

## **Reflections on *Daubert*: A Look Back at the Supreme Court's Decision**

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### **Introduction**

Over two decades ago, the U.S. Supreme Court decided *Daubert v. Merrell Dow Pharmaceuticals, Inc.* (1993). The case provided significant guidance to judges on how they should assess expert witness testimony. It set an important precedent followed by federal, and most state, courts in their attempt to determine the admissibility of such testimony.

### **The *Daubert* Case**

*Daubert*, a civil case, hinged on the validity of expert opinion on the scientific methodology used to determine the alleged causal link between an anti-nausea drug, Bendectin, and fetal birth defects. A key issue before the Court was whether the so-called “*Frye* test,” which emerged from *Frye v. United States* (1923), was the appropriate means for determining the admissibility of expert testimony or whether the Federal Rules of Evidence enacted in 1975 superseded *Frye*.

*Frye*, a criminal case, involved a determination about the admissibility of evidence from a blood pressure test, which for a time was used as a lie detection method. *Frye* held that scientific evidence is admissible if the technique upon which the method is based is “sufficiently established to have gained general acceptance in the particular field in which it belongs.” *Frye* was rarely cited for a quarter-century, but over time the “*Frye* test” became increasingly influential, and by the early 1980s, it had been adopted by 29 states (Haack 2005).

The *Daubert* Court had to determine the status of *Frye* in relation to the Federal Rules of Evidence, especially Rule 702, which then stated: “If scientific, technical or other specialized knowledge will assist the trier of fact to understand the evidence or to determine a fact in issue, a witness qualified as an expert by knowledge, skill, experience, training or education, may testify thereto in the form of an opinion or otherwise” (Fed. R. Evid. 702 (1993)).

The *Daubert* Court held that the Federal Rules of Evidence, not *Frye*, provided the standard for admitting expert scientific evidence in a federal trial. The Federal Rules of Evidence assign the trial judge the task of ensuring that an expert's testimony is relevant and reliable. According to the Court, "Pertinent evidence based on scientifically valid principles will satisfy those demands" (1993, 597).

### **The *Daubert* Test**

The Supreme Court in *Daubert* identified five factors to aid judges in their attempt to assess expert testimony:

whether the theory or technique in question can be (and has been) tested, whether it has been subjected to peer review and publication, its known or potential error rate and the existence and maintenance of standards controlling its operation, and whether it has attracted widespread acceptance within a relevant scientific community (1993, 593-4)

Since the *Daubert* decision, lower courts have grappled with the importance of these specific factors and the extent to which they should be applied.

### **Questions Raised by *Daubert***

Shortly after the *Daubert* decision, many unresolved issues started to emerge. For example, the lower courts had to determine whether and how judges were supposed to serve as gatekeepers of expert testimony. In short, are they supposed to perform a preliminary assessment of expert testimony or should the default be to admit such testimony for the trier of fact (in other words, the judge or jury) and trust the examination/cross-examination process to vet it properly? Furthermore, judges had to determine what exactly was supposed to be reviewed if they were going to serve as gatekeepers. More specifically, were they supposed to limit their attention to an expert's methods only or were the expert's conclusions part of their purview as well?

Another key issue was the relative importance of whether expert testimony is "scientific" in nature, and if so, whether different admissibility standards should be applied to it as opposed to "non-scientific" expert testimony. Along these lines, Chief Justice Rehnquist seemed puzzled by whether there is a distinction between "scientific" and "technical" evidence and if so, how judges would be able to draw such a distinction (1993, 524). The lower courts also had to ascertain whether they were strictly required to apply the *Daubert* factors when evaluating expert testimony or whether the application of those factors was merely recommended.

Over the years, these key issues were sorted out through the so-called "*Daubert* trilogy" (the original case, *General Electric Co. v. Joiner* (1997), and *Kumho Tire Co., Ltd. v. Carmichael* (1999)). The *Kumho* case, for example, added clarity about the types of expert testimony to which *Daubert* was intended to apply (all expert testimony, not just "scientific" testimony). The *Kumho* case also confirmed that the *Daubert* factors did not constitute a definitive checklist or test.

### ***Daubert* and the Future**

Recognizing the importance of scientific evidence to the legal system, the U.S. Congress in 2005 called for the creation of an independent forensic science committee at the National Academy of Sciences to identify the needs of the forensic science community; these include: assessing the resource needs of labs and medical examiner offices; identifying scientific advances that might better enable law enforcement to use forensic technologies; and determining how to share best practices in terms of the use of forensic technologies within professional communities. This effort resulted in a report from the National Research Council entitled *Strengthening Forensic Science in the United States: A Path Forward* (NRC 2009).

The NRC Report discussed *Daubert* in detail, observing that the case and its progeny created confusion and controversy in the court system. Moreover, the NRC Report, quoting Faigman et al. (2008), states that courts “employ *Daubert* more lackadaisically in criminal trials – especially in regard to prosecution evidence – than in civil cases, especially in regard to plaintiff evidence” (NRC 2009, 11). By making the examination of the “science” underlying experts’ methodologies more rigorous, *Daubert* requires judges and lawyers to have more knowledge about science. Yet, in the *Daubert* ruling, Justice Rehnquist noted that the twenty-two amicus briefs dealt with scientific matters that were “far afield from the expertise of judges” (1993, 524).

The NRC Report states that “[L]awyers and judges often have insufficient training and background in scientific methodology, and they often fail to fully comprehend the approaches employed by different forensic science disciplines and the reliability of forensic science evidence that is offered in trial” (2009, 27). Additionally, the NRC Report states that “[T]he fruits of any advances in the forensic science disciplines should be transferred directly to legal scholars and practitioners . . . members of the judiciary, and [other members of the justice system] so that appropriate adjustments can be made in criminal and civil laws and procedures, model jury instructions, law enforcement practices, litigation, strategies, and judicial decision-making” (2009, 27).

Two government entities have been established in response to the NRC Report’s recommendations—the National Commission on Forensic Science (NCFS),<sup>1</sup> whose mission is to develop policy, and the Organization of Scientific Area Committees (OSAC),<sup>2</sup> whose mission is to develop discipline specific practice standards and guidelines. OSAC’s Forensic Resource Committee and NCFS’s Training on Science and Law Subcommittee are committed to greater interdisciplinary knowledge sharing between the legal and forensic science communities.

The need for interdisciplinary education about forensic science, an issue revealed by the *Daubert* case and its “progeny”, is a global concern. In February 2015, The Royal Society sponsored a summit, held in London, that brought together international researchers, academics, and members of the judiciary to discuss how to ensure courts have confidence in forensic science.<sup>3</sup> A report from the summit is forthcoming in

summer 2015.

A judge's assessment of expert testimony can play a crucial role in a legal ruling and establish a precedent for how future courts handle such testimony. The aforementioned developments, motivated in part by issues raised in the *Daubert* case, illustrate the need for judges (and lawyers and juries) to become better educated about forensic science methodologies and practices. This is a non-trivial undertaking given that the scientific matters presented in the courtroom can be complex, esoteric, and nuanced.

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<sup>1</sup> For more information about the National Commission on Forensic Science, refer to <http://www.nist.gov/forensics/ncfs.cfm> (accessed May 17, 2015).

<sup>2</sup> For more information about the Organization of Scientific Area Committees (OSAC), refer to <http://www.nist.gov/forensics/osac.cfm> (accessed May 17, 2015).

<sup>3</sup> For more information refer to <https://royalsociety.org/events/2015/02/forensic-science/> (accessed May 20, 2015).