

Appellate courts must conduct independent research of Daubert issues to discover “junk science.”

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The scene is a courtroom in the State of Denial. The defendant, charged with murder, testifies to his innocence, claiming he was across town at the time of the crime. There being no eyewitnesses and no physical evidence linking the defendant to the victim, the State puts forth its scientific expert. Dr. Crackpot is an “auralist.” Simply by being in the same room with someone, the doctor claims to read the person’s “aura” and determine where he was on a specific date. The defense objects, arguing that this science is not valid, but the State has an article from *Weird Science Magazine* detailing the theories, and the defense

has nothing to refute it. The trial judge admits the evidence, deciding that any doubts about it go to the weight of the evidence rather than its admissibility. Dr. Crackpot testifies that the defendant was at the crime scene at the time of the murder, and the jury convicts.

The defendant appeals, arguing that “auralism” is junk science. But the parties offer no additional authority, believing they are limited by what was presented at trial. The appellate court, reviewing for an abuse of discretion, finds no error, since there is nothing in the record to indicate that the science is invalid.

Yet the science is junk. There is no such thing as an “auralist.” Nobody can credibly “read” a person’s “aura” and determine where they were on any given day. The scientific journals are replete with articles condemning the science, and Dr. Crackpot himself has been proven to be a fraud. Nevertheless, the defendant goes to prison for a crime he did not commit, and the law in Denial is that auralism is valid.

Change the name of the jurisdiction and the science, and this hypothetical case paints a realistic picture of the current state of the law in most jurisdictions. Appellate courts, limiting themselves to the information presented at trial, are forced to affirm trial courts’ *Daubert*¹ rulings under an abuse-of-discretion standard of review. By confining themselves to the record and failing to conduct any independent research on scientific validity, courts of appeals fail to discover junk science.

The solution is for appellate judges to conduct independent research of *Daubert* issues.

Daubert scientific issues represent a unique area of the law. More so than traditional evidentiary issues, *Daubert* issues transcend individual cases. A ruling on the validity of a science utilized in one case will affect every other case in that jurisdiction. As the hypothetical case demonstrates, this can be disastrous if the parties are unprepared and neglect to provide the trial judge with any useful information regarding a scientific theory’s validity. Legal resolutions of this type harm not only the litigants of one case, but all future litigants in that court.

Standard of review

Of course, in appellate law, the preliminary issue is the standard of review. If appellate judges may only review a trial court’s *Daubert* ruling for an abuse of discretion, they must limit themselves to the record before them. So to permit an appellate judge to conduct independent research, appellate courts must adopt a hybrid standard of review that defers to the trial judge on matters concerning the application of the science to the facts of the particular case, but reviews *de novo* the validity of the science itself.

A hybrid standard is not unheard of and is, in fact, advocated both in appellate court opinions² and in scholarly literature. Kesan points out that “[t]he gate-keeping function assumes that trial judges possess some



1. *Daubert v. Merrell Dow Pharmaceuticals, Inc.*, 509 U.S. 579 (1993).

sophistication and experience in scientific matters . . . [but] [t]here is little reason to believe that trial judges can readily equip themselves with such expertise.”³ Kesan contends that

de novo appellate review of district court findings on the scientific knowledge prong of *Daubert* would create a body of appellate opinions that carefully review scientific theories and methodologies. As appellate courts repeatedly face the same sorts of scientific evidence, more uniform adjudication at the trial and appellate levels will result. In addition, careful appellate scrutiny would permit consideration and development of distinct validation

Joiner,⁵ the Court stated, without elaboration, that federal district judges’ *Daubert* rulings were to be reviewed for an abuse of discretion. But in that case, the issue before the Court was whether an appellate court could apply a different standard of review when the district court admits scientific evidence from that used when it excludes scientific evidence. The Supreme Court firmly rejected that notion, concluding that the same standard of review should apply in either instance. The Court then stated that abuse of discretion was the appropriate standard but did

appellate judges have the time to conduct independent research—time that trial judges often lack.

Additionally, appellate research permits the law to change with the scientific times. Suppose a trial judge conducts independent research and determines that, at the time of the trial, the science at issue in the case is valid. Three months after trial, a new study is released demonstrating the obvious and fatal flaws in the science. On appeal, the appellate court should be permitted to conduct independent research, consider the new study, and reverse the trial court’s ruling admitting evidence of the science. As the Arizona Supreme Court has recognized, “[i]t is somewhat incongruous to call the trial court’s ruling ‘error’” in this situation.⁶ Nevertheless, as that court noted,

neither logic nor authority supports confining ourselves to a snapshot, rather than viewing the motion picture, of technological advancement. If the result obtained is the product of invalid scientific theory, there is no good reason to accept it simply because we were fooled at the inception of the inquiry.⁷

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criteria for expert testimony relating to different scientific or technical disciplines. Finally, appellate courts are also well situated to consider the broad public policy issues associated with admissibility determinations.⁴

Despite the advantages of a hybrid standard of review that would permit appellate judges to conduct independent research of *Daubert* issues, the Supreme Court of the United States has yet to establish one. Regrettably, in *General Elec. Co. v.*

not address the inconsistencies that this standard would cause or the possibility of a hybrid standard.

Assessing validity

The truth is, trial judges are in no better position than appellate judges to assess the validity of a scientific theory. Traditionally, appellate courts defer to trial court evidentiary rulings because the trial judge has the benefit of seeing witnesses in person and evaluating their credibility. But in *Daubert* cases, while the expert’s credibility is a factor, the bigger issue is the underlying science’s validity. So it is neither necessary nor useful to give any particular weight to the trial judge’s conclusion regarding this issue. Judges are judges, and whether trial or appellate, they are equally capable (or incapable) of determining a scientific theory’s validity. That determination is reached by independent research. And if a trial judge is capable of independent research, an appellate judge is even more capable. Simply by virtue of their job descriptions, appellate judges are generally more accustomed to research than trial judges. And

Need for uniformity

Finally, and perhaps most importantly, the need for uniformity of legal rulings is paramount in *Daubert* rulings. Courts have noted that, without a de novo review of scientific validity, “[c]ases built on similar facts and offering similar scientific techniques could have widely disparate results.”⁸ And “[u]nlike many other evidentiary issues, whether the scientific community generally accepts a methodology or test can transcend a particular dispute.”⁹ The result of an abuse-of-discretion review “will undoubtedly be rampant individualized decision-making.”¹⁰ This will “likely cause increased uncertainty among lawyers regarding the admissibility of expert testimony.”¹¹

There are those who would argue that it is unethical for appellate judges to conduct independent scientific research. But the American Bar Association’s Model Code of Judicial Conduct does not prohibit it. Canon 3 of the Model Code states that a

2. See *State v. Beard*, 194 W. Va. 740, 461 S.E.2d 486 (1995); *Taylor v. State*, 889 P.2d 319, 332 (Okla. Crim. App. 1995); *Commonwealth v. Vao Sok*, 425 Mass. 787, 683 N.E.2d 671 (1997); *State v. Harvey*, 151 N.J. 117, 699 A.2d 596 (N.J. 1997).

3. Jay P. Kesan, Note, *An Autopsy of Scientific Evidence in a Post-Daubert World*, 84 GEO. L. J. 1985, 2037-38 (1996)

4. *Id.*

5. 522 U.S. 136 (1997).

6. *State v. Bible*, 175 Ariz. 549, 858 P.2d 1152, 1189 n. 33 (Ariz. 1993).

7. *Id.*

8. *Goeb v. Tharaldson*, 615 N.W.2d 800, 814 (Minn. 2000).

9. *Harvey*, 699 A.2d at 619.

10. K. Issac deVyver, Comment, *Opening the Door But Keeping the Lights Off: Kumho Tire Co. v. Carmichael and the Applicability of the Daubert Test to Nonscientific Evidence*, 50 CASE WES. RES. L. REV. 177, 199 (1999).

11. Douglas B. Maddock, Jr., Note, *Federal Rules of Evidence: Raising the Bar on Admissibility of Expert Testimony: Can Your Expert Make the Grade After Kumho Tire Co. v. Carmichael?*, 53 OKLA. L. REV. 507, 513 (2000).

judge “shall not initiate, permit, or consider ex parte communications.” The Commentary to that Canon provides that a judge “must not independently investigate facts in a case and must consider only the evidence presented.” Of course, this does not in any way prevent a judge from conducting independent research into the law. Appellate judges, routinely and appropriately, research case law not provided to them by the parties and rely on that law in disposing of appeals. Researching scientific technology is analogous to researching

case law. It is not an investigation into the facts; instead, it is research into the validity of the scientific theory at issue. The Code does not prevent it. And, as with legal issues, the court can give the parties the opportunity to respond before any opinion is issued.

Appellate courts hold all the cards. They can determine what the proper standard of review is in any case. By instituting a hybrid standard for *Daubert* claims, an appellate court can ensure that independent research is permissible to evaluate a scientific

theory’s validity. This will take the courts out of Denial and reverse judgments dependent upon Crackpot testimony. It is a step worth taking. ☞☞

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