

## BOOK NOTE

### GALILEO'S REVENGE: JUNK SCIENCE IN THE COURTROOM

By Peter W. Huber.<sup>1</sup>

New York, New York: Basic Books. 1991.

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Scientists, as expert witnesses, can aid juries greatly in their deliberations by explaining technical matters in terms easily comprehensible to jurors. When, however, the expert testimony is based on mere conjecture, speculation, or poor methodology, it can mislead the jury. Such evidence is commonly referred to as junk science.<sup>2</sup> Contrary to what might be expected, junk science results not only from the work of readily identifiable charlatans, but also from the work of respectable professionals who, in advancing their hypotheses, lose perspective and falsify data or disregard evidence challenging their hypotheses. In *Galileo's Revenge: Junk Science in the Courtroom* ("Galileo's Revenge"),<sup>3</sup> Peter Huber describes the problems that have resulted from the virtually unrestricted admission of junk science into the courtroom and proposes ways to curb it.

Huber claims that "unscrupulous" lawyers have long made healthy livings by using expert witnesses to fabricate causes of action. For example, he describes a recent case in which expert testimony was used to argue that a plaintiff's subjection to a CAT scan harmed her psychic abilities (p. 4). When plaintiffs' attorneys offer such scientifically unsupportable evidence against deep-pocket defendants, juries often find in the plaintiffs' favor, regardless of the evidence's integrity. Indeed, in the case of the CAT scan, the jury awarded the plaintiff roughly one million dollars, although the decision was subsequently overruled. Perhaps jury awards based on junk science are attributable to the human

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1. Senior Fellow, Manhattan Institute for Policy Research.

2. See, e.g., W. John Moore, *Knocking the System*, NAT'L L.J., Nov. 23, 1991, at 2844 (discussing a speech that Vice President Quayle delivered to the litigation section of the American Bar Association).

3. PETER W. HUBER, *GALILEO'S REVENGE: JUNK SCIENCE IN THE COURTROOM* (1991).

need for explanation. Huber analogizes the persecution of "witches" in the sixteenth and seventeenth centuries to the modern day scapegoating of corporations and doctors on the basis of tenuous evidence.

In *Galileo's Revenge*, Huber attributes the increase of junk science in the courtroom to two causes: the shift from negligence-based rules of tort liability<sup>4</sup> to those of strict liability that impose liability on the cheapest cost avoider,<sup>5</sup> and the more liberal standards of the Federal Rules of Evidence ("FRE") for admitting expert testimony.<sup>6</sup> Both reasons, however, are questionable.

First, Huber provides little explanation or documentation for his claim that the shift to strict liability "was a prescription for bringing innumerable new scientific controversies into court" (p. 13). He criticizes the strict liability approach, claiming that it disregards physical causation in its "endless search" for the cheapest cost avoider (pp. 20-23). Huber suggests that the search for the cheapest cost avoider often overlooks the party who is the true cause of an accident and places in that party's stead a more solvent party (p. 150). This claim has weak support. Even when applying strict liability, courts do consider whether the defendant's activity is causally linked to the plaintiff's injury. Indeed, Calabresi, in describing strict liability, stated that the "[p]roximate cause cannot be used to impose liability on a non-causally linked, non-*but for* cause that would be a highly effective spreader instead of on a less efficient spreader that is a causally linked, *but for* cause."<sup>7</sup> Moreover, in the cases that Huber himself examines, no damages were awarded when the plaintiffs failed to establish a causal link between the injuries and the defendants' activities.

Second, Huber's assertion that liberal admission standards for expert testimony are responsible for junk science carries less weight in light of recent developments. Huber suggests that when the FRE was codified it replaced the minimum standards for admissibility of expert testimony, as

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4. See, e.g., W. PAGE KEETON ET AL., PROSSER AND KEETON ON THE LAW OF TORTS § 75, at 535 & n.18 (5th ed. 1984).

5. See, e.g., GUIDO CALABRESI, THE COSTS OF ACCIDENTS: A LEGAL AND ECONOMIC ANALYSIS (1970). Calabresi argues that in a strict liability scheme the cost of an accident should properly lie with the "cheapest cost avoider." *Id.* at 312.

6. FED. R. EVID. 702, 703. These rules regulate the admissibility of expert testimony and the facts on which these experts rely, respectively.

7. Book Note, *Rebel Without a Cause*, 105 HARV. L. REV. 935, 938 n.13 (1992) (reviewing HUBER, *supra* note 3) (quoting Guido Calabresi, *Concerning Cause and the Law of Torts: An Essay for Harry Kalven, Jr.*, 43 U. CHI. L. REV. 69, 76 (1975)) (emphasis in original).

expressed in *Frye v. United States*,<sup>8</sup> with more lenient ones. He contends that the *Frye* standard is no longer used by the courts to determine the admissibility of such testimony. Actually, the federal courts of appeal are split on whether *Frye* remains applicable.<sup>9</sup> The fifth circuit decision in *Christopherson v. Allied-Signal Corp.*,<sup>10</sup> for example, effectively resurrected the *Frye* test in holding that "the district court was within its discretion in concluding, *albeit implicitly*, that [the expert's] testimony failed to meet . . . the *Frye* test."<sup>11</sup>

Furthermore, Huber's claim that the FRE standards allow for virtually unrestricted admission of expert testimony is incorrect. The first and D.C. circuits, for example, have read into the FRE additional restrictions on the admissibility of expert-witness testimony.<sup>12</sup> Both circuits have incorporated into FRE 703 a considerable element of judicial discretion when examining the methodology of an expert witness. If a witness's methodology is inconsistent with that of the mainstream scientific community, the judiciary, in these circuits, can and does exclude the expert testimony.

Although Huber does not clearly trace the causes of the increase in junk science, he does argue cogently for why its use should not be tolerated. He focuses particularly on the inequity that results when law and pseudoscience are combined. To illustrate the unfairness that can result from flawed expert testimony, he describes several "traumatic cancer"<sup>13</sup> cases from the early part of this century (p. 39). Victims were frequently able to prove that the defendant caused their cancer simply by having a doctor testify that a prior injury caused by the defendant "may have" resulted in the subsequent cancerous growth (p. 46). The necessary proof was merely that the cancerous growth developed in the same region as the injury. The lack of scientific proof linking the cancer to the defendant's contact seemed not to matter. It was not until the 1960s, when medical science finally had gathered enough evidence to refute such claims, that courts stopped awarding damages for

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8. 293 F. 1013 (D.C. Cir. 1923).

9. See, e.g., Book Note, *supra* note 7, at 936 n.5.

10. 939 F.2d 1106 (5th Cir. 1991).

11. Michael C. McCarthy, "Helpful" or "Reasonably Reliable"? *Analyzing the Expert Witness's Methodology Under Federal Rules of Evidence 702 and 703*, 77 CORNELL L. REV. 350, 382 (1992) (quoting *Christopherson*, 939 F.2d at 1106) (emphasis in original).

12. See McCarthy, *supra* note 11, at 386.

13. The traumatic cancer cases Huber describes were those in which victims were injured by defendants in a certain part of their body and later developed cancer in that same area.

"traumatic cancer."

Huber offers two explanations why "so many judges [got] it so wrong in so many cases spanning so many years" (p. 45). First, some judges may have actually believed in "traumatic cancer," and thus were following the doctrine of *in dubio pro laeso*<sup>14</sup> (p. 45). The decisions favoring the victim were also tolerated because judges and juries may have found it difficult to feel sympathetic towards a deep-pocket defendant who could easily cover the victims' expenses.

Unfortunately, successful junk science is hardly limited to the past, and Huber analyzes the toll exacted by evidence based on poor scientific methodology in several modern instances. He cites the case of the Audi 5000 with its alleged propensity to accelerate out of the driver's control even when the driver had his or her foot firmly on the brake (pp. 60-61). The sudden acceleration was a mystery at the time because in almost all of the cases the brakes were found to be functioning normally after the ensuing accident. In numerous suits filed against Audi, plaintiffs' attorneys and "experts" postulated theories for the sudden acceleration, the most popular including electronic failure of the cruise control, defects in the accelerator linkage, and transmission pressure problems. In response to these allegations, the National Highway Traffic Safety Administration ("NHTSA") investigated the Audi 5000 and four other cars to determine the cause of the mysterious sudden acceleration. NHTSA reported that no vehicle malfunction was evident, concluding that the accidents were probably the result of the plaintiffs' pedal misapplications. In short, the sudden accelerations were due to driver error, not to the Audi 5000. Unfortunately, NHTSA's report came after Audi had settled many cases and lost a few. Thus, the Audi experience demonstrates that speculation on the part of so-called experts and the admission of their speculation as evidence can lead some courts to find liability where there is arguably none. Huber also describes some of the negative externalities resulting from these decisions: The negative publicity that Audi received as a result of the lawsuits caused its sales in the United States to plummet by over forty-six percent (p. 74).

In another illustration of the costs of junk science, Huber discusses the Bendectin cases. In 1983, Bendectin was taken off the market by its manufacturer, Merrel Dow, after it became party to numerous suits alleging that Bendectin caused birth defects in babies whose mothers had

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14. When in doubt favor the injured.

used the drug. Again, Huber shows that the FDA later established that Bendectin did not cause the birth defects. Merrel Dow eventually defeated most of these cases by challenging the admissibility of the evidence provided by the plaintiffs' expert witnesses.<sup>15</sup> Although Merrel Dow did not suffer the same reputational loss as Audi, the company incurred substantial litigation costs. More importantly, women who would have benefited from Bendectin were denied access to it because of its withdrawal from the market.

Huber concludes with proposals for curbing the admission of junk science. He first suggests that *Frye* be resurrected. Since a Supreme Court decision on the proper interpretation of the FRE is forthcoming, it remains to be seen what standards the courts will uniformly adopt.<sup>16</sup> Huber also includes the late Nobel-prize physicist Richard Feynmann's suggestion that in order to testify in court an expert must have published or at least disclosed his or her conclusion prior to the trial. Huber also recommends admitting only the testimony of scientists who are presently researching in the area in which they are going to testify. He suggests that if courts restricted the amount of time experts can spend in court, it would alleviate the problem. The implementation of these suggestions, as well as the others made by Huber, may prove problematic, but they should be given some consideration.

Because it promotes the use of responsible science in the courtroom, *Galileo's Revenge* will appeal to scientists, practicing lawyers, and legal scholars having a technical background. It is a timely and controversial piece that will be referred to for years to come.

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15. See, e.g., *Lynch v. Merrel-Nat'l Labs.*, 830 F.2d 1190 (1st Cir. 1990); *Richardson v. Richardson-Merrel, Inc.*, 649 F. Supp. 799 (D.D.C. 1986), *aff'd*, 857 F.2d 823 (D.C. Cir. 1988), *cert. denied*, 493 U.S. 882 (1989).

16. Presumably, to mend the split in the courts and to clarify the standards of admissibility for expert scientific testimony, the Supreme Court has granted certiorari earlier this year to a representative case. See *Daubert v. Merrel Dow Pharmaceuticals, Inc.*, 951 F.2d 1128 (9th Cir. 1991), *cert. granted*, 61 U.S.L.W. 3284 (U.S. Oct. 13, 1992) (No. 92-102).

