The Treatment of Diseases and the War against Cancer*, Sci. AM. Nov. 1985, at 51, 58 (explaining why positive-looking statistics on the effects of chemotherapy are misleading). But see *Johnson v. United States*, 780 F.2d 902 (11th Cir. 1986) (exclusion of expert testimony as cumulative under Rule 403 is abuse of discretion where excluded expert more qualified than those who testified); *Backes v. Valspar Corp.*, 783 F.2d 77 (7th Cir. 1986) (chemist's affidavit on issue of medical causation sufficient to defeat summary judgment motion).

It should be noted, however, that in *Zenith Radio Corp. v. Matsushita Elec. Indus. Co.*, 723 F.2d 238, 284 (3d Cir. 1983), *rev'd on other grounds*, 106 S. Ct. 1348 (1986), the Third Circuit reversed the trial court precisely because the trial court had excluded expert testimony, among other evidence. The Supreme Court did not directly address the admissibility issue. *Matsushita Elec. Indus. Co. v. Zenith Radio Corp.*, 106 S. Ct. 1348, 1352 (1986).

75. But see *Ferebee v. Chevron Chemical Co.*, 736 F.2d 1529 (D.C. Cir. 1984). In denying defendant judgment notwithstanding the verdict in a case involving long-term skin exposure to dilute solutions of paraquat, the court states that:

Judges, both trial and appellate, have no special competence to resolve the complex and refractory causal issues raised by the attempt to link low-level exposure to toxic chemicals with human disease. On questions such as these, which stand at the frontier of current medical and epidemiological inquiry, if experts are willing to testify

fective in saving time. Perhaps a form of minitrial combined with summary judgment needs to be developed.

Rule 11 sanctions may have some impact in limiting the use of frivolous expert opinions.<sup>76</sup> Generally I am not in favor of such punitive measures, but they will undoubtedly have some effect in reducing abusive use of experts. Would it not be proper to consider an amendment to Rule 11 enabling the court to impose sanctions against the expert, as well as against the lawyer and the client?

## 2. Questions and Comments by the Judge

Federal judges, and some state judges, have extensive power to comment on the evidence.<sup>77</sup> This power is seldom used. In the area of scientific proof and expert witnesses, the judge may need to express the court's views more forcefully to guide the jury. Alternatively, the court can provide the jury with assistance in a somewhat less heavyhanded manner by asking questions of an expert witness (or by suggesting them to counsel) where it appears to the court that counsel is doing an inadequate job of bringing out the salient facts or that the jury is missing the point. Both of these alternatives imply that the court is capable of commenting or questioning intelligently.

## 3. The Role of the Judge in Nonjury Trials

Where a case is tried nonjury, it is desirable, to the extent practicable, for the judge to become familiar with the scientific background by reading about the issues and discussing them with the experts.<sup>78</sup> There is some danger here, of course, since a half-informed layman can do more damage than one who suffers from a

---

that such a link exists, it is for the jury to decide whether to credit such testimony. *Id.* at 1534.

76. Rule 11 provides sanctions, including attorneys' fees and costs, for signing of pleadings, motions, or other papers which are not well-grounded in fact, warranted by existing law or a good faith argument for a change in the law, or which are interposed for an improper purpose. FED. R. CIV. P. 11.

77. See WEINSTEIN'S EVIDENCE, *supra* note 27, at ¶ 200 [07].

78. See *Madrigal Audio Laboratories, Inc. v. Cello, Ltd.*, Nos. 86-7224, 86-7254, slip op. at 5184-85 n.1 (2d Cir. Aug. 20, 1986). In this trademark case, the district judge appointed a special master, stating: "I don't understand anything about the merits of any patent or trademark case. I'm not about to educate myself in that jungle." *Id.* The court of appeals expressed its "firm disagreement with the district judge's concept of his duties," arguing that the trial judge "is obligated, whenever faced with unfamiliar factual or legal issues, . . . to educate himself in those fields . . ." *Id.*

complete lack of knowledge, but also is aware of his or her limitations. Nevertheless, some attempt at self-education and understanding is desirable—so long as the parties are made aware of the judge's efforts and can provide assistance. Thus, it would be appropriate for the judge to request the parties to provide a reading list. It would also be proper to require the parties to allow the judge to observe experiments or other relevant happenings.<sup>79</sup>

An excellent illustration of enlightened judicial practice was provided by Judge Finesilver in the swine flu cases. He was assigned to try all such cases in each of the district courts in his circuit. During the course of a year, he settled or tried over one hundred cases, attaining expertise in the process by listening to many expert witnesses on both sides and by studying all of the literature. In addition to his readings, he attended a course dealing with related problems in the local medical school, enabling him to better understand the scientific issues and terminology.

In Virginia, Judge Robert Merhige's grasp of uranium technology and economics undoubtedly enabled him to help settle the difficult Westinghouse case.<sup>80</sup> His knowledge of the medical problems will be of great assistance to the parties in his management of the A.H. Robins litigation and bankruptcy.

Passivity of the court is no virtue when serious scientific questions of more than passing importance are involved. The court owes an obligation to the parties, to society, and to itself to assist in obtaining the best possible answers to the scientific questions before it.<sup>81</sup> That will mean forcing the parties to gather and pre-

---

79. This device was used by Judge Medina in an antitrust case when he observed the methods used in processing papers in unrelated but parallel transactions. *United States v. Morgan*, 118 F. Supp. 621, 650 (S.D.N.Y. 1953). *But see* Casebook, *supra* note 10, at 1296-98 (cases questioning propriety of judge's relying on personal knowledge).

Judges must be careful, however, to remain neutral. *See generally* Note, *Lord's Justice: One Judge's Battle to Expose the Deadly Dalkon Shield I.U.D.*, 99 HARV. L. REV. 875 (1986).

80. On December 19, 1975, a Judicial Panel on Multidistrict Litigation ordered thirteen federal diversity actions transferred for pre-trial purposes to the Eastern District of Virginia. The cases were assigned to the Honorable Robert R. Merhige, Jr. *In re Westinghouse Elec. Corp. Uranium Contracts Litig.*, 405 F. Supp. 316, 319 (J.P.M.D.L. 1975). For background on this case, see Comment, *The International Uranium Cartel: Litigation and Legal Implications*, 14 TEX. INT'L L.J. 59, 64 (1979).

81. This should be contrasted to the rules *against* the jury doing independent research. *See United States v. Duncan*, 598 F.2d 839, 866 (4th Cir.), *cert. denied*, 444 U.S. 871 (1979) (juror reference to dictionary definitions of "motive" and "intent" was improper); *see also* CASEBOOK, *supra* note 10, at 1299.

sent evidence effectively, calling upon other experts as necessary, and studying to obtain the understanding needed to maintain effective control.

### III. CONCLUSION: THE PROBLEM REMAINS UNSOLVED

It should be apparent that increasing judicial discretion in the manner that I have suggested poses serious problems. Granting summary judgment more liberally runs the risk of diluting the seventh amendment's guarantee of a jury trial. Is there not something just a little bit odd about giving judges, whose ignorance of matters scientific is well known,<sup>82</sup> the final word on the value of expert testimony?

Other proposals, such as those for stricter ethical standards for experts, do not raise any constitutional problems, but only practical ones. How, for example, do you legislate ethics?

There is much room for reflection and debate. The bench and bar are so heavily involved in day-to-day matters that sometimes they do not fully appreciate what the problems are and how they might be solved. Moreover, a tendentious quality is added to much of the debate by those whose financial interests may be seriously affected by substantial substantive or procedural changes. The leadership in this area must be provided by the relatively impartial law schools.

Despite all the difficulties we face in trying to deal with the problem of expert witnesses, we appear to have at least one advantage over some of our forebears: We now realize that we have problems that are nearly intractable and that every reform probably creates new difficulties. This was apparently not always the case. In 1811, a treatise writer had this to say about the testimony of expert witnesses: "In proportion as experience and science advance, the uncertainty and danger from this kind of proof diminishes."<sup>83</sup>

While this attitude may have been appropriate in the age of enlightenment, it appears to us today—175 years and an explosion in

---

82. Cf. Koshland, *The Basic Concepts of Science Elude the Decision-Makers*, *Newsday*, Dec. 12, 1985, at 94 ("Judges and legislators with little or no scientific training are making sweeping decisions on risks to the environment and from nuclear war and industrial accidents.")

83. L. MACNALLY, *THE RULES OF EVIDENCE ON PLEAS OF THE CROWN* 225 (\*329) (1811) (regarding medical doctors).

expert knowledge later—to be somewhat naive. Whether we can reduce the dangers from experts' proof I do not know. But would not the teaching of evidence and our work in the courts be dull if all the problems had been solved or were readily soluble?

