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Are Forensic Experts an Endangered Species?

REFERENCE: Slap, A. J. and Fessenden, M., "Are Forensic Experts an Endangered Species?" *Journal of Forensic Sciences*, JFSCA, Vol. 36, No. 3, May 1991, pp. 714-721.

ABSTRACT: There are those in the legal profession, including some judges, who believe that the only good expert is a dead one. Such people believe that only established truth through science should be permitted into the courtroom; anything less is rank speculation and should be excluded on summary judgment. In such a world, there would be scant need for causation experts or juries, despite the guarantee of the Seventh Amendment.

KEYWORDS: jurisprudence, witnesses, testimony, expert witnesses

While there is a rationale for the preliminary exclusion of expert testimony in limited circumstances, one must wonder if the tendency to exclude expert testimony is a by-product of hostility toward plaintiffs and the tort system. This tendency has resulted in unjustifiable challenges to the value and credibility of forensic experts' opinions on causation. According to some jurists, you can find a Ph.D. to opine on any subject, no matter how frivolous.³ Forensic experts have been called "hired guns" and worse.⁴ This disturbing trend results in otherwise viable and respected opinions being excluded and kept from the jury, even though our system of justice dictates that juries are the ultimate arbiters of credibility.

This paper was adapted from a presentation given by Mr. Slap to the National Forensic Center's Sixth Annual Conference, San Antonio, TX, 9-10 Dec. 1989. Received for publication 8 March 1990; revised manuscript received 21 June 1990; accepted for publication 11 July 1990.

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³Huber, "Safety and the Second Best: The Hazards of Public Risk Management in the Courts," *Columbia Law Review*, Vol. 85, 1985, pp. 33 and 277. ("The scientific community is large and heterogeneous, and a Ph.D. can be found to swear to almost any 'expert' proposition, no matter how false or foolish.") Weinstein, "Improving Expert Testimony," *University of Richmond Law Review*, Vol. 20, 1986, pp. 473 and 482. ("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. . . . Jury and judges can be, and sometimes are, misled by the expert-for-hire.") See, for example, Holden, "Science in Court," *Science*, Vol. 243, 31 March 1989, p. 1658. ("The lure of high fees serving as an expert witness in some cases has, however, created a cadre of professional witnesses whose scientific views are often far outside the mainstream.")

⁴See Holden, *supra* (Footnote 3 in this paper), p. 1658. (Professor E. Donald Elliott of Yale Law School is quoted as saying that the present system "extends equal dignity to the opinions of charlatans and Nobel prize winners.") Olson, "The Case Against Expert Witnesses," *Fortune*, 25 Sept. 1989, p. 133. ("Cynical lawyers call their experts saxophonists because they can be played with such virtuosity.") *Ibid.*, p. 136. ("The more you appear in Court, the more chances you get to appear again, picking up what you might call frequent-testifier bonus points.") See also Weinstein, *supra* (Footnote 3), p. 482.

The criticism of forensic experts seems to center upon the notion that their opinions change to suit the client or that they use “junk science” to support their opinions.⁵ Our court system, however, unlike the scientific search for certainty, seeks to achieve such goals as compensation and justice.⁶ The Seventh Amendment to the U.S. Constitution⁷ guarantees the right of trial by jury, which ensures that these goals will be kept in balance by the jury. Inappropriately excluding experts at a preliminary stage has the result of depriving plaintiffs and defendants of their right to a jury trial.

Under the guise of applying the rules of evidence, judges are becoming the gatekeepers who determine what science will be allowed in the courtroom, going well beyond their role as assessors of expert qualifications and probative value. As a result, the goal of certainty becomes more important than a jury’s community-specific application of justice. Justice Holmes stated in “Law in Science and Science in Law”⁸:

I confess that in my experience I have not found juries especially inspired for the discovery of truth. . . . Indeed, one reason why I believe in our practice of leaving questions of negligence to them is what is precisely one of their gravest defects from the point of view of their theoretical function: that they will introduce into their verdict a certain amount—a very large amount, so far as I have observed—of popular prejudice, and thus keep the administration of the law in accord with the wishes and feelings of the community.

Trial by summary judgment eliminates the time-honored safeguard of the jury.

Consider the following. If there was no scientific basis whatsoever for an expert’s opinion, one would agree that a judge should keep the expert from testifying to prevent the expert from confusing or misleading the jury.⁹ However, consider this example: What if the majority of an expert community generally agree that Substance X does not cause cancer, but a small dissenting group exists? Should an expert from the dissenting group be permitted to testify that Substance X did cause cancer in Plaintiff Y?¹⁰ What if the majority of experts on Substance X respect the dissenters as part of a legitimate academic debate? Should a member of the dissenting group then be permitted to make his case to a jury?

Now, let us take the case where Substance X is the subject of a raging scientific debate.¹¹ Should a court make the determination that one side of the debate has won and that the

⁵See Olson, *supra* (Footnote 4), p. 138.

⁶See, generally, Nesson, “Agent Orange Meets the Blue Bus: Factfinding at the Frontier of Knowledge,” *Boston University Law Review*, Vol. 66, 1986, p. 521; and Kanner and Lind, “Law, Science, Causation, and the Right to Trial by Jury in Toxic Tort Cases,” *University of Alabama Law Review*, in press.

⁷“In Suits at common law, where the value in controversy shall exceed twenty dollars, the right to trial by jury shall be preserved, and no fact tried by a jury shall be otherwise reexamined in any Court of the United States, than according to the rules of the common law.”

⁸Holmes, “Law in Science and Science in Law,” *Harvard Law Review*, Vol. 12, 1899, p. 443.

⁹Federal Rule of Evidence 703 states: “The facts or data in the particular case upon which an expert bases an opinion or inference may be those perceived by or made known to him at or before the hearing. If [they are] of a type reasonably relied upon by experts in the particular field in forming opinions or inferences upon the subject, the facts or data need not be admissible in evidence.”

¹⁰For example, see *Johnston v. United States*, 597 F. Supp. 374, 410–411 (D. Kan. 1984). (“The Court finds that the next reason why the opinions of Dr. Morgan and Dr. Gofman must be rejected is because neither man represents the view of the vast majority of competent, respected scientists in this field. Rather, Dr. Morgan and Dr. Gofman represent the views of an extreme minority of scientists. This is not a situation where the scientific community is equally divided between two respective schools of thought.”) See also *Richardson v. Richardson-Merrell, Inc.*, 857 F. 2d 823 (D.C. Cir. 1988), *cert. denied*, 110 S. Ct. 218 (1989); and *Ealy v. Richardson-Merrill, Inc.*, 897 F. 2d 1159 (D.C. Cir. 1990).

¹¹For example, see *In re Paoli Railroad Yard*, 706 F. Supp. 358 (E.D. Pa. 1988) [conflicting expert testimony with regard to the effect of exposure to polychlorinated biphenyls (PCBs)]. See, generally, Nesson, *supra* (Footnote 6).

experts espousing the losing side can no longer bring their point of view to court?¹² Finally, let us take the situation in which science has not really dealt with a particular issue (for example, whether Substance X causes cancer). In this scenario, some courts seem to be willing to defer, at least to medical experts, when the *methods* employed by the expert in determining causation are generally accepted.¹³

In the process of grappling with these issues, courts have left a trail littered with the corpses of experts, as well as the burned-out hulks of scientific, legal, and constitutional principles.¹⁴ In cases such as *In re Agent Orange* and *In re Paoli Railroad Yard* [regarding exposure to polychlorinated biphenyls (PCBs)], the courts espouse a model of science that simply does not exist. These courts and other commentators assume that science deals with absolute truths. While the common law standard for admitting expert testimony is a "reasonable degree of certainty," the excluding courts have merely paid lip service to this standard in favor of a "best science" standard. The unstated premise here is that science that is only certain to a "reasonable degree" is "junk" and cannot be submitted to a jury. These courts look for much higher confidence levels, especially in cases where epidemiological studies contradict the proffered expert's (plaintiff's expert's) testimony. If epidemiological studies are offered to disprove causation, there is an increasing likelihood that expert opinions criticizing or questioning such studies will be excluded.¹⁵

In science or medicine, however, the requisite accuracy or reliability of a technique or opinion often depends upon what is at stake. For example, a bridge fastener that holds in roughly 60% of its applications would not be acceptable if the consequence of

¹²See, for example, *In re Agent Orange*, 611 Supp. 1223 (D.C.N.Y. 1985). [The court excluded expert testimony connecting exposure to Agent Orange (dioxin) with the plaintiffs' various health problems.]

¹³See *Ferebee v. Chevron Chemical Company*, 736 F. 2d 1529, 1535 (D.C. Cir. 1984). [The *Ferebee* court admitted the testimony of the plaintiff's expert claiming causation, through paraquat exposure, of pulmonary fibrosis with subsequent death. The court noted that the experts on both sides relied on similar diagnostic methodologies and differed solely in their conclusions. ("The case was thus a classic battle of the experts, a battle in which the jury must decide the victor.")] *Peteet v. Dow Chemical Company*, 868 F. 2d 1428, 1433 (5th Cir. 1989). [The court affirmed a jury verdict for the plaintiff holding that exposure to a herbicide had caused cancer and subsequent death. The court noted that "[w]hat is necessary is that the expert arrived at his causation opinion by relying upon *methods* that other experts in his field would reasonably rely on in forming their own, possibly different, opinions about what caused the patient's disease." Quoting *Osborne v. Anchor Laboratories, Inc.*, 825 F. 2d 908, 915 (5th Cir. 1987).] But also compare these with Brock, *infra* (Footnote 14) (holding that the lack of a conclusive epidemiological basis in the expert testimony was fatal to the plaintiff's case).

See also *Merrell Dow Pharmaceuticals, Inc. v. Oxendine*, U.S. Sup. Ct. No. 89-951, petition for certiorari filed 15 Dec. 1989. [Merrell Dow Pharmaceuticals, Inc., manufacturer of Bendectin, has sought U.S. Supreme Court review of the reinstatement of a \$750,000.00 plaintiff's verdict by the District of Columbia Court of Appeals. In reinstating the verdict, the appeals court stated that the evidence on both sides was evenly weighed and that the case was a classic battle of the experts. *Oxendine I*, 506 A. 2d 1100 (D.C. 1986).]

¹⁴For example, *Johnston*, 597 F. Supp., p. 410. ("In the Court's view, Dr. Morgan is perhaps an esteemed scientist of yesterday trying to hold on to whatever reputation remains. He has baffled his old fiends and those far better trained. He is, in the Court's view, a pathetic figure who can better serve the field by simply going home.")

Some courts have even placed policy considerations, such as faster introduction of prescription drugs into the marketplace, on the scale opposite the Seventh Amendment's right of jury trial as a basis for exclusion of expert testimony. For example, *Brock v. Merrell Dow Pharmaceutical*, 874 F. 2d 166 (5th Cir. 1989), *cert. denied*, 110 S. Ct. 1511 (1990). ("Moreover, in mass torts the same issue is often presented over and over to juries in different cases, and the juries often split both ways on the issues. The effect of this is to create a state of uncertainty among manufacturers contemplating the research and development of new and potentially life-saving drugs.")

¹⁵See, for example, *In re Agent Orange Product Liability Litigation*, 611 F. Supp. 1223 (D.C. NY. 1985); *Richardson*, 857 F. 2d 823 (D.C. Cir. 1988); *Paoli*, 706 F. Supp. 358 (E.D. Pa. 1988); and *Johnston*, 597 F. Supp. 374 (D. Kan. 1984).

failure would be collapse of the structure. On the other hand, a treatment for acquired immunodeficiency syndrome (AIDS) that has proven even moderately successful in patients would be accepted by the medical community if the consequence of not trying the drug might be the patient's accelerated or certain death.¹⁶

Even in the law, what is at stake colors the analysis of the admissibility of scientific opinion. In a criminal case, where a defendant's life or liberty is at issue, should a jury be permitted to hear the prosecution's opinion testimony based upon an identification technique that is only reasonably accurate?¹⁷ Obviously, answers to such questions are not easily ascertainable. What is clear, however, is that even the most equitable jurists, in their quest for certainty, cannot usurp the function of the jury by excluding testimony that does not qualify as the "best" or most accepted prevailing theory of the time.

Courts are not well trained to make preliminary decisions as to the stage, quality, or "winner" of a scientific debate.¹⁸ Yet, in the face of qualified expert opinions that questioned the conclusiveness of opposing epidemiological studies in the *Agent Orange*, *Bendectin*, and *Paoli PCB* cases, the courts declared the scientific debate over.¹⁹

History is replete with examples of scientific methods or opinions once excluded by the courts and later found to be accurate.²⁰ Likewise, there have been examples of scientific methods or opinions admitted which were later found *not* to be accurate.²¹ In

¹⁶For instance, the U.S. Food and Drug Administration has approved the drug azidothymidine (AZT) for use in seropositive human immunodeficiency virus (HIV) patients based upon a study which showed a 30% reduction in mortality in the azidothymidine-treated group in comparison with the placebo group. Fischl, M. D., et al., "The Efficacy of Azidothymidine (AZT) in the Treatment of Patients with AIDS and AIDS-Related Complex," *New England Journal of Medicine*, Vol. 317, 23 July 1987, p. 185.

¹⁷See, generally, *United States v. Williams*, 583 F. 2d 1194 (2nd Cir. 1978), *cert. denied*, 439 U.S. 1117 (1979). (The court admitted voice spectrograph comparisons as proof that the defendant had been the threatening caller. *United States v. Ferri*, 778 F. 2d 985 (3d Cir. 1985). (The court admitted footprint comparisons to establish the identity of the defendant.) Consider the controversies surrounding the admissibility of testimony based upon gunshot residue tests, neutron activation analysis, bite mark comparisons, trace metal detection, and numerous other techniques. See "Symposium on Science and the Rules of Evidence," 99 F.R.D. 187 (1983).

¹⁸Bishop, "Leaps of Science Create Quandries on Evidence," *New York Times*, 6 April 1990.

¹⁹See *In re Agent Orange Product Liability Litigation*, 611 F. Supp. 1223 (D.C. NY 1985); *Richardson*, 857 F. 2d 823 (D.C. Cir. 1988); *Paoli*, 706 F. Supp. 358 (E.D. Pa. 1988); and *Johnston*, 593 F. Supp. 374 (D. Kan. 1984). But also compare *Friedman v. F.E. Myers Co.*, 706 F. Supp 376 (E.D. Pa. 1989).

²⁰Numerous techniques and theories that courts initially were hesitant to accept are now routinely admitted. See, generally, "Rules of Admissibility of Scientific Evidence," 115 F.R.D. 79 (1983); and Black, "A Unified Theory of Scientific Evidence," *Fordham Law Review*, Vol. 56, 1988, p. 302.

²¹For example, consider the controversy surrounding the reliability of spectrographs (voiceprint) evidence. Although they were once embraced by numerous courts across the country after a Michigan State University study published in 1972, courts later began to reject their admissibility based upon a 1979 report published by the National Academy of Sciences through the National Research Council (NRC), "On the Theory and Practice of Voice Identification," No. 10, National Research Council, Washington, DC, 1979. (The NRC report placed voiceprint identification into question until further research and testing could occur.) See, for example, *State v. Gortarez*, 141 Ariz. 254, 686 P. 2d 1224 (1984). (The Arizona Supreme Court refused to admit spectrograph evidence after reviewing numerous reports on its reliability, including the 1979 NRC report.)

For interesting discussions concerning the advances in deoxyribonucleic acid (DNA) profiling, as well as recent suspicion surrounding the technology, see Thornton, "DNA Profiling, New Tool Links Evidence to Suspects with High Certainty," *C & EN*, 20 Nov. 1989, p. 18; Lewis, "DNA Fingerprinting Method Demands Long Overdue," *Genetic Engineering News*, Nov./Dec. 1989; and Berg, "DNA Reliability Questioned by California Lab Study," *The Legal Intelligencer*, 1 March 1990.

The same suspicion regarding admissibility occurred with one type of gunpowder residue testing (named the "paraffin glove test"). Once accepted, the test subsequently was soundly rejected by the scientific community. For a concise discussion of gunpowder residue and other types of testing, see "Rules of Admissibility of Scientific Evidence," *supra* (Footnote 20).

the medical and scientific community, as well, there have been examples of theories or methods, thought to be valid, which were later discredited, and vice versa.²² Drugs, food additives, and even vitamins once generally recognized as safe, have later, after further study, been taken off the market.²³ If a drug such as diethylstilbestrol (DES) had been tested in the courts during its "approval phase," expert opinion linking it to some malady would have been wrongfully excluded by courts following decisions of *Frye*,²⁴ *Agent Orange*, *Paoli*, and *Richardson*.²⁵

Consider the opinions in *Johnston* and *Paoli*. While they present difficulties for attorneys litigating in the area of toxic torts, the opinions are enough to give forensic experts nightmares.

In the *Johnston* case, the plaintiffs claimed a variety of cancers due to exposure to radium-226 at a government aircraft instrument plant.²⁶ The case was tried in the court without a jury. While the court could have simply weighed the evidence and found the defendant's experts more credible, Judge Patrick Kelly went out of his way to decimate the plaintiffs' experts, Drs. John Gofman and Karl Morgan.²⁷ Both of these men are esteemed scientists who represent a minority of dissenting view in the radiation field.²⁸ Given the court's expressed desire to discredit these two witnesses, how many forensic experts would be willing to risk the remainder of their careers to testify under those circumstances? Cases like *Johnston* clearly have already had a chilling effect throughout the forensic expert community.

In *Agent Orange*, after a \$180 million class action settlement, Judge Jack Weinstein dismissed all opt-out class members' claims on summary judgment based on Federal Rule of Evidence 703 (FRE 703). The court found that the plaintiffs' experts were qualified but that their methods were not those reasonably relied upon by experts in the field.²⁹

²²For example, the drugs encainide and flecainide originally were heralded as outstanding for use as antiarrhythmic therapy for ventricular arrhythmia after myocardial infarction. Although the medical community initially embraced encainide and flecainide therapy, later studies showed a significantly higher mortality rate among patients treated with such drugs in comparison with those who received placebos. "Preliminary Report: Effect of Encainide and Flecainide on Mortality in a Randomized Trial of Arrhythmia Suppression after Myocardial Infarction," *New England Journal of Medicine*, Vol. 321, 10 Aug. 1989, p. 406. Likewise, the Bjork-Shiley heart valve has recently been recalled by the manufacturer. Although the manufacturer's recall does not cite a defect as the reason for the recall, recent investigation has revealed a high incidence of valve breakage and subsequent death of the user-patient.

For instance, where a theory or treatment was originally discredited and later accepted, one only need recall the initial suspicions and doubts surrounding organ transplants and prosthesis use. These originally questioned procedures are now commonly accepted.

²³We are all too familiar with the tragedies resulting from ingestion of thalidomide and diethylstilbestrol (DES). These approved drugs were later found to cause abnormalities in the children of mothers who had taken the drugs during pregnancy. After many years of use, red food coloring was found to be harmful and was taken off the market. Recent health concerns surrounding the dietary supplement L-tryptophan resulted in a 5 Dec. 1989 recall of the product by the U.S. Food and Drug Administration.

²⁴In *Frye v. United States*, 293 F. 1013 (D.C. Cir. 1923), the District of Columbia Circuit espoused the oft-quoted "general acceptance" test: "[J]ust when a scientific principle or discovery crosses the line between stages is difficult to define, somewhere in this twilight zone the evidential force of the principle must be recognized, and while 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" (p. 1014).

²⁵See *In re Agent Orange Product Liability Litigation*, 611 F. Supp. 1223 (D.C. NY 1985); *Richardson*, 857 F.2d 823; *Paoli*, 706 F. Supp. 358; and *Johnston*, 579 F. Supp. 374.

²⁶*Johnston v. United States*, 597 F. Supp. 374 (D. Kan. 1984).

²⁷*Ibid.*, p. 410. See also, *supra*, Footnote 14.

²⁸The extensive credentials of both experts are outlined, yet belittled, in the *Johnston*, case at pages 410-415.

²⁹*In re Agent Orange Product Liability Litigation*, 611 F. Supp. 1223, 1244-1254 (D.C.N.Y. 1985). (The *Agent Orange* court offered extensive analysis concerning what types of data and methods are reasonably relied upon by experts in the field.)

The court further found that the plaintiffs had not successfully rebutted the many epidemiological studies showing that *Agent Orange* did not cause the type of health problems from which the plaintiffs suffered. The court made this determination notwithstanding the fact that the plaintiffs' experts testified that the epidemiological studies were flawed and not authoritative.³⁰

In the *Paoli PCB* case, the court granted summary judgment to the defendants, rejecting all the plaintiffs' experts (five with Ph.D degrees and three with M.D. degrees), whose testimony supported the claim that the plaintiffs' exposure to PCBs caused a variety of ailments.³¹ Here, Judge Robert Kelly wrote³²:

Summary judgment is not precluded merely because a party has produced an expert to support its position. An expert who brings little more than his credentials and a subjective opinion will not forestall entry of summary judgment in favor of defendant.

The *Paoli PCB* case, which is presently on appeal, represents a nadir in trial by affidavit. The trial court decided scientific questions as to the ability of PCBs to cause the plaintiffs' ailments based on the defendants' "mega-affidavit" signed by seven medical doctors (M.D.s) and five Ph.Ds.³³ This bean-counting approach to expert testimony in toxic tort trials is simply antithetical to the plaintiffs' right to trial by jury.³⁴

In *Sterling v. Velsicol*, the trial court, ruling without a jury, found that the plaintiffs' claims of injury from toxic waste dumping were valid and awarded the plaintiffs a \$22 million dollar verdict.³⁵ The trial court accepted the testimony of Dr. Alan Levin of San Francisco, California, dealing with immune system damage. On appeal, however, the Sixth Circuit reversed that part of the district court's ruling.³⁶

In an extremely troubling precedent, the Sixth Circuit declared that (1) Dr. Levin was a self-styled "clinical ecologist"; (2) two academic groups had discredited clinical ecology; and, (3) therefore, Dr. Levin's testimony should be stricken.³⁷ The court noted, however, that the American Medical Association and the American Board of Allergy and Immunology had *not* discredited clinical ecology. Nevertheless, the Sixth Circuit believed it had enough evidence to convict this field of medicine judicially and all of the "fruit of the poisonous tree."³⁸ The appeals court failed to scrutinize the tests or methods of diagnosis used by Dr. Levin, as was required under FRE 703.³⁹

³⁰*Ibid.*

³¹*In re Paoli Railroad Yard*, 706 F. Supp. 358 (E.D. Pa. 1988) [Conflicting expert testimony with regard to the effect of exposure to polychlorinated biphenyls (PCBs)].

³²*Ibid.*, p. 364.

³³*Ibid.*, p. 366.

³⁴It is significant to note that immediately after the *Paoli* case, the court in *Friedman v. F.E. Myers Co.*, 706 F. Supp. 376 (E.D. Pa. 1989), ruled in direct conflict with the *Paoli* holding with regard to the sufficiency of the plaintiffs' expert opinions. Faced with defendants' motions that were essentially identical to those submitted in *Paoli*, Judge Newcomer differed with Judge Kelly in *Paoli* and held that summary judgment or exclusion of expert testimony was inappropriate at such a preliminary stage. The *Friedman* court noted that it was unable to conclude that the testimony of the plaintiffs' expert witness was not based upon materials reasonably relied upon by experts in the field (p. 381). The court emphasized that "it will be for the jury to hear plaintiffs' expert testimony on causation and give it whatever weight is appropriate" (p. 381). (The law firm of Mesirov, Gelman, Jaffe, Cramer, and Jamieson represented the plaintiffs in *Friedman*.)

³⁵*Sterling v. Velsicol*, 647 F. Supp. 303 (W.D. Penn. 1987).

³⁶*Sterling*, at 855 F.2d 1188, 1208–1209 (6th Cir. 1988).

³⁷*Ibid.*, p. 1208.

³⁸*Ibid.*

³⁹See Footnote 9, *supra*, for Federal Rule of Evidence 703. Numerous cases have interpreted this rule to mean that the *information* or *methods* upon which an expert's opinion is based must be of a kind reasonably relied upon in a scientific community. See *Ferebee v. Chevron Chemical Co.*, 736 F. 2d 1529 (D.C. Cir. 1984), *cert. denied*, 469 U.S. 1062, 105 S. Ct. 545, 83 L. Ed. 2d 439 (1984); *Wells v. Ortho Pharmaceutical Corp.*, 788 F. 2d 741 (11th Cir. 1986); and *Villari v. Terminix International, Inc.*, 663 F. Supp. 727 (E.D. Pa. 1987).

In an oft-cited case, *Viterbo v. Dow*, the plaintiff claimed injury from a Dow herbicide, Tordon 10K.⁴⁰ The plaintiff used the treating physician as an expert on causation. The trial court excluded the testimony of the plaintiff's treating physician on summary judgment, holding that "Dr. Johnson lacked objectivity in that he diagnosed Viterbo's condition as resulting from exposure to Tordon 10K, based only on the patient's oral history and *without benefit of medical tests* [emphasis added]."⁴¹ The court of appeals affirmed this ruling. Both the district and appeals courts, however, specifically refer to medical tests performed by Dr. Johnson on the plaintiff.⁴² In addition to this obvious contradiction, the court also failed to make a finding that the tests performed by Dr. Johnson were not of a type reasonably relied upon by experts in the field—the standard under FRE 703. Rather, both the district and appeals courts substituted their judgment as to the credibility of Dr. Johnson for that of the jury.

Interestingly, in an 1989 case, *Peteet v. Dow*, the Fifth Circuit Court of Appeals upheld a \$1.5 million jury verdict that Dow's herbicide, Tordon 101, caused the plaintiff's Hodgkin's disease.⁴³ In that case, the court found that the plaintiff's expert had met the requirements of FRE 703, in that his determination was based on methods reasonably relied upon by experts in that particular field.⁴⁴

A 25 Sept. 1989, *Fortune* magazine article, "The Case Against Expert Witnesses," commenting on the problem of "junk science" in the courts, states, "Broader reform is clearly needed . . . some sort of peer review is the ultimate answer."⁴⁵ The article quotes Professor Elliot of Yale University, New Haven, Connecticut, as advocating the use of court-appointed experts "who would explain what mainstream practitioners . . . think of the witnesses' theories."⁴⁶

We submit, however, that this is *precisely* the type of credibility issue that juries are best suited to decide. Not only are juries best suited for the task, but credibility determinations are a function that must be preserved for the jury if litigants are to be guaranteed their Seventh Amendment rights.

In a well-prepared and well-tried case, the side opposing an expert who may be out on a scientific limb will have no problem sawing off the limb and watching the expert fall. Cross-examination is an effective method of exposing weaknesses in expert theories and damaging credibility. Such weaknesses and credibility damage are rarely overlooked by juries. Historically, juries have proven capable of credibility determinations even in the most sophisticated cases. In the long run, judicial intervention in this area will have a chilling effect on plaintiffs' rights and remedies, their attorneys, and the willingness of experts to participate in the judicial process.

Epilogue

On 20 Sept. 1990, the U.S. Court of Appeals for the Third Circuit, in deciding on *In Re: Paoli Railroad Yard PCB Litigation*, reversed the district court's summary judgment in favor of the defendants.⁴⁷ The district court had precluded all of the plaintiffs' causation experts and granted summary on behalf of the defendants. Rejecting the district court's analysis, which focused almost entirely on the plaintiffs' experts and their opinions, the

⁴⁰*Viterbo v. Dow*, 826 F. 2d 420 (5th Cir. 1987).

⁴¹*Ibid.*, p. 422.

⁴²The court stated, "Next, Dr. Johnson relied on tests he conducted," *ibid.*, p. 423.

⁴³*Peteet v. Dow*, 868 F. 2d 1248 (5th Cir. 1989).

⁴⁴*Ibid.*, pp. 1432–1434.

⁴⁵Olsen, *supra* (Footnote 4), p. 138.

⁴⁶*Ibid.*

⁴⁷*In Re: Paoli Railroad Yard PCB Litigation*, No. 88-1973, slip opinion, p. 21 (3d Cir. 20 Sept. 1990).

Third Circuit held that the lower court had improperly applied Federal Rules of Civil Procedure 703, 702, and 403 to exclude the experts.⁴⁸

In reversing the summary judgment, the court thoroughly outlined the content of the experts' opinions and the defendants' objections to each.⁴⁹ Soundly criticizing the district court's application of Rule 703, the Third Circuit emphasized that it was unable to identify any foundation for admissibility determinations upon which the lower court relied.⁵⁰ The court noted that the district court had failed to follow the Rule 703 protocols established in *In Re Japanese Electronic Products*,⁵¹ which require an inquiry into what experts in the relevant discipline deem to be a reliable basis for an expert opinion and not what a court deems reliable.⁵²

The Third Circuit further underscored that the district court applied too stringent a standard with regard to expert qualifications under Rule 702. The court reversed the trial court's exclusionary rulings that a particular witness was unqualified and that the expert employing meta-analysis was relying upon an unreliable scientific technique.⁵³ The *Paoli* court held that the district court's exclusion of these experts was based upon an improper evaluation, which was contrary to the requirements under *United States v. Downing*.⁵⁴ The Court also briefly noted that, to the extent the district court excluded any expert opinions under Rule 403, it failed to conduct the careful balancing of probativeness and prejudice that is required under the rule.⁵⁵

The Third Circuit criticized virtually all of the district court's reasoning and, further, significantly predicted that the Pennsylvania Supreme Court would permit a cause of action for the recovery of medical monitoring costs.⁵⁶ Thus, the Court reasoned that the *Paoli* plaintiffs would be able to recover the costs of periodic medical examinations necessary for early detection of the onset of physical harm.

The reversal in *Paoli* is significant both for forensic experts and for claimants who rely on such experts to establish their claims. The district court was wrong in its preclusion of the plaintiffs' experts and reached well beyond the bounds of Federal Rules of Civil Procedure 702 and 703. The Third Circuit insinuated that the district court was, in essence, inappropriately "choosing between" expert opinions rather than excluding based upon evidentiary grounds.⁵⁷

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⁴⁸*Ibid.*, pp. 22–23.

⁴⁹*Ibid.*, pp. 28–46.

⁵⁰*Ibid.*, p. 66.

⁵¹723 F. 2d 238 (3rd Cir. 1983).

⁵²*Ibid.*, p. 65.

⁵³*Ibid.*, pp. 69–78.

⁵⁴753 F. 2d 1224 (3d Cir. 1985).

⁵⁵*Ibid.*, pp. 79–81.

⁵⁶*Ibid.*, pp. 63–65.

⁵⁷*Ibid.*, p. 66.