

## Admissibility of Expert Evidence in Frye Jurisdictions: An Alternative to Daubert

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Many forensic scientists are familiar with the impact caused by *Daubert* and its progeny on expert testimony in federal and some state court proceedings.<sup>1</sup> Much has been written on this topic (1-3). What is not discussed as often, and our topic here, are the *Frye*<sup>2</sup> requirements. Although the *Frye* test is no longer used in the federal context,<sup>3</sup> it is still used by eight states, including California, Illinois, Maryland, Minnesota, New Jersey, New York, Pennsylvania, and Washington.<sup>4</sup>

The *Frye* test was established in 1923 by the United States Court of Appeals of the District of Columbia Circuit. The *Frye* court articulated the approach as follows:

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<sup>1</sup> *Daubert v. Merrell Dow Pharmaceuticals Inc.*, 509 U.S. 579 (1993); *General Elec. Co. v. Joiner*, 522 U.S. 136 (1997); *Kumho Tire Co. v. Carmichael*, 526 U.S. 137 (1999).

<sup>2</sup> *Frye v. United States*, 293 F. 1013 (D.C. Cir. 1923).

<sup>3</sup> See *Daubert*, 509 U.S. 579 (“[The *Frye*] standard, absent from, and incompatible with, the Federal Rules of Evidence, should not be applied in federal trials.”).

<sup>4</sup> See *People v. Leahy*, 882 P.2d 321 (Cal. 1994); *State v. Copeland*, 922 P.2d 1304, 1310 (Wash. 1996); *Goeb v. Tharaldson*, 615 N.W.2d 800, 814 (Minn. 2000); *Grady v. Frito-Lay, Inc.*, 839 A.2d 1038, 1044 (Pa. 2003); *Montgomery Mut. Ins. Co. v. Chesson*, 923 A.2d 939 (Md. 2007); *Donaldson v. Central Ill. Public Serv. Co.*, 767 N.E.2d 314, 324 (Ill. 2002); *Selig v. Pfizer, Inc.*, 713 N.Y.S.2d 898 (N.Y. App. Div. 2000); *Rubanick v. Witco Chem. Corp.*, 93 A.2d 733, 740 (N.J. 1991). The *Frye* standard was also previously used in Florida and Kansas until July 1, 2013, and July 1, 2014, respectively.

*Just when a scientific principle or discovery crosses the line between the experimental and demonstrable 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.*<sup>5</sup>

Thus, under *Frye*, the court's role is to determine whether the theory has been generally accepted in the relevant scientific community. In 1993, the *Daubert* court found that this test was superseded by the adoption of the Federal Rules of Evidence, which did not expressly require general acceptance and incorporated a flexible reliability standard instead.<sup>6</sup> Under *Daubert*, a court is to determine if the reasoning or methodology underlying the testimony is scientifically valid and can be applied to the facts at hand. In theory, *Daubert* was supposed to “liberalize” the proof standards under *Frye* (4). In practice, courts that apply *Daubert* are more restrictive.<sup>7</sup> Writing for a unanimous panel, Judge Alex Kozinski warned that:

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<sup>5</sup> *Frye*, 293 F. 1013.

<sup>6</sup> See *Daubert*, 509 U.S. 579 (1993).

<sup>7</sup> *Id.*

Federal judges ruling on the admissibility of expert scientific testimony face a far more complex and daunting task in a post-*Daubert* world than before. The judge's task under *Frye* is relatively simple: to determine whether the method employed by the experts is generally accepted in the scientific community. Under *Daubert*, . . . we must determine nothing less than whether the experts' testimony reflects "scientific knowledge," whether their findings are "derived by the scientific method," and whether their work product amounts to "good science." [This] puts federal judges in an uncomfortable position. The question of admissibility only arises if it is first established that the individuals whose testimony is being proffered are experts in a particular scientific field. . . . [T]hough we are largely untrained in science and certainly no match for any of the witnesses whose testimony we are reviewing, it is our responsibility to determine whether those experts' proposed testimony amounts to "scientific knowledge," constitutes "good science," and was "derived by the scientific method." The task before us is more daunting still when the dispute concerns matters at the very cutting edge of scientific research, where facts meets theory and certainly dissolves into probability. As the record in this case illustrates, scientists often have vigorous and sincere disagreements as to what research methodology is proper, what should be accepted as sufficient proof for the existence of a "fact," and whether information derived by a particular method can tell us anything useful about the subject under study.

Our responsibility, then, unless we badly misread the Supreme Court's opinion, is to resolve disputes among respected, well-credentialed scientists about matters squarely within their expertise, in areas where there is no scientific consensus as to what is and what

is not "good science," and occasionally to reject such expert testimony because it was not "derived by the scientific method."<sup>8</sup>

In the decade since *Daubert* was decided, more and more judges, both state and federal, have joined this swelling chorus in suggesting that *Daubert* goes too far. For example, when U.S. Senator John Cornyn (R. Tex.) was a member of the Texas Supreme Court he protested that "the *Daubert* dicta thrusts judges, by and large untrained in science, into the inappropriate role of amateur scientists."<sup>9</sup> An experienced New York state court judge came to the same conclusion, writing that:

*After serving eighteen years on the bench, including a significant amount of involvement in judicial training and education, both as a student and a faculty member, and after an additional eighteen years as a practicing lawyer and judicial law clerk involved almost daily in the court system, this writer is convinced that few judges possess the academic credentials or the necessary experience and training in scientific disciplines to separate competently high quality, intricate scientific research from research that is flawed (5).*

Because of these concerns, many state courts have refused to follow *Daubert* and still follow the *Frye* rule. The reasoning behind continuing to follow the *Frye* rule is that under the *Frye* general acceptance standard, judges defer assessments of scientific merit to practicing scientists, and thereby "ensure that the persons most qualified to assess the scientific validity of

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<sup>8</sup> *Daubert*, 43 F.3d 1311, 1315-16 (emphases added).

<sup>9</sup> *E.I. du Pont de Nemours & Co., Inc. v. Robinson*, 923 S.W.2d 549, 560 (Tex. 1995) (Cornyn, J., dissenting).

a technique have the determinative voice.”<sup>10</sup> In a case affirming the state’s adherence to the *Frye* standard, the Pennsylvania Supreme Court explained:

*In our view, Frye’s “general acceptance” test is a proven and workable rule, which when faithfully followed, fairly serves its purpose of assisting the courts in determining when scientific evidence is reliable and should be admitted. One of the primary reasons we embraced the Frye test in Topa was its assurance that judges would be guided by scientists when assessing the reliability of a scientific method. Given the ever-increasing complexity of scientific advances, this assurance is at least as compelling today as it was in 1977, when we decided that case. We believe now, as we did then, that requiring judges to pay deference to the conclusions of those who are in the best position to evaluate the merits of scientific theory and technique when ruling on the admissibility of scientific proof, as the Frye rule requires, is the better way of insuring that only reliable expert scientific evidence is admitted at trial. We also believe that the Frye test, which is premised on a rule that of “general acceptance”-is more likely to yield uniform, objective, and predictable results among the courts, than is the application of the Daubert standard, which calls for a balancing of several factors. Moreover, the decisions of individual judges, whose backgrounds in science may vary widely, will be similarly guided by the consensus that exists in the scientific community on such matters. Thus, as we are persuaded of the wisdom and efficacy*

*of Frye’s “general acceptance” rule, we hold that it continues to control in Pennsylvania.*<sup>11</sup>

The application to the *Frye* test is limited to only expert testimony based on a technique, process, or theory that is new to science and the law, *i.e.*, novel scientific evidence.<sup>12</sup> Thus, a technique that is well established in a particular field will not be subjected to *Frye*’s general acceptance test. For example, in *Gelsthorpe v. Weinstein*, the court found that a *Frye* hearing was not warranted to determine the testimony of a doctor who used the differential diagnosis method to eliminate possible cases of the plaintiff’s medical condition to arrive at his conclusion as to causation.<sup>13</sup> The court reasoned, “[d]ifferential diagnosis is an established scientific methodology in which the expert eliminates possible causes of a medical condition to arrive at the conclusion as to the actual cause of the condition. There is no question that the differential diagnosis technique . . . is generally accepted in the scientific community.”<sup>14</sup> An expert’s opinion is not subject to *Frye* analysis “simply because some other experts disagree with it and because the challenged expert does not rely on any specific authority to support his particular opinion.”<sup>15</sup>

If in a *Frye* jurisdiction, scientific experts may face a *Frye* motion challenging the admissibility of the expert’s evidence, which will usually occur at the motion *in limine* phase of the case. The grounds are typically that the particular technique is new or novel, and thus, is not

<sup>10</sup> See *People v. Leahy*, 882 P.2d 321, 325 (Cal. 1994).

<sup>11</sup> *Grady v. Frito-Lay, Inc.*, 839 A.2d 1038, 1044 (Pa. 2003) (internal citations omitted).

<sup>12</sup> See, e.g., *People v. Johnson*, 43 Cal.Rptr.3d 587, 595 (Cal. Ct. App. 2006).

<sup>13</sup> 897 So.2d 504 (Fl. Dist. Ct. App. 2005).

<sup>14</sup> *Id.* at 510.

<sup>15</sup> *Id.*

generally accepted in the relevant scientific community. Proof of the technique's reliability may be submitted in the form of judicial notice, or in the alternative, as part of a foundational hearing. To establish that the proffered evidence is reasonably reliable, the proponent may offer evidence of the following types: (1) the testimony of reliable or knowledgeable experts; (2) authoritative scientific literature; and (3) persuasive judicial decisions which acknowledge such general acceptance of expert testimony.<sup>16</sup> The proponent of the evidence bears the burden of establishing general acceptance.

*Frye* has proven to be flexible where courts find a more lenient standard of admissibility is warranted. In New Jersey, for example, *Rubanick v. Witco*<sup>17</sup> and *Landrigan v. Celotex Corp.*<sup>18</sup> relaxed the standards for admission of scientific evidence in toxic torts litigation. Scientific evidence in toxic torts litigation will be admissible if it is based on a sound methodology involving data and information of a type reasonably relied on by experts in the field.<sup>19</sup>

In *Rubanick*, the Supreme Court was called upon to determine the admissibility of expert

evidence regarding the causation of cancer in toxic torts cases.<sup>20</sup> Plaintiff survivors of two men brought suit alleging their decedents had been exposed to a toxic substance at work which caused their fatal colon cancer.<sup>21</sup> In deciding whether the expert evidence was admissible, the New Jersey Supreme Court, while giving deference to "the traditional test" for the admissibility of scientific evidence, recognized the "extraordinary and unique burdens" of plaintiffs trying to prove causation in toxic torts cases.<sup>22</sup> The court noted this burden to be related to the "extremely high level of proof required before scientists will accept a new theory" and the "current inability of science to fully comprehend carcinogenesis."<sup>23</sup> Because of this burden, injured plaintiffs would potentially never recover if required to wait for scientific theories of causation to be found generally acceptable.<sup>24</sup> Because the general acceptance standard relies on the scientific method, it requires "an extraordinarily high level of proof based on prolonged, controlled, consistent, and validated experience," thus severely limiting the potential for injured plaintiffs to recover in the statutory period allowed for them to do so.<sup>25</sup> Thus, due to the delayed effects of the exposure and the "inability of current science to identify precisely the causes of cancer," courts needed a reasonable alternative to the *Frye* test in toxic torts cases.<sup>26</sup>

The court adopted a new theory of admissibility for scientific evidence relative to causation in toxic torts litigation, holding that scientific

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<sup>16</sup> See *State v. Moore*, 902 A.2d 1212, 1226 (N.J. 2006).

<sup>17</sup> 593 A.2d 733 (N.J. 1991).

<sup>18</sup> 605 A.2d 1079 (N.J. 1992).

<sup>19</sup> *Rubanick*, 593 A.2d at 747-48. Cases applying the standard *Rubanick* sets forth are mainly medical causation/personal injury related cases. See *Clark v. Safety-Kleen Corp.*, 845 A.2d 587 (N.J. 2004) (medical causation); *Lindquist v. City of Jersey City Fire Dep't*, 814 A.2d 1069 (N.J. 2003) (worker's compensation, medical causation). However, there is one case where the *Rubanick* standard has been applied to expert testimony which age-dated contaminated soil. See *6400 Corp. v. Chevron U.S.A. Inc.*, ATL-L-872-02, 2007 WL 209932 (N.J. Super. Ct. App. Div. Jan. 29, 2007).

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<sup>20</sup> *Rubanick*, 593 A.2d at 734.

<sup>21</sup> *Id.*

<sup>22</sup> *Id.* at 739.

<sup>23</sup> *Id.*

<sup>24</sup> See *id.* at 739-40.

<sup>25</sup> See *id.* at 740.

<sup>26</sup> See *id.*

theories of causation may be found sufficiently reliable if based on sound methodology involving data and information “of the type reasonably relied on by experts in the scientific field.”<sup>27</sup> The court determined that the “proper inquiry is whether comparable ‘experts in the field [would] actually rely’ on that information.”<sup>28</sup> The expert must be “sufficiently qualified by education, knowledge, training, and experience in the specific field of science, and must be able to demonstrate a “professional capacity to assess the scientific significance” of the data, apply the methodology and explain the bases for the opinion(s) reached.<sup>29</sup>

In contrast to the relaxed standard applied in toxic tort cases, New Jersey courts have found that a closer inspection is required in criminal cases.<sup>30</sup> In *State v. Sharp*, the court found that “when the State seeks to advance scientific evidence in criminal cases, given the important liberty interests of the defendant that are at stake, the reliability of that evidence is subject to heightened scrutiny.”<sup>31</sup> In that case, the court held that the expert’s opinion as to the cause of a fire, reached by utilizing the process-of-elimination approach, was not a net opinion and thus admissible because the method had been legitimately recognized by previous courts.<sup>32</sup> Even under heightened scrutiny,

“[p]roof of general acceptance does not mean that there must be complete agreement in the scientific community about the techniques, methodology, or procedures that underlie the scientific evidence.”<sup>33</sup>

It is important that forensic experts testifying in certain state courts be aware of the *Frye* standard. Other forensic experts will benefit from understanding the backdrop *Frye* provides in *Daubert* jurisdictions.

### Acknowledgements

The author thanks Elizabeth 'Lili' Peterson and Allison Brouk for their constructive comments when preparing this article.

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<sup>27</sup> *Id.* Judges are not to determine whether the methodology is scientifically sound; rather, they are to determine whether scientists in the field find it to be so. *Id.* at 748 (“Great difficulties can arise when judges, assuming the role of scientist, attempt to assess the validity of a complex scientific methodology”).

<sup>28</sup> *Id.* at 749.

<sup>29</sup> *Id.*

<sup>30</sup> See *State v. Sharp*, 928 A.2d 165, 168-69 (N.J. Super. Ct. Law Div. 2006).

<sup>31</sup> *Id.*

<sup>32</sup> *Id.* at 169.

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<sup>33</sup> *State v. Chun*, 943 A.2d 114, 135-36 (N.J. 2008).