

4-1986

## Policing the Bases of Modern Expert Testimony

Ronald L. Carlson

Follow this and additional works at: <https://scholarship.law.vanderbilt.edu/vlr>



Part of the [Litigation Commons](#)

---

### Recommended Citation

Ronald L. Carlson, Policing the Bases of Modern Expert Testimony, 39 *Vanderbilt Law Review* 577 (1986)  
Available at: <https://scholarship.law.vanderbilt.edu/vlr/vol39/iss3/5>

This Essay is brought to you for free and open access by Scholarship@Vanderbilt Law. It has been accepted for inclusion in Vanderbilt Law Review by an authorized editor of Scholarship@Vanderbilt Law. For more information, please contact [mark.j.williams@vanderbilt.edu](mailto:mark.j.williams@vanderbilt.edu).

# Policing the Bases of Modern Expert Testimony

Ronald L. Carlson\*

## I. INTRODUCTION

Technical witnesses have revolutionized the American lawsuit. Advertisements in litigation periodicals bear witness to the broad range of courtroom expert testimony available to the trial bar. A specialist in airplane pilot error places an advertisement on the same page with an advertiser who is “[e]minently qualified to provide expert testimony in churning securities litigation.”<sup>1</sup> Also included are obscenity experts for criminal cases as well as a timber products specialist with “global experience in accidents and related cases,” who claims, “[m]ore than 30 years experience with wood utility poles.”<sup>2</sup> Within the category of timber and woods there are other experts as well. A national directory exists for locating experts whose specialties are “[a]ccidents and injuries caused by trees.”<sup>3</sup>

The offerings of available technical services of course include traditional specialties. Experts in document and handwriting analyses may be found along with a plethora of physicians. Some doctors have entered the courtroom expert market with enthusiasm. One recent advertisement promoting “Heavyweight Malpractice Experts. Any type physician, surgeon or medical expert available” features a photograph of a “fighting doctor” clad in white coat and boxing gloves.<sup>4</sup>

---

\*John Byrd Martin Professor of Law, University of Georgia. B.A. 1956, Augustana College; J.D. 1959, Northwestern University (Clarion De Witt Hardy Scholar); LL.M. 1961, Georgetown University (E. Barrett Prettyman Fellow in Trial Advocacy).

1. 21 TRIAL, Dec. 1985, at 103; see also 90 CASE & COMMENT, Jan.-Feb. 1985, at 60-63.

2. 21 TRIAL, Sept. 1985, at 91.

3. *Id.* (referring to the MEMBERSHIP DIRECTORY OF AMERICAN SOCIETY OF CONSULTING ARBORISTS IN U.S. AND CANADA).

4. 21 TRIAL, *supra* note 1, at 96. The ad continues, “Two of our recent cases settled for \$1.45 million and \$990,000.00!” *Id.*

Expert witness networks of various kinds have developed. For example, the Technical Advisory Service for Attorneys (“TASA”) provides a central source of experts, and claims that “TASA’s computer contains 8,000 experts in 3,000 categories.” There also are printed

The expanding array of scientific (as well as some not-so-scientific) specialties available as sources for testimony raises hard questions. Will courts require that the witness' opinions be reasonably based upon trustworthy data? How far must judges inquire into the practice of other experts in the same field prior to allowing the trial witness to proffer an expert opinion? How much of the expert's supporting data will be received in evidence? This Essay addresses these and other important questions affecting the scope of modern expert testimony.

## II. THE BASES FOR EXPERT OPINION

The federal jury or bench trial usually is marked by the appearance of at least a few, if not several, expert witnesses. What these experts have to say may be based on material that is far different than it would have been fifteen or twenty years ago. With the advent of Federal Evidence Rule 703, the expert can form his opinion from many different reports and documents that formerly would have made the opinion inadmissible. Thus, objections such as "Objection, she is basing her expert opinion on out-of-court hearsay" are no longer automatically sustained.<sup>5</sup>

The litmus test for admission or exclusion of an expert's opinion based upon reports of others is the reasonableness of the testifying expert's reliance on such reports. If the underlying facts or data that helped the expert reach conclusions are of a type on which other experts in the field customarily rely, most courts will permit the expert to testify. Accordingly, a question or two along

---

directories of technicians and experts. See, e.g., *DIRECTORY OF EXPERT WITNESSES IN TECHNOLOGY* (1985), reviewed in 71 A.B.A. J. 74 (1985).

5. Honoring such an objection may result in reversible error. See, e.g., *State v. Henze*, 356 N.W.2d 538 (Iowa 1984). The prosecution in *Henze* sought to show that defendant was intoxicated at the time of his arrest. A doctor who had examined defendant shortly after his arrest also reviewed defendant's medical records, which had been prepared by other doctors. Relying partly on his own observations of defendant on the night of the arrest and partly on his later review of defendant's medical records, the testifying doctor was prepared to state that defendant's behavior did not require a conclusion that he was intoxicated. The trial judge sustained a hearsay objection that targeted the underlying medical records as an improper basis for testimony. Applying a state rule modeled after Federal Evidence Rule 703, the state supreme court reversed. The court stated:

We may and do hereby judicially notice the fact that doctors customarily rely on medical records prepared by other doctors in forming opinions about their patients' conditions.

We conclude, therefore, that Dr. Berstler's proffered testimony was admissible under rule 703 and the hearsay objection was not tenable. The trial court erred in excluding the testimony on hearsay grounds.

*Id.* at 540 (footnote and citations omitted).

these lines to counsel's expert may be helpful, especially when the trial judge applies stringent rules of procedure: "Dr. Watson, in reaching a diagnosis regarding a patient in the day-to-day practice of orthopedic medicine, do you regularly rely on radiology reports such as those produced on the plaintiff by Medicus Radiology Clinic? Is that also the practice of other orthopedists?"

In a typical case, once the expert identifies the basis for his opinion, the expert will proceed to propound his conclusions. There will be occasions, however, when a genuine issue is raised concerning the trustworthiness of the background data relied upon by an expert. The recent federal district court decision in *In re "Agent Orange" Product Liability Litigation*<sup>6</sup> underlined the trustworthiness question.

#### A. *Agent Orange Litigation*

Of the numerous opinions issued in mid-1985 in litigation surrounding the use of Agent Orange in Vietnam, perhaps the most important one explored the question of expert qualifications, as well as the foundation for technical opinions. This well-researched effort by Chief Judge Weinstein of the United States District Court for the Eastern District of New York decided whether Vietnam veterans and their families could maintain a suit against several chemical companies who manufactured Agent Orange for the federal government. Some litigants proceeded in a class action; others did not join in the class. The court's decision affected veterans who opted out of the class. A central issue concerned the probative worth of expert medical opinions, most notably causation opinions by a hematologist and a pathologist.

The factual setting for *Agent Orange* developed out of the Vietnam War. Private corporations supplied the government with Agent Orange, a herbicide containing toxic chemicals. Many veterans who were exposed to this defoliating substance, as well as several family members, sued the manufacturing companies. Seven chemical companies moved for summary judgment, asserting that plaintiffs could not identify the individual manufacturer of the Agent Orange to which a given veteran was exposed and that plaintiffs could not prove that exposure to Agent Orange caused their injuries.<sup>7</sup> This latter objection led to one of the most comprehensive judicial discussions to date of modern expert opinion

---

6. 611 F. Supp. 1223 (E.D.N.Y. 1985).

7. *Id.* at 1229. Other grounds for dismissal also were alleged.

evidence.

It should be noted that Chief Judge Weinstein announced the expert opinion rules in the context of a summary judgment motion. The question before the *Agent Orange* court was whether plaintiffs had met their burden of demonstrating a genuine issue of fact. Plaintiffs had introduced expert proof in affidavit form, which concluded that plaintiffs' current diseases and afflictions resulted from Agent Orange. Finding that the proposed expert evidence lacked a solid basis, the court held that the affidavits failed to comply with Federal Evidence Rule 703. Defendants' motion for summary judgment was granted, and the case was dismissed. The test applied by the court was whether, assuming the proposed proofs were produced at trial, the chemical companies would be entitled to a directed verdict. Because the court applied a trial-type test, the *Agent Orange* opinion is relevant for establishing both trial and pretrial standards applicable to expert proof. The court was convinced that there was "no doubt that a directed verdict at the close of each of plaintiffs' cases would be required."<sup>8</sup>

Avoiding protracted and expensive trials when the end result will be a directed verdict is a sensible goal. Summary judgment is a valuable tool for eliminating these costly burdens when only speculative issues of fact exist. A decisive question that frequently arises in making this judgment is whether the plaintiff's expert has a well-founded opinion, or whether the expert's opinion is based on unsound or theoretical speculations. This issue dominates the forty-two page decision in *Agent Orange*. When an expert relies on hearsay information, it must at least be the type of information normally employed by other experts in the field. The *Agent Orange* court concluded that absent such a showing the proffered evidence failed to meet the requirements of Rule 703.

One plaintiff's doctor formed his opinion by relying on forms completed by veterans that incorporated a checklist of symptoms attributable to their exposure to Agent Orange while in Vietnam. Items like skin disorders, fatigue, memory loss, anger, and other symptoms appeared on these forms. The trial court critically reviewed the expert's reliance on the material:

Plaintiffs' checklists and "affidavits," illustrated by Appendix "A" to this opinion, submitted with Dr. Singer's affidavits are not material that experts in this field would reasonably rely upon and so must be excluded under Rule 703. . . . The court takes judicial notice—based on hundreds of trials—that no reputable physician relies on hearsay checklists by litigants to reach a con-

---

8. *Id.* at 1260.

clusion with respect to the cause of their afflictions.<sup>9</sup>

Another physician who supported plaintiffs' case relied "in the main on the same self-serving hearsay used by Dr. Singer."<sup>10</sup> The court was similarly critical of that physician's testimony: "Plaintiffs have submitted no evidence that other physicians would rely upon material of this kind in reaching a medical conclusion about causation."<sup>11</sup>

The court dismissed plaintiffs' claims after analyzing (1) epidemiological studies that showed that there is no evidence that paternal exposure to Agent Orange causes birth defects, (2) an Air Force survey that concluded that there is insufficient evidence to support a cause and effect relationship between herbicide exposure and adverse health, and (3) an Australian report finding no statistically significant difference in death rates from cancer among veterans and nonveterans.<sup>12</sup> Central to the perceived inadequacy of the lawsuit was the litigants' inability to eliminate other possible causes of plaintiffs' illnesses.<sup>13</sup> The court observed that many health complaints registered in the case were "frequently identified with Vietnam stress syndrome due to battle and other military stresses."<sup>14</sup> The court further found that "[w]hile many plaintiffs have become bald since leaving Vietnam, baldness is often a natural part of aging."<sup>15</sup> The court thus concluded that the fatal flaws in plaintiffs' action were unconvincing proof of causation and inappropriate expert reliance on hearsay.

### B. Testing Expert Proof

Whether one agrees or disagrees with Judge Weinstein's resolution of summary judgment under the facts in *Agent Orange*, there should be little dissension regarding his suggested mechanics for testing expert opinion. The apparatus the opinion provides for accomplishing this task is sound and provides valuable guidance when the issue is hotly contested. The legal analysis contained in the decision begins with the proposition that the Federal Rules of

---

9. *Id.* at 1246.

10. *Id.* at 1247.

11. *Id.* at 1248.

12. The court also cited other reports. "[A]ll reliable studies of the effect of Agent Orange on members of the class so far published provide no support for plaintiffs' claims of causation." *Id.* at 1231.

13. *Id.* at 1250.

14. *Id.*

15. *Id.* at 1251.

Evidence require trial judges to "make a preliminary inquiry into the admissibility of expert testimony."<sup>16</sup> The opinion provides: "The court must first determine whether the expert is sufficiently qualified in his or her field to be allowed to testify. The court must also determine whether the proffered evidence would be helpful to the trier of fact, although doubts should be resolved in favor of admissibility."<sup>17</sup> In *Agent Orange* the credentials of the two major medical witnesses satisfied these requirements of expert witness qualification. Furthermore, under the helpfulness standard of Federal Evidence Rule 702,<sup>18</sup> the scientific techniques used by these experts should have been considered acceptable.

Nevertheless, qualifying as an expert in a relevant field, providing testimony that meets the helpfulness standard, and using an acceptable analytical technique<sup>19</sup> are factors that do not always guarantee admissibility under the Federal Rules of Evidence. Rule 703 imposes an additional test for admissibility. The trial court must decide whether the data used by the expert to prepare his or her opinion in the litigated case is of a type reasonably and customarily relied upon by other experts in the field.<sup>20</sup> Some appellate

16. *Id.* at 1239 ("In determining whether an expert opinion is sufficient to withstand a summary judgment motion, courts undertake a detailed inquiry into the admissibility of the proffered testimony."). Many summary judgment cases have examined expert testimony. See, e.g., *American Key Corp. v. Cole Nat'l Corp.*, 762 F.2d 1569 (11th Cir. 1985); *Bieghler v. Kleppe*, 633 F.2d 531 (9th Cir. 1980).

17. 611 F. Supp. at 1242 (citations omitted). The trial judge should exercise special care in evaluating expert qualifications and the subject of the expert's testimony when the proposed testimony lies at "the periphery of what the scientific community considers acceptable." *Id.* The court notes two competing approaches to novel scientific proof by comparing *United States v. Williams*, 583 F.2d 1194 (2d Cir. 1978), *cert. denied*, 439 U.S. 1117 (1979), with *Frye v. United States*, 293 F. 1013 (D.C. Cir. 1923). For analysis of the *Frye* test see R. CARLSON, E. IMWINKELRIED & E. KIONKA, *MATERIALS FOR THE STUDY OF EVIDENCE* 219-21 (1983); Gianelli, *The Admissibility of Novel Scientific Evidence: Frye v. United States, A Half-Century Later*, 80 COLUM. L. REV. 1197 (1980). *Frye*-type problems are usually considered under Federal Evidence Rule 702.

18. The test set out in Rule 702 is whether the testimony will assist the trier of fact. See FED. R. EVID. 702.

19. In short, complying with Federal Evidence Rule 702.

20. FED. R. EVID. 703. The courtroom foundation for expert opinion based in whole or in part on out of court hearsay frequently includes preliminary questions concerning the specialist's own reliance on the unadmitted data, as well as the practice of other experts in the field. R. CARLSON, *SUCCESSFUL TECHNIQUES FOR CIVIL TRIALS* § 4:20, at 219 (1983).

In *Agent Orange* the court found it significant that none of plaintiffs' experts asserted that they normally relied on hearsay checklists like those offered at trial to diagnose a patient. What the court termed the "bald assertion of plaintiffs' counsel that Dr. Singer's affidavit was 'based upon the kind of information which any treating or examining physician would require in rendering an opinion'" did not suffice in the court's view. "Instead, courts look to evidence from experts in the field about the reliability of the materials in question as

courts go further and impose a requirement that the trial judge separately determine the trustworthiness of the particular data underlying the expert's opinion.<sup>21</sup>

*Agent Orange* follows the latter view:

[T]he court may not abdicate its independent responsibilities to decide if the bases meet minimum standards of reliability as a condition of admissibility. If the underlying data are so lacking in probative force and reliability that no reasonable expert could base an opinion on them, an opinion which rests entirely upon them must be excluded.<sup>22</sup>

Finding the underlying data faulty, the *Agent Orange* court excluded the expert opinions.

Because of the disposition in *Agent Orange*, an important expert witness issue was never reached: the role of supporting data once an expert's opinion is deemed admissible. For example, after an expert testifies in a jury trial, does the background data from which he derived his conclusions become admissible evidence on behalf of the proponent of the expert witness? Because this issue has practical impact in cases that do proceed to trial, it requires discussion here.

### C. Challenging the Admission of Supporting Data

An apt analogy exists between practice under Federal Evidence Rules 703 and 612. Rule 612 controls procedure when a witness refreshes his memory from a writing prepared by himself or another. Suppose a witness has a failure of memory during direct examination. When the witness accomplishes the refreshing process on the witness stand in front of a jury, there is consensus that the underlying document does not come into evidence merely because it refreshed recollection. Introduction options belong to the

---

well as their own experience and common sense." 611 F. Supp. at 1246 (citation omitted); see also Carlson, *Collision Course in Expert Testimony: Limitations on Affirmative Introduction of Underlying Data*, 36 U. FLA. L. Rev. 234, 241 (1984) ("If the judge decides that the data is not reasonably relied upon, he may bar the expert's opinion altogether, bar it to the extent it relies on impermissible data, or only bar references to the impermissible data.").

21. 611 F. Supp. at 1244 (citing Carlson, *Collision Course in Expert Testimony*, *supra* note 20, at 240-41 & n.26). The *Agent Orange* court adverted to a liberal view, wherein experts are allowed to base opinions on material relied upon by other experts in the field without separately determining the trustworthiness of the underlying data. *Id.* In support of this view, the court cited the Third Circuit's decision in *In re Japanese Elec. Prods. Antitrust Litig.*, 723 F.2d 238 (3d Cir. 1983), *cert. granted*, 105 S. Ct. 1863 (1985). See 611 F. Supp. at 1244. For an enlarged discussion of this issue, see *infra* notes 41-49 and accompanying text.

22. *Id.* at 1245 (citations omitted).



cross-examiner, not to the proponent of a witness who needed to look at a document in order to provide direct testimony.

Similarly, an expert whose opinion required extrinsic data may identify and briefly describe the supporting out-of-court document that gave rise to his conclusions. To go further and allow the admission of an unauthenticated writing into evidence or to permit the testifying expert to quote extensively from that writing violates accepted hearsay norms. Furthermore, in a criminal case, when a prosecutor directs an expert called by the state to read from an underlying report prepared by another person, the defendant's constitutional right to confront the adverse witness is abridged. That the trial witness relied on the extrinsic report makes little difference. The outside report remains hearsay and is not admissible in evidence unless the proponent lays a proper foundation. While hearsay and confrontation concerns would seem minimal when an expert simply identifies a background document as a basis for his opinion,<sup>23</sup> reporting fully to the jury from the conclusions of nontestifying experts is improper.<sup>24</sup>

Courts have not always appreciated the fine but important distinction between allowing an extra-record report to form a basis for courtroom opinion and permitting the whole of the report to come into evidence. On the other hand, many courts have understood the vice of free introduction of underlying data.<sup>25</sup> Of course, most experts will not rely exclusively on reports of others but will have first-hand contact with the subject. A doctor, for example, usually will have examined the patient. There will be, however, many instances when the physician augments his own examination with the lab studies or reports of other doctors.<sup>26</sup> With technical

---

23. Perhaps a description by the witness of the general subjects discussed in underlying reports would be unassailable as well. Beyond that, introduction of a copy of the report or recitation of its contents, including conclusions, raises profound hearsay and confrontation objections.

24. See *State v. Towne*, 142 Vt. 241, 453 A.2d 1133 (1982).

25. See, e.g., *Curry v. Sikorsky Aircraft*, 779 F.2d 272 (5th Cir. 1985); *Barrel of Fun, Inc. v. State Farm Fire & Casualty Co.*, 739 F.2d 1028 (5th Cir. 1984); *Rose Hall, Ltd. v. Chase Manhattan Overseas Banking Corp.*, 576 F. Supp. 107, 158 (D. Del. 1983), *aff'd*, 740 F.2d 958 (3d Cir. 1984), *cert. denied*, 105 S. Ct. 909 (1985); *People v. Robinson*, 417 Mich. 661, 340 N.W.2d 631 (1983); *State v. Towne*, 142 Vt. 241, 453 A.2d 1133 (1982). In connection with the *Barrel of Fun* decision, see *infra* note 41. *But see* *United States v. Affleck*, 765 F.2d 944 (10th Cir. 1985) (en banc); *Paddack v. Dave Christensen, Inc.*, 745 F.2d 1254 (9th Cir. 1984); *United States v. Ramos*, 725 F.2d 1322 (11th Cir. 1984). See generally, Rossi, *Modern Evidence and the Expert Witness*, 12 LITIGATION, Fall 1985, at 18. For additional authorities on both sides, see C. McCORMICK, *McCORMICK ON EVIDENCE* 38-41 (3d ed. 1984); Carlson, *Collision Course in Expert Testimony*, *supra* note 20, at 247-50.

26. See, e.g., *State v. Henze*, 356 N.W.2d 538 (Iowa 1984). For a discussion of *Henze*,

subjects, such as chemistry, physics, or engineering, a highly qualified expert may develop his opinions from primary records generated exclusively by other professionals. While some of these underlying records will have been offered and received into evidence by the time the expert testifies, others will not. In selected cases, counsel may not have formally introduced any of the supporting data, especially when that data comes from offices in distant parts of the country. In these circumstances the question that arises is whether the lawyer who calls an expert is entitled to read the underlying records into evidence.

As has been explained, strict principles of expert, hearsay, and confrontation law require that the answer to the above question be an emphatic no.<sup>27</sup> While underlying records might qualify as admissible business records, virtually every formulation of the business records exception requires an authenticating witness *from the office that generated the record*. A records custodian knows the regularity of the entries contained in the offered record, the timeliness of the entries, and the type of knowledge possessed by individuals participating in the recordmaking process.<sup>28</sup>

This Essay is not intended to suggest that experts should be denied the use of unadmitted hearsay to form and propound expert opinions. Rather, the analysis speaks to the impropriety of receiving in wholesale fashion the unauthenticated background data as an exhibit on behalf of the party that offered the expert's courtroom opinion. Once the expert identifies the sources for his conclusions during direct examination, the reference to outside material is complete. Furthermore, in criminal cases, permitting the expert to go beyond this point and recite extensively from another person's report significantly damages the confrontation clause of the Constitution. This back door introduction of the contents of a non-testifying expert's report, without producing the author of the material, impinges on the criminal defendant's sixth amendment rights.

To protect against litigation based on unsworn allegations contained in the report of a nontestifying expert, it may be time to

---

see *supra* note 5.

27. See, e.g., *Commonwealth v. Kendall*, 9 Mass. App. Ct. 152, 399 N.E.2d 1115 (1980) (holding that in the guise of giving the reasons for his opinion the expert cannot testify to matters that are not admissible under a recognized hearsay rule exception).

28. Evidence presented by a witness who receives a report or letter generally is insufficient to establish the document as a business record of the recipient. See, e.g., *State v. Wright*, 367 N.W.2d 269 (Iowa 1985).

consider careful revision of Federal Evidence Rule 703. Such revision would lend predictability to expert witness practice and settle the question whether Rule 703 creates a giant exception to the hearsay rule for otherwise inadmissible hearsay reports and opinions.<sup>29</sup>

### III. SUMMARIZING THE JUDICIAL ROLE

It is perhaps valuable at this juncture to identify in systematic fashion some of the prominent steps involved in the admission of expert testimony. The decisions and inquiries that frequently mark this process are set forth below.

*The court first must determine whether the expert is sufficiently qualified to testify.*<sup>30</sup> Rule 702 provides a liberal standard that allows an expert to be qualified by academic training or life experiences. Notable examples in the latter category include allowing a long-time farmer to provide an opinion about a probable corn yield<sup>31</sup> or permitting a witness who has been an equipment

---

29. This unsettled issue has been referred to in commentaries. See, e.g., 83 FED. R. EVID. NEWS 78 (1983); 78 FED. R. EVID. NEWS 118 (1978) (citing *State v. Rolls*, 389 A.2d 824 (Me. 1978)); see also 85 FED. R. EVID. NEWS 23 (1985).

Revision of the rules may be in the offing. The Federal Rules of Evidence will receive an official review for the first time since their adoption in 1975. An ad hoc committee of the Judicial Conference of the United States will study the rules and receive suggestions for amendments. *Federal Evidence Rules Slated for First Review*, 11 LITIGATION NEWS, Winter 1986, at 7. One American Bar Association committee already has considered many of the principles advanced in the foregoing section of this Essay. The Rules of Evidence and Procedure Committee of the Section of Criminal Justice, meeting on January 4, 1986, favorably reviewed the concept of imposing appropriate safeguards on the use at trial of underlying expert data, subject to further drafting of detailed rule language.

One productive idea might be to add a new section (b) to Rule 703 incorporating the following concept:

In criminal cases, and generally in civil cases, underlying expert data must be independently admissible in order to be received in evidence. An expert's reliance on unadmitted data does not mandate introduction of the data, where the sole reason for introduction is that it formed a basis for the expert's opinion. When good cause is shown in civil cases and the underlying information is particularly trustworthy, the court may admit the data under this rule to illustrate the basis for the expert's opinion.

Under the proposed revision, part (a) of Rule 703 would retain the present rule without change. The concept embraced in tentative subdivision (b) holds the promise of restricting use of inadmissible underlying data to its proper role, that of supporting an expert's opinion without becoming independent evidence. In particularly compelling circumstances, and especially in civil cases, judges might admit reliable background documentation. They certainly can do so when it comports with other rules of admission, including the catchall exceptions to the hearsay rule in Federal Evidence Rules 803(24) and 804(b)(5). With careful rule revision, modern expert witness practice can move forward without unduly trampling upon established hearsay doctrine or confrontation rights.

30. *Agent Orange*, 611 F. Supp. at 1242.

31. See *Federal Crop. Ins. Corp. v. Hester*, 765 F.2d 723 (8th Cir. 1985).

service manager for three years to testify whether a front-end loader is defective.<sup>32</sup> When qualifications are lacking, the court will exclude the opinion testimony.<sup>33</sup>

*The court also must determine whether the proffered evidence would be helpful to the trier of fact.*<sup>34</sup> One commentator writes that "a Ph.D. can be found to swear to almost any 'expert' proposition, no matter how false or foolish."<sup>35</sup> Before deferring to the expert, the court should ascertain that the expert's field of specialty, as well as the area of his expected testimony, will assist the trier of fact. With the large number of expert specialties available for courtroom testimony,<sup>36</sup> there may be topics upon which the jury does not need the aid of an expert.<sup>37</sup>

*When the expert relies on unadmitted data, the trial court must decide whether this data is of a type reasonably relied on by experts in the field.* The proper foundation for expert opinion requires that the testifying expert affirm that he regularly relies on nonrecord matter of the kind involved in the litigated case.<sup>38</sup> After

---

32. See *Dildine v. Clark Equip. Co.*, 285 Ark. 325, 686 S.W.2d 791 (1985).

33. See, e.g., *Herman v. Speed King Mfg. Co.*, 675 P.2d 1271 (Wyo. 1984); *Reinhardt v. Colton*, 337 N.W.2d 88 (Minn. 1983).

34. See *Agent Orange*, 611 F. Supp. at 1242.

35. Huber, *Safety and the Second Best: The Hazards of Public Risk Management in the Courts*, 85 COLUM. L. REV. 277, 333 (1985).

36. See the introductory remarks in this Essay for further details. In a recent interview in *Litigation*, attorney James F. Neal described his voir dire examination of a "self-proclaimed expert" who had "proposed to testify as an expert on everything from unsafe coffeepots to unsafe railroad cars." Schwartz, *Evidence in the Pinto Case: An Interview with James F. Neal*, LITIGATION, Fall 1985, at 29, 32.

37. See *Zimmer v. Miller Trucking Co.*, 743 F.2d 601 (8th Cir. 1984) (expert testimony that concerns subject matter within the knowledge of laymen is superfluous). For a case excluding expert testimony because psychological stress evaluation does not command sufficient scientific acceptance, see *Barrel of Fun, Inc. v. State Farm Fire & Casualty Co.*, 739 F.2d 1028 (5th Cir. 1984) (precedents hold that polygraph evidence is likewise inadmissible).

On the other hand, courts should be alert to new areas of endeavor with potential for assisting the truth determination process. *United States v. Ginsberg*, 758 F.2d 823 (2d Cir. 1985) (expert on use of beepers and codes by narcotics dealers); *WSM, Inc. v. Hilton*, 724 F.2d 1320 (8th Cir. 1984) (expert in the field of regional English to explain origin and meaning of word "opry"); *Schaffter v. Ward*, 17 Ohio St. 3d 79, 477 N.E.2d 1116 (1985) (engineer should have been allowed to testify on point-of-impact in accident case; engineer's opinion could have aided jury). For a collection of cases on the admissibility of expert testimony on rape trauma syndrome as well as similar syndromes affecting battered wives and children, see Annot., 42 A.L.R. 4th 879 (1985) (cases on both sides). Another 1985 annotation collects decisions concerning when expert testimony will assist the trier of fact so as to be admissible under Federal Evidence Rule 702. Annot., 75 A.L.R. FED. 462 (1985).

38. The foundation for expert opinion sometimes is flawed by a failure to include evidence of personal reliance. One court noted that an expert economist did not state that he normally would base his opinion on the type of information submitted to him. *American Key Corp. v. Cole Nat'l Corp.*, 762 F.2d 1569, 1580 (11th Cir. 1985); see also *State v. Rolls*,

the specialist states that he considered such material in forming his opinion, he should identify whether his professional judgments are based in whole or in part on this information.<sup>39</sup> Thereafter, the proponent must establish that other, similar experts place reasonable and customary reliance on the kind of material upon which the expert relied.<sup>40</sup> Finally, several courts impose a requirement that the trial judge make an independent assessment of the underlying data.

Numerous cases in addition to *Agent Orange* endorse this last requirement—a special assessment of trustworthiness. In *Barrel of Fun, Inc. v. State Farm Fire & Casualty Co.*,<sup>41</sup> for example, expert testimony was based on a psychological stress evaluation (PSE). By measuring stress in a person's voice, this evaluation purportedly indicates whether the individual is lying. The Fifth Circuit held "that PSE evidence, whether in the form of raw data or expert opinion interpreting or extrapolating upon that data, is inherently suspect."<sup>42</sup> In deciding whether to permit expert opinion, the court held that "the trustworthiness of the underlying data is not irrelevant."<sup>43</sup> Similarly, in rejecting the testimony of a consulting engineer, the Colorado Supreme Court ruled that while the basis of expert testimony need not be admissible in evidence, the facts that are contrary to the undisputed evidence in the case cannot be reasonably relied on by experts.<sup>44</sup>

Unfortunately, this sort of testing of underlying data is not universal. In *Indian Coffee Corp. v. Proctor & Gamble Co.*,<sup>45</sup> the Third Circuit clearly emphasized the standard of reliance by experts in the field rather than the trial court's judgment of the trustworthiness of the underlying materials.<sup>46</sup> In another jurisdic-

---

389 A.2d 824, 824 (Me. 1978) (experts must rely on data for "purposes other than testifying in a lawsuit").

39. Suggested questions to lay a proper foundation appear in R. CARLSON, *supra* note 20, § 4:20, at 219-20.

40. See Carlson, *supra* note 20, at 240-41.

41. 739 F.2d 1028 (5th Cir. 1984).

42. *Id.* at 1033.

43. *Id.* at 1033 (quoting *Emerging Problems Under the Federal Rules of Evidence*, 1983 A.B.A. Sec. LIT. 208). Without changing its position regarding the inadmissibility of the "raw data," the court suggested that an expert's opinion might be proper when based only partly on a PSE test. *Id.* at 1034. The court, however, rejected the opinion testimony because it found the opinion to be based exclusively on PSE test results. *Id.*

44. *KN Energy, Inc. v. Great W. Sugar Co.*, 698 P.2d 769 (Colo.), *cert. denied*, 105 S. Ct. 3489 (1985); see also *Sbatkin v. McDonnell Douglas Corp.*, 727 F.2d 202 (2d Cir. 1984) (expert opinion excluded when based on unrealistic assumptions).

45. 752 F.2d 891 (3d Cir.), *cert. denied*, 106 S. Ct. 180 (1985).

46. See also *In re Japanese Elec. Prods. Antitrust Litig.*, 723 F.2d 238 (3d Cir. 1983),

tion, a state supreme court announced a rule of judicial notice that physicians customarily rely on records prepared by other doctors in forming opinions about a patient's medical condition.<sup>47</sup> A dissenting justice expressed concern about the generalized extension of judicial notice and spoke of the need for trial courts to make particularized factual determinations:

I do not doubt that medical doctors often rely upon medical records prepared by other persons in forming their own opinions or drawing some kinds of inferences. I am unwilling to stretch that general observation into a judicially noticed fact that would satisfy rule 703 whenever a medical doctor wishes to give opinion testimony based in part on another doctor's medical records, regardless of the type of record, type of medical specialty, and type of opinion or inference to be drawn. The admissibility of opinion testimony based on hearsay should depend on the circumstances of each specific case, not on judicial notice of what doctors routinely rely upon in general.<sup>48</sup>

Judge Weinstein apparently agrees with this justice's emphasis upon factual determinations by trial judges. In his *Agent Orange* opinion, Judge Weinstein observed:

[C]areful scrutiny of proposed evidence is especially appropriate in the toxic tort area. The uncertainty of the evidence in such cases, dependent as it is upon speculative scientific hypotheses and epidemiological studies, creates a special need for robust screening of experts and gatekeeping under Rules 403 and 703 by the court.<sup>49</sup>

*Is the expert's testimony, in whole or in part, unduly prejudicial or misleading? Is the testimony in proper form?* Once other tests are met, the court still must exclude relevant evidence if its probative value is substantially outweighed by the danger of unfair prejudice, confusion, or misleading the jury, or if admission would cause unnecessary delays.<sup>50</sup> It is important to note that expert opinion evidence complying with Rule 703 can still pose confusion and prejudice problems under Rule 403.<sup>51</sup> Moreover, the expert's

---

*cert. granted*, 105 S. Ct. 1863 (1985). The petition for Supreme Court review in this case raised the question whether a federal trial judge is powerless to exclude expert testimony that is "based upon false or unsupported factual assumptions" simply because other experts in the field may rely on similar types of information. 54 U.S.L.W. 3045 (U.S., Aug. 6, 1985) (No. 83-2004). Certiorari was granted on other questions. 105 S. Ct. 1863 (1985).

47. *State v. Henze*, 356 N.W.2d 538 (Iowa 1984). For a discussion of *Henze*, see *supra* note 5.

48. *Id.* at 541 (Wolle, J., dissenting).

49. 611 F. Supp. at 1260. At another point, the court noted that the assumptions that form the basis for the expert's opinion should be subjected to "rigorous examination" in the mass toxic tort context. *Id.* at 1244. Judge Weinstein added, "[T]he court may not abdicate its independent responsibilities to decide if the bases meet minimum standards of reliability as a condition of admissibility." *Id.* at 1245; see also *id.* at 1239.

50. FED. R. EVID. 403.

51. See 85 FED. R. EVID. NEWS 103 (1985) (citing *United States v. Rouco*, 765 F.2d 983

testimony must comply with additional norms, including the following: an expert usually is not allowed to testify about conclusions of law or legal criteria necessary for the establishment of liability,<sup>52</sup> causation questions put to experts must be properly phrased,<sup>53</sup> and evidence of causation must be sufficient to satisfy legal standards.<sup>54</sup>

*Appropriate limits should be placed on the use of underlying data at trial.* Underlying data may be identified as a basis for an expert's opinion, but it should not automatically become affirmative evidence on behalf of the proponent of the witness. Of course, when the background information meets the requirements of other rules, it may be independently admissible.<sup>55</sup>

#### IV. CLOSING THE CIRCLE: CROSS-EXAMINATION WHEN THE BASIS FOR EXPERT OPINION IS LACKING

This Essay has concentrated on several of the primary problems in expert witness examination, including the court's role in testing whether underlying data was reasonably relied on by an expert, as well as the need to confine that data to its proper role. Completeness requires a brief look at a related concern. What if the expert presents an opinion and then cannot recall the supporting data from which that opinion was derived? What if the expert recalls the data, but refuses to reveal it?

Legal policy allows an opposing party to force full disclosure

---

(11th Cir. 1985)); see also *United States v. Daly*, 756 F.2d 1076 (5th Cir. 1985); *Barrel of Fun, Inc. v. State Farm Fire & Casualty Co.*, 739 F.2d 1028, 1033 (5th Cir. 1984); *In re Agent Orange Prod. Liab. Litig.*, 611 F. Supp. 1223, 1255 (E.D.N.Y. 1985).

52. See, e.g., *Miller v. Bonar*, 337 N.W.2d 523, 529 (Iowa 1983) (testimony to a legal conclusion on domestic law not allowed; upon redirect examination, state trooper testified that driver was in violation of state code). Professor Rossi notes that inroads have been made in this rule in certain areas of litigation, citing securities and tax matters, among others. Rossi, *supra* note 25, at 24.

53. See, e.g., *State v. Burke*, 368 N.W.2d 182, 186 (Iowa 1985) ("[W]hen expert testimony indicating a possibility of causation of a particular condition by a particular circumstance is coupled with nonexpert testimony to the effect that the condition did not exist before the occurrence of the circumstance that allegedly caused it, then a jury question as to causation is generated."). See generally R. CARLSON, *supra* note 20, § 4:26, at 230-31. (questioning experts on medical causation).

54. See, e.g., *In re Agent Orange Prod. Liab. Litig.*, 611 F. Supp. 1223, 1261 (E.D.N.Y. 1985); see also Note, *Increased Risk of Harm: A New Standard for Sufficiency of Evidence of Causation in Medical Malpractice Cases*, 65 B.U.L. Rev. 275 (1985) (in medical malpractice suits it is difficult to distinguish between the effects of the plaintiff's disease and the effects of the doctor's negligence).

55. For an example of a doctor's testimony predicated upon patient's statements, see *O'Gee v. Dobbs Houses, Inc.*, 570 F.2d 1084 (2d Cir. 1978). See also FED. R. EVID. 803(4).

of an expert's underlying facts on cross-examination. Thus, when a direct examiner chooses, as is his option, to produce an expert's opinion without a full explanation of all of the tests and findings that went into forming the expert's conclusions,<sup>56</sup> the cross-examiner can force the expert to reveal the underlying data.<sup>57</sup> What if the examiner is denied cross-examination rights because of an unwilling or forgetful expert? Will the court impose sanctions?

Although at first blush this hypothetical may seem remote and far-fetched, a 1985 opinion by the United States Supreme Court reviewed such a situation. In *Delaware v. Fensterer*,<sup>58</sup> an expert for the prosecution could not recall why he reached a particular conclusion.<sup>59</sup> Although the Delaware Supreme Court felt that the defense counsel's cross-examination of the agent was an exercise in futility, the United States Supreme Court upheld the prosecution. The Supreme Court held that no confrontation violation occurred because it found no court-imposed restriction on the scope of cross-examination. The Court noted: "In this case, defense counsel's cross-examination of Agent Robillard demonstrated to the jury that Robillard could not even recall the theory on which his opinion was based."<sup>60</sup> Apparently, the Court concluded that the opportunity to discredit expert witness testimony is sufficient to satisfy the requirements of the confrontation clause.

The *Fensterer* decision, however, does not foreclose a different result in cases in which a witness' lapse of memory totally frustrates any opportunity for cross-examination.<sup>61</sup> Neither does the opinion dictate a submissive approach by the court when a witness who is well acquainted with the basis for his opinion stubbornly and contumaciously refuses to disclose it.<sup>62</sup> Finally, statutory for-

---

56. FED. R. EVID. 705. A deviation from the text pattern may occur at the summary judgment stage. In making the decision whether a material issue of fact exists, the court may need to know the basis for the expert's opinion. Further, the civil procedure rule controlling summary judgments requires specific facts. See FED. R. CIV. P. 56; *Evers v. General Motors Corp.*, 770 F.2d 984 (11th Cir. 1985). But see *Bulthuis v. Rexall Corp.*, No.84-6090 (9th Cir. 1985) (holding that an expert opinion which is not supported by a description of underlying facts may be admissible and may defeat summary judgment if the affiant appears competent to give an expert opinion on the subject).

57. FED. R. EVID. 705. Sometimes this data may consist of a report or other document. When the expert's reliance on the document is shown, and "the witness is properly cross-examined, the reference to the report is for impeachment purposes, not substantive evidence." Carlson, *supra* note 20, at 246 n.50.

58. 106 S. Ct. 292 (1985) (per curiam).

59. *Id.* at 293.

60. *Id.* at 295.

61. See *California v. Green*, 399 U.S. 149, 169 n.18 (1970).

62. See C. McCORMICK *supra* note 25, at 48-49 (cross-examiner may have the direct



mulae that inappropriately emasculate the right of cross-examination will not be tolerated.<sup>63</sup>

## V. CONCLUSION

One of the great contributions of the Federal Rules of Evidence was the modernization of expert witness practice. Rule 703 broadened the bases for expert opinions by aligning courtroom procedures with the day-to-day approach of technicians, doctors, and other specialists. Under the Federal Rules, experts now can supply forensic opinions based on data made known to the expert outside of court, even though some of that data might not be admissible in evidence. Rule 703 thus sweeps away archaic restrictions and allows a testifying expert to state opinions based on non-record information.<sup>64</sup>

Nevertheless, just as the foregoing proposition has become firmly established in the cases, new problems have arisen with which courts are beginning to cope. Some recent decisions have announced special rules for testing the reliability of information upon which expert opinions are based. Another issue that courts increasingly confront is the proper role of the expert's underlying data. This Essay has argued that the wholesale introduction of this data into evidence is totally inappropriate. Furthermore, in criminal cases the exclusion of this data is mandated by the confrontation clause of the United States Constitution. Still, few commentators have addressed this vital constitutional issue.<sup>65</sup> As one court characterized the issue, a predominant question today is not what data an expert may rely on, but what data the expert may put into evidence.<sup>66</sup> Modern expert witness rules do not grant a license for testifying technicians freely to tell juries what other nontestifying experts concluded about the case. Rule 703 must never become the

---

examination testimony stricken from the record).

63. See *Davis v. Alaska*, 415 U.S. 308 (1974); see also M. LADD & R. CARLSON, *CASES AND MATERIALS ON EVIDENCE* 129 (1972) (appellate court reversal when "trial judge improperly cuts off cross-examination"). In *United States v. Jones*, 766 F.2d 412 (9th Cir. 1985), the court ruled that the confrontation clause protects the right of a defendant to cross-examine witnesses for bias and that a judge's refusal to permit cross-examination may require reversal. This decision reviews the law regarding rebuffed homosexual advances, an area of cross-examination allowed in a number of courts.

64. See, e.g., *Mannino v. International Mfg. Co.*, 650 F.2d 846 (6th Cir. 1981).

65. Fortunately, courts have addressed this constitutional issue. See *State v. Towne*, 142 Vt. 241, 453 A.2d 1133 (1982) (that forensic psychiatrists reinforced his opinion through consultation with another specialist did not authorize psychiatrist to relay conclusions of a witness never brought to court).

66. See *id.* at 246, 453 A.2d at 1135.

back door exception to the hearsay rule because the sixth amendment entitles a defendant to confront his accusers.

