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THE DAUBERT DECISION ON THE ADMISSIBILITY OF SCIENTIFIC EVIDENCE: THE SUPREME COURT Chooses the Right Piece for All the Evidentiary Puzzles

Edward J. Imwinkelried*

The meaning of statutory language, plain or not, depends on context . . . .

On June 28, 1993, the United States Supreme Court handed down its decision in Daubert v. Merrell Dow Pharmaceuticals, Inc. In Daubert, the Court clarified the standard for the admission of scientific evidence in federal court. The decision itself attracted a good deal of publicity. In part, the decision attracted so much attention because it was preceded by an intense contro-

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3 Id. at 2799.
4 Id.

"[G]eneral acceptance" is not a necessary precondition to the admissibility of scientific evidence under the Federal Rules of Evidence, but the Rules of Evidence—especially Rule 702—do assign the trial judge the task of ensuring that an expert's testimony both rests on a reliable foundation and is relevant to the task at hand. Pertinent evidence based on scientifically valid principles will satisfy those demands.

Id.

versy over the introduction of so-called "junk science." Twenty-two amicus briefs were filed in Daubert on behalf of such interested parties including the American Medical Association, the Association of Trial Lawyers of America, the Carnegie Commission, the Chamber of Commerce, the Defense Research Institute, the National Association of Manufacturers, and the United States Government. On the one hand, in Galileo's Revenge: Junk Science in the Courtroom, Peter Huber had charged that American courts had lowered the threshold for admitting expert testimony to the point that many juries were returning erroneous verdicts based on pseudo-scientific theories propounded by charlatans and quacks. Critics such as Huber urged the courts to vigorously enforce the prevailing Frye test requiring that scientific testimony be based on generally accepted, consensus theories. On the other hand, the advocates of more liberal admissibility standards argued that the traditional, conservative standards blocked the admission of critical, and reliable scientific evidence.


6 See Peter W. Huber, Galileo's Revenge: Junk Science In The Courtroom 2-3 (1991) [hereinafter Galileo's Revenge]. The author stated: Junk science is the mirror image of real science, with much of the same form none of the same substance. There is the astronomer on the one hand, and the astrologist, on the other . . . Take the serious sciences of allergy and immunology, brush away the detail and rigor, and you have the junk science of clinical ecology . . . [Junk science] is a hodgepodge of biased data, spurious inference and logical legerdemain, patched together by researchers whose enthusiasm for discovery and diagnosis far outstrips their skill. It is a catalog of every conceivable error: data dredging, wishful thinking truculent, dogmatism, and, now and again, outright fraud.

Id.

7 See Brief for the American Law Professors, Daubert (No. 92-102); Brief for the American Society of Law, Medicine and Ethics, Daubert (No. 92-102); Brief for Physicians, Scientist, and Historians of Science, Daubert (No. 92-102); Brief for the American Insurance Assoc., Daubert (No. 92-102); Brief for the American Assoc. for the Advancement of Science and the National Academy of Sciences, Daubert (No.92-102); Brief for the Washington Legal Foundation, Daubert (No. 92-102).

8 Huber, supra note 4, at 604.

9 Peter W. Huber, Quoth the Maven, 23 Reason, Nov. 1991, at 40.

10 Frye v. United States, 293 F.2d 1013 (D.C. Cir. 1923).

The *Daubert* case is the most famous of the over 2,000 *Bendectin* lawsuits filed. The *Daubert* lawsuit was originally filed by Jason Daubert and his parents. Jason suffered from serious birth defects. He and his parents alleged that the cause of the defects was his mother's prenatal ingestion of *Bendectin*. *Bendectin* is a prescription antinausea drug manufactured by the defendant, Merrell Dow Pharmaceuticals ("Merrell Dow"). Although the plaintiffs originally filed suit in California state court, Merrell Dow had the suit removed to federal court on the basis of diversity of citizenship.

Before trial, Merrell Dow moved for summary judgment. Merrell Dow rested its motion in large part on an affidavit by Dr. Steven H. Lamm. The affidavit stated that Dr. Lamm had reviewed all the published epidemiological research investigating a possible causal connection between *Bendectin* use and birth defects. Dr. Lamm stated that he had read 30 studies involving over 130,000 patients. Dr. Lamm added that none of the studies had unearthed a statistically significant relationship between *Bendectin* and the incidence of birth defects. On the basis of the affidavit, Merrell Dow asserted that the theory that *Bendectin* caused birth defects simply was not generally accepted in scientific circles.

The plaintiffs opposed the summary judgment motion. They countered Dr. Lamm's affidavit with affidavits from eight experts. The plaintiffs' affidavits pointed to a variety of types of evidence indicating a nexus between birth defects and *Bendectin* use such as live animal studies, test tube research, pharmacological comparisons of the chemical structure of *Bendectin* and drugs known to cause birth defects, and the reanalysis of the epidemiological studies cited in Dr. Lamm's affidavit. The plaintiffs' affidavits stated that upon reanalysis, the totality of the data in the reported epidemiological studies indicates a statistically significant

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12 Huber, supra note 4, at 604.
13 See Coyle, supra note 5, at 1. Jason Daubert was born without three fingers on his right hand and a major bone in his right arm. *Id.*
14 Daubert v. Merrell Dow Pharmaceuticals, Inc., 951 F.2d 1128, 1229 (9th Cir. 1991).
17 *See Daubert*, 727 F. Supp. at 575.
18 *Id.* Dr. Lamm stated that after reviewing the studies he found "no difference in the risk of birth defects between those infants whose mothers had taken Benedictin during the first trimester of pregnancy and those infants whose mothers had not." *Id.*
relationship.

The federal district court granted summary judgment to Merrell Dow.\(^{19}\) The district court judge relied primarily on Federal Rule of Evidence ("Rule") 703.\(^{20}\) That statute reads:

\begin{quote}
Bases of Opinion Testimony By Experts

[T]he 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 the expert at or before the hearing. If 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.
\end{quote}

The judge focused on the language, "of a type reasonably relied upon by experts in the particular field,"\(^{21}\) in the second sentence of the statute. The judge concluded that language essentially codified the *Frye* standard, demanding that the foundation for scientific evidence include proof that "the principle upon which it is based [is] sufficiently established to have general acceptance in the field to which it belongs."\(^{22}\) He interpreted the earlier federal decisions as ruling that a finding of "causation in this area" cannot be deemed generally accepted unless it is supported by epidemiological studies demonstrating a statistically significant connection. Since none of the studies did, the judge ruled in Merrell Dow's favor.

The plaintiffs appealed the order of summary judgment to the Court of Appeals for the Ninth Circuit,\(^{23}\) which affirmed the order.\(^{24}\) Although the Ninth Circuit reached the same result as the district court, the Ninth Circuit employed a different rationale. As previously stated, the district judge premised his decision on the Federal Rules of Evidence (the "Federal Rules"), notably Rule 703. In contrast, the Ninth Circuit did not explicitly invoke any provisions of the Federal Rules. Instead, the court relied squarely on the common law, as announced in *Frye*. Rather than applying any standard prescribed by Congress, the court declared that "[w]e impose this [*Frye* test] because [scientific] evidence creates a

\(^{19}\) *Id.* at 570.

\(^{20}\) *FED. R. EVID.* 703.

\(^{21}\) *Daubert*, 727 F. Supp. at 572.

\(^{22}\) *Id.*

\(^{23}\) *Daubert v. Merrell Dow Pharmaceuticals, Inc.*, 951 F.2d 1128, 1131 (9th Cir. 1991).

\(^{24}\) *Id.*
substantial danger of undue prejudice . . . [due to] its aura of special reliability and trustworthiness."{25}

The Ninth Circuit then proceeded to apply the *Frye* test to the lower court's record. The circuit court conceded that the plaintiffs' experts' affidavits suggested that a reanalysis of the reported epidemiological data would yield a statistically significant relationship between birth defects and Bendectin.{26} However, the court found what it regarded as a fatal flaw in the plaintiffs' showing: the reanalysis had not been published in a peer-reviewed, scientific journal.{27} The court announced that "the reanalysis of epidemiological studies is generally accepted by the scientific community only when it is subjected to . . . scrutiny by others in the field"{28}—that is, the scrutiny which occurs upon publication in a peer-reviewed journal. Citing *Galileo's Revenge*, the court asserted that "good science" is "the science of publication, . . . consensus and peer review."

Just as they had appealed the district court decision, the plaintiffs petitioned the Supreme Court for a writ of certiorari to challenge the Ninth Circuit's judgment, which was granted. The Supreme Court thereafter reversed.{29}

Negatively, the Supreme Court unanimously held that the enactment of the Federal Rules of Evidence superseded *Frye*.{30} In authoring the lead opinion, Justice Harry A. Blackmun acknowledged that the *Frye* standard has been widely accepted, but he concluded that the test did not survive the passage of the Federal Rules.{31} In his judgment, neither the text nor the legislative history of the Federal Rules manifests any intention to prescribe a test of general acceptance.{32}

In prior cases, the Rehnquist Court had adopted a textualist or "plain meaning" approach to the construction of statutes.{33} In construing congressional enactments, earlier Supreme Courts had attached great weight to extrinsic legislative history materials such

{25} *Id.* at 1130.
{26} *Id.* at 1130-31.
{27} *Id.* at 1131.
{28} *Daubert v. Merrell Dow Pharmaceuticals, Inc.*, 951 F.2d 1128, 1131 (9th Cir. 1991).
{30} *Id.* at 2794.
{31} *Id.* at 2792-94.
{32} *Id.*
as committee reports.\textsuperscript{34} Earlier Courts had frequently allowed such materials to "trump" the seemingly plain meaning of the text of a statute.\textsuperscript{35} However, the members of the current Rehnquist Court are skeptical of the wisdom of placing heavy reliance on extrinsic material. To begin with, "all that Congress enacts into law" is the statutory text itself.\textsuperscript{36} Moreover, extrinsic materials are usually generated by committee staff persons whom special interest groups sometimes influence to slant the report.\textsuperscript{37} The report might mislead a court construing the statute into "giving the group by way of interpretation what the legislature refused to grant."\textsuperscript{38} In its previous decisions construing the Federal Rules of Evidence, the Rehnquist Court had consistently followed a textualist approach.\textsuperscript{39}

In \textit{Daubert}, the Court once again assayed a textualist approach to reading the Federal Rules. Justice Blackmun noted Federal Rule 402 which provides that all logically relevant evidence is admissible "except as otherwise provided by the Constitution of the United States, by Act of Congress, by these rules, or by other rules prescribed by the Supreme Court pursuant to statutory authority."\textsuperscript{40} The quoted language omits any reference to case or decisional law. The omission implies that the courts no longer possess the common-law power to create and enforce uncodified exclusionary rules. The Justice approvingly quoted the late Professor Edward Cleary, the reporter for the Federal Rules of Evidence: "In principle, under the Federal Rules no common law of evidence remains."\textsuperscript{41} In Justice Blackmun's words, although federal courts may consult common-law precedents to help them interpret ambiguous provisions in the Federal Rules, "the [Federal] Rules occupy the field" otherwise.\textsuperscript{42} One consequence of that occupation

\textsuperscript{34} Otto Hetzel, \textit{Legislative Law and Process: Cases and Materials} 205 (1980).
\textsuperscript{35} Eskridge, supra note 33, at 628.
\textsuperscript{36} Id. at 648.
\textsuperscript{37} Hirschey v. FERC, 777 F.2d 1, 7-8 (D.C. Cir. 1985) (Scalia, J., concurring).
\textsuperscript{40} FED. R. EVID. 402.
\textsuperscript{42} Id.
was the implied abolition of the *Frye* test. The Court then held that none of the language in the Federal Rules could reasonably bear the interpretation that scientific testimony is admissible only when it is based on a consensus, generally accepted view.\(^{43}\) In so holding, the Court found that both the district court and the court of appeals erred, the district court in believing that Rule 703 incorporated *Frye* and the court of appeals in looking to the common law as authority for continued enforcement of *Frye*.

Affirmatively, the seven-justice majority\(^ {44}\) emphasized that despite the demise of *Frye*, the federal trial judge still has a vital gatekeeping or screening function to perform. The abolition of *Frye* "does not mean . . . that the Rules . . . place no limits on the admissibility of purportedly scientific evidence."\(^ {45}\) The majority found limitations "embodied in Rule 702 . . . ."\(^ {46}\) That statute reads:

> [I]f 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.\(^ {47}\)

Specifically, Justice Blackmun focused on the expression, "scientific . . . knowledge," in the statute.\(^ {48}\) He emphasized that science is a process rather than a static body of knowledge.\(^ {49}\) He wrote that "in order to qualify as 'scientific knowledge,' an inference or assertion must be derived by the scientific method."\(^ {50}\) In turn, he described that method as a validation technique,\(^ {51}\)

\(^{43}\) *Id.*

\(^{44}\) See Kirby, *supra* note 4, at S38. The Chief Justice and Justice John Paul Stevens did not join in the parts of the opinion setting out a new test to replace *Frye*. They pointed out that the grant of the petition for certiorari presented only the question of whether *Frye* was still good law. However, if the other Justices had agreed, *Daubert* would have been:

a major setback for the effort to eliminate questionable science from the courtroom. But the other justices would persuaded that simply reversing *Frye* would open the floodgates to bad science. [T]hose seven justices went on to spell out "the nature and source" of the trial judge's "gatekeeping responsibility" in terms that should exclude much unreliable science . . . .

\(^{45}\) *Daubert*, 113 S. Ct. at 2794-95.

\(^{46}\) *Id.*

\(^{47}\) *Fed. R. Evid.* 702.


\(^{49}\) *Id.*

\(^{50}\) *Id.*

\(^{51}\) *Id.*
namely, the formulation of hypotheses and either experimentation or observation to test the validity of the hypothesis.\textsuperscript{52} Under Federal Rule of Evidence 104(a),\textsuperscript{53} the trial judge must determine whether the scientist’s conclusion rests on sound scientific methodology. In making that determination, the judge should consider a number of factors, including whether the scientist’s hypothesis is testable, whether it has been tested, whether the hypothesis has been subjected to peer review, whether the underlying methodology has a known error rate, and whether the methodology used to generate the conclusion is generally accepted.\textsuperscript{54} Justice Blackmun underscored that “[t]he focus . . . must be solely on [underlying] principles and methodology, not on the conclusions that they generate.”\textsuperscript{55}

It is a foregone conclusion that the wisdom of the \textit{Daubert} decision will long be debated. Until \textit{Daubert}, \textit{Frye} was the controlling law in roughly two-thirds of the American jurisdictions.\textsuperscript{56} As recently as the mid-1970s, the general acceptance test appeared to be the governing standard in at least forty-five states.\textsuperscript{57} In \textit{Daubert}, the \textit{Frye} test “was vigorously defended by Merrell Dow and a host of amici.”\textsuperscript{58} Certainly, a case can be made that \textit{Daubert} places a heavy burden on federal trial judges by forcing them to pass on the validity of scientific methodology.\textsuperscript{59} “The thought of some [lay] judge deciding what is science and what is not evokes unpleasant memories of Galileo.”\textsuperscript{60} In his separate opinion in \textit{Daubert}, Chief Justice William Rehnquist cautioned that trial judges are not “amateur scientists.”\textsuperscript{61}

The thesis, though, of this article is that it is a mistake to focus on only the narrow question of whether the \textit{Daubert} majority selected the optimal test for the admissibility of scientific evidence. The point of this article is that there was far more at stake in

\textsuperscript{52} See supra note 44 (discussing validity of hypothesis).
\textsuperscript{53} \textit{Daubert}, 113 S. Ct. at 2796.
\textsuperscript{54} Id.
\textsuperscript{55} Id.
\textsuperscript{56} 1 PAUL C. GIANNELLI \& EDWARD J. IMWINKELREID, SCIENTIFIC EVIDENCE § 1-5 (2d ed. 1993).
\textsuperscript{57} Betty R. Steingass, Note, Changing the Standard for the Admissibility of Novel Scientific Evidence: State v. Williams, 40 Ohio St. L.J. 757, 769 (1979).
\textsuperscript{58} Kirby, supra note 4, at S38.
\textsuperscript{59} Id. at S39.
\textsuperscript{60} See Chesebro, supra note 11, at 1639.
Daubert merely than the future of either Bendectin litigation or the law of scientific evidence. In a meaningful sense, what was at stake in Daubert was the future of the law of evidence applied in the federal courts. As Part One of this Article demonstrates, if the Court had approved the district court’s reasoning and held that Rule 703 governed the question of the validity of the expert’s hypothesis, the Court would have made a shambles of the structure of Article VII of the Federal Rules. Part Two explains that if the Court had embraced the argument of several amici that Rule 702 somehow codified Frye’s general acceptance standard, the Court would have undercut the coherence of the overall organization of the Federal Rules, in particular, the relationship among Articles II, VII, and VIII. Finally, Part Three advances the contention that if the Court had approved the Ninth Circuit’s reasoning that Frye survived as a common-law authority, the Court would have frustrated the basic congressional intent that the Federal Rules operate as a comprehensive evidence code. In short, whatever doubts there may be that Daubert properly resolved the specific issue of the standard for introducing scientific testimony, in the broader context the Daubert Court was eminently correct; its decision was the only way of vindicating the Federal Rules as a coherent and comprehensive evidence code. In effect, the Court was faced with the task of assembling three puzzles; the Court had to piece together the structure of Article VII of the Federal Rules, the overall organization of the Rules, and the Rules’ relation to the common law of evidence. The Court’s decision in Daubert was the right piece for each puzzle.

I. THE FIRST PUZZLE: THE STRUCTURE OF ARTICLE VII OF THE FEDERAL RULES OF EVIDENCE

A. The Choice Facing the Court

One question the Court faced in Daubert was whether to look to Rule 702 or Rule 703 for guidance. Rule 702 contained the expression, “scientific... knowledge,”62 and there was therefore the possibility of extracting substantive admissibility standards from that expression. However, the text and title of Rule 703 referred

62 Fed. R. Evid. 702.
to the "bases" of an expert opinion.\textsuperscript{63} The term, "bases," is expansive enough to include the scientific hypothesis underlying the expert's opinion. Furthermore, numerous courts and commentators had looked to Rule 703 as authority for policing the validity of the expert's theory.\textsuperscript{64} In \textit{Daubert}, the district court treated Rule 703 as the source of that authority.\textsuperscript{65} Indeed, in their reply brief, even the plaintiffs urged the Supreme Court to adopt the position that Rule 703 was controlling.\textsuperscript{66}

At first glance, that position is attractive. As previously stated, at least viewed in isolation, the wording of the statutory text, "bases," is broad enough to encompass the scientific theory which the scientist bases her opinion on. Again, in prior decisions construing the Federal Rules, the Rehnquist Court had consistently adopted a textualist approach to interpretation.\textsuperscript{67} Furthermore, as several amici argued,\textsuperscript{68} a passage in the official Advisory Committee Note to Rule 703 suggested that 703 governs the validity of the expert's reasoning. That passage reads: "Th[is] rule . . . offers a more satisfactory basis for ruling upon the admissibility of public opinion poll evidence. Attention is directed to the validity of the techniques employed rather than to relatively fruitless inquiries whether hearsay is involved."\textsuperscript{69}

Although the Supreme Court generally favors a textualist approach to interpretation, most of the justices subscribe to a moderate school of textualism, permitting consideration of extrinsic legislative history material even when the statutory text may appear to have a plain meaning.\textsuperscript{70} In particular, the Court has ascribed significant weight to Advisory Committee Notes as an indicator of

\textsuperscript{63} \textit{See} Fed. R. Evid. 703.


\textsuperscript{66} Petitioner's Reply Brief at 9, \textit{Daubert} (No. 92-102).

\textsuperscript{67} \textit{See supra} notes 33-39 (discussing Supreme Court's textualist approach).

\textsuperscript{68} Brief for the American College of Legal Medicine in support of Respondent at 17, \textit{Daubert} (No. 92-102); Brief for the Pharmaceutical Manufacturers Association in support of Respondent at 11, 22, \textit{Daubert} (No. 92-102); Brief for the United States in support of Respondent at 15, 26, \textit{Daubert} (No. 92-102).

\textsuperscript{69} Fed. R. Evid. 703 advisory committee's note (emphasis added).

\textsuperscript{70} \textit{In re} Brichard, 788 F. Supp. 1098, 1101 (N.D. Cal. 1992) ("Recent Supreme Court cases suggest that in all questions of statutory interpretation, a court may examine the legislative history in order to avoid an 'unreflective' reading of a statute.").
legislative intention.\textsuperscript{71} For that reason, the Advisory Note to Rule 703 could conceivably have prompted the Court to rule that 703 was governing.

\textbf{B. The Court's Ultimate Decision}

Despite the strength of the case for Rule 703, the Supreme Court decided to turn to Rule 702 as the statutory basis for substantive admissibility standards for scientific evidence.\textsuperscript{72} That decision was not only defensible;\textsuperscript{73} the decision was also essential if the various provisions of Article VII of the Federal Rules are to function as a coherent whole.

To be sure, the passage in the Advisory Committee's Note to Rule 703 is suggestive. However, upon closer scrutiny, the passage does not say that Rule 703 prescribes the standards for evaluating "the validity of the techniques employed."\textsuperscript{74} The passage is equally susceptible to the interpretation that by removing the hearsay objection in public opinion poll cases, Rule 703 merely clears the way for the courts to inquire into the validity issue, an inquiry informed by standards supplied by another Federal Rules provision such as Rule 702.

An analysis of the balance of the Advisory Committee's Note confirms that the mission of Federal Rule 703 does not include regulating the validity of the expert's underlying scientific theory or principle. As one of the articles cited in Justice Blackmun's opinion explains,\textsuperscript{75} when a scientist testifies at trial, her testimony is normally syllogistic.\textsuperscript{76} She applies a major premise (if a patient displays symptoms A, B, and C, he suffers from illness D) to a minor premise (this patient's case history includes symptoms A, B, and C) to generate a conclusion (this patient suffers from illness D). The major premise is the expert's scientific theory or principle, and the minor premise sets out the case-specific facts to which the expert applies the theory or principle. The information

\textsuperscript{71} See Beech Aircraft Corp. v. Rainey, 488 U.S. 153, 166 (1988) (attaching considerable weight to advisory committee's note to Federal Rule 803(8)(c)).
\textsuperscript{73} See John W. Strong, \textit{Language and Logic in Expert Testimony: Limiting Expert Testimony by Restrictions on Function, Reliability, and Form}, 71 Or. L. Rev. 349, 364 (1992) (arguing Rule 702 may be construed as constituting "a textual basis for the courts . . . to impose some stricter standard of reliability").
\textsuperscript{74} Fed. R. Evid. 703 advisory committee's note.
\textsuperscript{75} Daubert, 113 S. Ct. at 2793 n.4.
\textsuperscript{76} See generally Imwinkelried, supra note 64, at 1.
contained in the expert's major premise differs qualitatively, in kind, from the information factored into the minor premise. The witness is testifying *qua* expert only when she is describing the major premise. The minor premise contains the type of factual information which the jurors normally evaluate. For example, the expert might have included symptom C in her minor premise because one of the patient's relatives told the expert that the patient exhibited that symptom. The expert may have an M.D., however, she did not take any special courses in credibility assessment; and the lay jurors are equally qualified to decide whether the relative is so biased in the patient's favor that the relative's report is untrustworthy. The Advisory Committee Note to Rule 703 gives a number of examples of the Rule's scope: "Thus, a physician in his own practice bases his diagnosis on information from numerous sources and of considerable variety, including statements by patients and relatives, reports and opinions from nurses, technicians and other doctors, hospital records, and X rays." All of these examples are illustrations of the type of case-specific information which typically serves as the expert's minor premise.

Furthermore, an even earlier passage in the Advisory Committee's Note makes it clear that Rule 703 is designed to afford the trial attorney an alternative to using the hypothetical question. When an attorney employs a hypothetical question at trial, the virtually universal practice is that the attorney begins by asking the expert to "assume the following facts." In a Bendectin case, the plaintiff's attorney might ask a physician to assume "facts" about: the mother's prior medical history, the mother's pregnancy, her use of Bendectin, and the nature of the limb defects with which her child was born. However, no judge in their right mind would allow the attorney to include the following "facts" in the hypothetical:

Doctor, I would also like you to assume that the scientific community generally accepts the technique of reanalyzing epidemiological data and that a reanalysis of the epidemiologi-

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77 *Id.*
78 *Id.* at 8-13.
79 *Id.*
80 *Fed. R. Evid.* 703 advisory committee's note.
81 *Id.*
cal data on Bendectin yields a relationship which is statistically significant at the .05 level.

That is not the kind of data which the attorney is supposed to furnish to the expert in the hypothesis. Quite to the contrary, that is the type of information which the expert is supposed to furnish to the court to help the trier of fact evaluate the specific facts in the pending case; the witness's knowledge of epidemiology is the expertise which the witness contributes to the fact-finding process. The hypothesis of assumed facts was never intended to serve as a vehicle for inserting that type of scientific proposition into the record. If the limited function of Rule 703 is to create an alternative to the hypothetical question, it stands to reason that neither is Rule 703 a vehicle for policing the validity of such scientific propositions.

The official comment to Mississippi's version of Federal Rule 702 suggests the logic of using Rule 702 to police such propositions. If a witness qualifies as an expert, Rule 702 gives the witness latitude to voice opinions during the trial. However, as the comment states, the witness enjoys that latitude only when the witness is opining about "a matter within his purported field of knowledge." The common-sense implication is that when a witness qualifies as an expert only because of her possession of "scientific . . . knowledge," she must confine the substance of her testimony to propositions qualifying as "scientific . . . knowledge." The concluding phrase in Rule 702 expressly permits expert testimony in the "form" of an opinion or otherwise, but the substance of the testimony must amount to "scientific . . . knowledge."

In this light, the Daubert Court's decision to look to Rule 702 was supportable. More importantly for our purposes, considering the decision in the broader context of the proper construction of Article VII, the decision was virtually unavoidable. By its terms, Rule 703 applies only to "[t]he facts or data in the particular case upon which an expert bases an opinion." The same terminology appears twice in Rule 705: "The expert may testify in terms of opinion or inference and give reasons therefor without first testifying to the underlying facts or data, unless the court requires otherwise. The expert may in any event be required to disclose the

83 FED. R. EVID. 703 (emphasis added).
underlying facts or data on cross-examination."\textsuperscript{84}

When a legislature uses the same words in different parts of a statutory scheme, the court routinely presumes that the legislature intended that the words would have the identical meaning in both parts of the statute.\textsuperscript{85} The presumption is entitled to special weight when the two parts of the statutes are as close to each other as Rules 703 and 705.

If "the underlying facts or data" mean the same thing in Rules 703 and 705, then Rule 703 cannot be interpreted as applying to the expert's explanatory theory or technique. To hold that Rule 703 regulates the validity of the expert's scientific theory would render Rule 705, and consequently, the structure of Article VII, nonsensical.\textsuperscript{86} The face of Rule 705 provides that on direct examination, the expert may state the "reasons" for his opinion "without first testifying to the underlying facts or data." The wording obviously assumes a distinction between "reasons," on the one hand, and "underlying facts or data," on the other. However, to construe "the facts or data" as encompassing all the bases of the expert's opinion, including the scientific theory functioning as the major premise, would obliterate that distinction. So construed, "the facts or data" in Rules 703 and 705 include everything, and there could be no other "reasons" for the opinion. A broad interpretation of Rule 703 reduces Rule 705 to an absurdity; such a reading of Rule 703 empties the term "reasons" in Rule 705 of any possible meaning. If "the facts and data" include both the major and minor premise components of the expert's reasoning process, there are no other "reasons" which the witness can possibly "give" on direct examination. Rather than a useful provision, Rule 705 becomes an embarrassment. There "is no principle of statutory . . . construction that takes precedence over the" maxim that an absurd interpretation is to be avoided.\textsuperscript{87}

As provisions in the same article of the Federal Rules, Rules 703 and 705 must be harmonized.\textsuperscript{88} The only way to reconcile them is

\textsuperscript{84} Fed. R. Evid. 705 (emphasis added).

\textsuperscript{85} See Boise Cascade Corp. v. EPA, 942 F.2d 1427, 1432 (9th Cir. 1991); S & M Investment Co. v. Tahoe Regional Planning Agency, 911 F.2d 324, 327 (9th Cir. 1990), cert. denied, 498 U.S. 1087 (1991); Barnson v. United States, 816 F.2d 549, 554 (10th Cir. 1987); Doctors Hosp., Inc. v. Bowen, 811 F.2d 1448, 1452 (11th Cir. 1987).

\textsuperscript{86} Imwinkelried, supra note 64, at 16-17.

\textsuperscript{87} Mutual Life Ins. Co. v. Los Angeles, 787 P.2d 996, 1007 (Cal. 1990).

\textsuperscript{88} People v. Trimble, 20 Cal. Rptr. 2d 495, 497 (Cal. Ct. App. 1993); Lambert Steel v.
to construe the expression, "the facts or data," as meaning only the case-specific information which the expert utilizes as her minor premise. However, once Rule 703 is limited in this fashion, Rule 702 naturally assumes the function of regulating the expert’s major premises. Now all the pieces of the Article VII puzzle fall neatly into place. Rule 704 limits the phrasing of the ultimate conclusion;\(^8^9\) Rule 703 regulates the type of information which the expert may factor into her minor premise; and as the Daubert Court correctly ruled, Rule 702 "embodie[s]" the restrictions on the expert’s major premise.\(^9^0\) It is Rule 702 which is the source of the requirements that the trial judge find that the expert’s testimony will assist the trier of fact and that the expert’s conclusion has been validated as "scientific knowledge" in the sense that it rests on sound methodology. By locating those restrictions in Rule 702, the Daubert Court gave Article VII of the Federal Rules a sensible, coherent structure.

II. THE SECOND PUZZLE: THE OVERALL STRUCTURE OF THE FEDERAL RULES OF EVIDENCE

Part One explained why the Daubert Court’s decision to look to Rule 702 rather than Rule 703 was the only decision that made sense in terms of the structure of Article VII of the Federal Rules. If the Court had chosen to attempt to extract the restrictions on the expert’s major premise from Rule 703, the Court would have reduced Rule 705 to nonsense. Thus, the context of Article VII dictated that the Court solve the first puzzle by situating the restrictions in Rule 702.

A. The Choice Facing the Court

Of course, Article VII itself is part of a broader context. The larger puzzle is the structure of the Federal Rules of Evidence, including not only Article VII but Articles II and VIII as well. To

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\(^{89}\) FED. R. EVID. 704(a). Rule 704(a) states: "Except as otherwise provided in subdivision (b), testimony in the form of an opinion or inference otherwise admissible is not objectionable because it embraces an ultimate issue to be decided by the trier of fact." Id.; see also Steven I. Friedland, Expert Testimony on the Law: Excludable or Justifiable?, 37 U. MIAMI L. REV. 451, 453-55 (1983) (courts construing rule as prohibiting opinions on pure questions of law).

solve that puzzle, the Court had to determine whether Rule 702 imposed the restriction that scientific witnesses’ testimony be based only on generally accepted conclusions and theories. The *Frye* decision imposed that restriction. In *Frye*, a 1923 case, the accused offered exculpatory testimony about the results of a systolic blood pressure test. That test was a forerunner of the contemporary polygraph test. The test results supposedly indicated that the accused responded truthfully when he denied committing the charged crime. The trial judge excluded the testimony, and the appellate court affirmed the exclusion for the stated reason that most experts in specialties such as psychology had not yet accepted the conclusion that the test accurately diagnosed deception.

Merrell Dow and several of the supporting amici implored the *Daubert* Court to hold that the Federal Rules mandated trial judges to continue enforcing the *Frye*, general acceptance standard. In its brief in support of Merrell Dow, the American Insurance Association asked the Court to rule that Rule 702 “imposes [the] requirement that the scientific propositions upon which an expert bases his testimony must be [generally] accepted as valid in the scientific community before they properly may be the subject of . . . expert testimony.” Similarly, the amicus brief for the Journal of the American Medical Association urged the Court to apply *Frye* to “the [scientific] proposition” which the expert proposes to present to the trier of fact.

Likewise, the Defense Research Institute requested that the Court extend *Frye* to “the conclusion reached” by the expert. Like the request that the Court look to Rule 703, at first blush the request that the Court adhere to the general acceptance test was an attractive one. As Merrell Dow stressed in its brief, even at the late date of the eve of the *Daubert* decision the *Frye* rule was still the prevailing view in both federal and state courts in the

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91 See *Frye v. United States*, 293 F. 1013, 1014 (D.C. Cir. 1923); see also GIANNELLI & IMWINKLERDREID, *supra* note 56, at § 1-5.
92 Brief for the American Insurance Association in support of Respondent at 7, *Daubert* (No. 92-102).
94 Brief for the Defense Research Institute, Inc. in support of Respondent at 15, *Daubert* (No. 92-102).
95 Respondent’s Brief at 25, *Daubert* (No. 92-102).
United States. 96 Frye was the law in roughly two-thirds of the jurisdictions. 97 Merrell Dow was guilty of only slight overstatement when it asserted that the Frye rule “has long and uniformly been recognized at common law.” 98 In the lead opinion, Justice Blackmun conceded that Frye “has been the dominant standard . . . .” 99

Frye was not only a hoary precedent and the clear weight of authority; it had recently been bolstered by Huber’s policy argument that the general acceptance test was a needed bulwark against jury reliance on “junk” science. In its amicus brief, the American Tort Reform Association argued that without the tool of the Frye test, trial judges would be powerless to bar testimony about “frivolous [scientific] theories.” 100 In its opinion, the Ninth Circuit embraced that argument. 101 The court voiced its belief that scientific testimony can overwhelm a lay jury. Quoting Galileo’s Revenge, the court indicated that the best method of separating the wheat from the chaff, the good science from the bad, was to use the criterion of general acceptance or consensus.

B. The Court’s Ultimate Decision

Notwithstanding the considerable appeal of the Frye test, the Court held that Frye was no longer good law in federal court. The majority announced that while general acceptance of the expert’s theory “can . . . have a bearing on” the admissibility of scientific testimony, 102 foundational proof of general acceptance was not “a necessary precondition to admissibility” of scientific evidence. 103 As in the case of the Court’s choice to look to Rule 702 rather than Rule 703, the Court’s decision to abandon Frye was not only supportable; the decision was also critical if the Court was to make some sense of the overall organization of the Federal Rules of Evidence.

The decision is defensible both as a matter of statutory construction and as a matter of evidentiary policy. The language of
Rule 702 would have to be tortured to incorporate the Frye test. When the drafters wanted to prescribe a general acceptance test, they found apt words to do so. For example, Rule 803(17) states: "The following are not excluded by the hearsay rule, even though the declarant is available as a witness: . . . Market Reports, Commercial Publications. Market quotations, tabulations, lists, directories, or other published compilations, generally used and relied upon by the public or by persons in particular occupations."104

There is no comparable language in Rule 702. For their part, the Michigan drafters decided to retain the Frye rule.105 However, they realized that Rule 702's language did not embody a general acceptance test. They consequently amended their version of Rule 702 to include appropros language, namely, the adjective "recognized."106 Without that additional language, there is nothing in the text of Rule 702 which even faintly implies that the statute conditions the admissibility of scientific testimony on proof of the widespread acceptance of the scientific proposition.

The Daubert Court's decision can certainly be defended as a matter of evidentiary policy. While courts such as the Ninth Circuit often assert that lay jurors are awed by scientific testimony, there is little empirical support for that assertion.107 Quite to the contrary, there is research data indicating that lay jurors have the capacity "to discount expert testimony . . . ."108 Summarizing the research to date, two commentators concluded that "[t]he image of a spellbound jury mesmerized by the gilded testimony of a forensic expert" represents fantasy rather than reality.109 To put the matter bluntly, the assertions of lay jurors' incompetence are largely unsubstantiated.

Furthermore, by elevating general acceptance to the status of

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104 Fed. R. Evid. 803(17) (emphasis added).
106 JOSEPH & SALTZBURG, supra note 64, at § 15.5.
107 See generally Imwinkelried, supra note 97, at 554.
108 Elizabeth Loftus & John Monahan, Trial by Data: Psychological Research as Legal Evidence, AMER. PSYCHOLOGIST, Mar. 1980, at 270, 276; see also ABA Special Committee on Jury Comprehension, Jury Comprehension in Complex Cases 40 (1989). "Jurors seemed to have no difficulty rejecting or at least disregarding testimony of experts whom they regarded simply as 'hired guns' . . . ." Id.
the "exclusive" criterion for the admissibility of scientific evidence,\textsuperscript{110} Frye misled the courts into ignoring the questions which are the direct determinants of scientific merit such as the issue of the size of the researcher's database and the accuracy rate which she attained during the experiment:\textsuperscript{111} "Frye is a crude, unscientific [test] for gauging scientific testimony; it amounts to assessing validity by counting heads. To prove a hypothesis a researcher must do more than poll colleagues or ask for a show of hands at a scientific convention."\textsuperscript{112} At the very least, it was justifiable for the \textit{Daubert} majority to shift the focus from the popularity of the expert's conclusion to the soundness of the methodology used to generate the conclusion. In the words of one of the amicus briefs quoted by Justice Blackmun,\textsuperscript{113} a brief filed on behalf of six Nobel Laureates, "[i]t is how the conclusions are reached, not what the conclusions are, that makes them 'good science' . . . ."\textsuperscript{114}

More importantly for our current inquiry, the overall structure of the Federal Rules of Evidence left the Court with virtually no choice but to refuse to read a general acceptance requirement into Rule 702. Rule 702 is not the only device for feeding scientific data into the judicial system; there are similar input mechanisms scattered throughout the Federal Rules. There are at least two other mechanisms: the judicial notice provisions in Article II of the Federal Rules and the learned treatise hearsay exception in Article VIII. Just as a decision to look to Rule 703 would have wreaked havoc with the stucture of Article VII, a decision to superimpose Frye onto Rule 702 would have muddied the relationship between Article VII and Articles II and VIII.

Article VIII codifies a learned treatise hearsay exception in Rule 803(18). That exception authorizes the receipt of a passage in "published treatises, periodicals, or pamphlets on a subject of history, medicine, or other science or art, established as reliable authority . . . ."\textsuperscript{115} To invoke this exception, the proponent must lay a predicate, including proof that the text or periodical in question is generally accepted as authoritative within the pertinent spe-

\textsuperscript{111} Edward J. Imwinkelried, \textit{Abolish the "Frye" Test}, 12 CAL. LAW., Apr. 1992, at 63.
\textsuperscript{112} Id.
\textsuperscript{113} \textit{Daubert}, 113 S. Ct. at 2797.
\textsuperscript{114} Brief for Nicholas Bloemberger as Amici Curiae at 22, \textit{Daubert} (No. 92-102).
\textsuperscript{115} FED. R. EVID. 803(18).
cialty. General acceptance is part of the requisite foundation, but it is the text which must be generally accepted rather than the scientific theory stated in the passage which the proponent proffers.

For its part, Article II of the Federal Rules sets out the verifiable certainty basis of judicial notice. Rule 201(b)(2) provides that a trial judge may dispense with formal evidence by judicially noticing a proposition when the proposition is "capable of accurate and ready determination by resort to sources whose accuracy cannot reasonably be questioned." The courts frequently apply this provision to scientific propositions. However, before a court will do so, the proponent must persuade the judge that the proposition is widely accepted within the pertinent scientific specialty. Again, a showing of general acceptance is necessary; however under Article II, the showing must relate to the scientific proposition in question.

In its amicus brief supporting Merrell Dow, the American Insurance Association conceded that Rules 201 and 803(18) were germane to the question of the proper interpretation of Rule 702. The association argued that the three statutes are in pari materia and that since Rule 803(18) requires proof of the general acceptance of the noticed proposition, Rule 702 should be construed as codifying "a comparable . . . standard . . . ."

The association was correct in observing that as parts of the same statutory scheme, Rules 201 and 803(18) can help shed light on the meaning of Rule 702 even though the former provisions appear in different articles of the Federal Rules. However, on closer examination, Rules 201 and 803(18) not only cut against the association's argument; they further demonstrate that the broader context of the overall structure of the Federal Rules compelled the Daubert Court's choice to jettison Frye.

If the Court had read Rule 702 as requiring proof of the general

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117 FED. R. EVID. 201(b)(2).
118 GIANNELLI & IMWINKLREID, supra note 56, at § 1-2.
119 Id.; see also CHARLES McCORMICK, MCCORMICK ON EVIDENCE § 330 (4th ed. 1992) [hereinafter MCCORMICK ON EVIDENCE].
120 Brief for the American Insurance Association in support of Respondent at 10-17, Daubert (No. 92-102).
121 Id. at 10.
122 Id. at 11-12.
acceptance of the scientific proposition itself, the Court would have essentially equated the standards under Rules 702 and 201(b)(2). Like the judicial notice standard, the test for the admissibility of scientific evidence would necessitate a showing of the general acceptance of the proposition. For all practical purposes, Rule 702 would duplicate 201(b)(2) and Rules 201 and 702 would be redundant. 123 "A construction ascribing to two separate [statutory] provisions the same meaning and scope is disfavored." 124 The cases are legion holding that a court must presume that a legislature does not intend any of its enactments to be superfluous. 125 It is a cardinal principle of statutory construction 126 that each statutory provision should have independent force; 127 if at all possible, every provision should be interpreted as serving a distinctive, useful function. 128 Courts are reluctant to approve any proposed interpretation which renders a statutory provision even partially 129 inoperative. 130 If Daubert had held that Rule 702 codified the same general acceptance standard as Rule 201(b)(2), the statutes would be "repetitive." 131 If the proponent can show the general acceptance of the scientific proposition, there would be no need to present expert testimony under Rule 702; the same showing would entitle the proponent to judicial notice of the proposition under Rule 201. It is far more rational to think that Congress intended Rule 702 to embody a different threshold. In sum, it is

123 Beef Nebraska, Inc. v. United States, 807 F.2d 712, 717 (8th Cir. 1986) (stating court should avoid constructions which render statutory provisions redundant).
131 Haynes v. United States, 891 F.2d 235, 239 (9th Cir. 1989).
ridiculous to assume that a showing of general acceptance of the proposition is the standard for Rule 702 when the very same showing will trigger the judicial notice provisions of Rule 201.

In the 1954 edition of his famous hornbook, Dean Charles McCormick argued that although general acceptance of the proposition is the correct standard for judicial notice, the test for admissibility of expert admissibility should be both different and more relaxed. In 1993, the *Daubert* Court proved Dean McCormick correct. In light of *Daubert*, each input mechanism for scientific information performs a unique and useful purpose. When a scientific proposition is so generally accepted that the court can dispense with formal evidence and go to the length of giving the jury a mandatory instruction to accept the proposition as a given, Rule 201(b)(2) controls. If the question is whether a scientific text may be quoted to the jury, Rule 803(18) governs. Under Rule 803(18), the proponent need not show that the passage to be quoted embodies a well-settled proposition; but the proponent must demonstrate that the text is generally accepted as authoritative. Finally, when the issue is whether a witness may give live testimony about a proposition, as under Rule 803(18) the proponent need not show that the proposition itself is generally accepted; but under Rule 702, the proponent must come forward with foundational proof that the witness used generally accepted methodology to generate the proposition.

The state of the research on a particular scientific issue may be such that under Rule 201(b)(2), the trial judge can judicially notice one proposition as the only tenable position on a certain scientific issue. However, in many cases, the state of the scientific art will preclude judicial notice of the truth of any particular position; there may be "a genuine debate" within the discipline over the issue. There might be several "competing scientific . . . claims," all resting on sufficiently sound methodology to pass muster under *Daubert*. While the scientific record may preclude judicial notice under Rule 201, the record might nevertheless permit one or both litigants to resort to Rule 702. The drafters not only went to the trouble to include separate input mechanisms, Rules 201,

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133 Fed. R. Evid. 201(g).
134 Respondent's Brief at 30, *Daubert* (No. 92-102).
135 Id. at 15 n.8.
RIGHT PIECE OF THE PUZZLE

702, and 803(18), in the Federal Rules; they even placed those mechanisms in different articles of the Rules. In attempting to divine the meaning of Rule 702, the court should consider the “design of the statut[ory scheme] as a whole.” Reading Frye into Rule 702 would make a mockery of the scheme of the Federal Rules. The only way to give independent effect to the mechanisms dispersed in Articles II, VII, and VIII is to conclude, as did the Daubert Court, that Rule 702 turns on the acceptability of the underlying scientific methodology rather than the general acceptance of the resulting conclusion.

III. THE THIRD PUZZLE: THE STRUCTURE OF FEDERAL EVIDENCE LAW AS A WHOLE

Part One of this article discussed the structure of Article VII of the Federal Rules. However, Part Two pointed out that Article VII is part of the broader context, and the larger puzzle of the statutory scheme of the Federal Rules of Evidence. Part Three addresses a still broader context, namely, federal evidence law as a whole. The Federal Rules themselves are part of a larger puzzle: federal evidence law including both the statutory provisions and the case law dealing with evidentiary issues. How do the federal statutes and cases fit together?

A. The Choice Facing the Court

In his lead opinion, Justice Blackmun declared that the Federal “Rules occupy the field.” However, even a cursory review of the statutory provisions reveals that the Federal Rules fall short of constituting a completely self-contained evidence code. Initially, the Rules do not speak to all related procedural questions. For instance, there is no statutory definition of the scope of redirect examination. Moreover, the Rules say little about the standards for evaluating the legal sufficiency of evidence. By way of example, the Rules do not specify the quantum of evidence necessary to sustain the initial burden of production. Lastly, the Rules do not even purport to comprehensively regulate all admissibility

138 McCORMICK ON EVIDENCE, supra note 119, at § 338.
questions. The premier illustration is the huge window to the common law in Rule 501:

\[\text{[E]xcept as otherwise provided by the Constitution of the United States or provided by Act of Congress or in rules prescribed by the Supreme Court pursuant to statutory authority, the privilege of a witness, person, government, State, or political subdivision thereof shall be governed by the principles of the common law as they may be interpreted by the courts of the United States in the light of reason and experience.}\]

The Conference Committee Report on Rule 501 specifically states that the Rule authorizes the courts to evolve a "federal common law" of evidentiary privilege.

However, to use Justice Blackmun's expressions, with those exceptions, the Federal Rules appear to "occupy the field." The question presented in Daubert was whether they not only apparently but actually occupy the fields such as opinion evidence which they expressly regulate in detail. Merrell Dow itself contended that the Court could derive the necessary evidentiary restrictions from Rule 702. However, many of the amici supporting Merrell Dow went further and asked the Court to hold that federal trial judges retain the common-law power to formulate and enforce uncodified exclusionary rules. The American College of Legal Medicine championed the argument that the Rules countenance additional "judicially-created doctrines." The Chamber of Commerce argued that trial judges may enforce "a traditional common law rule" such as Frye so long as the text of the Federal Rules does not clearly manifest any intent to overturn the rule. Furthermore, the Washington Legal Foundation similarly contended that "Frye may be sustained as a judge-made rule independent of the Federal Rules of Evidence . . . ."

Like the requests that the Court look to Rule 703 or read Frye into the Federal Rules, this contention has some superficial ap-
peal. The *Daubert* Court was not writing on a clean slate; as previously stated, at the time of its decision, the *Frye* rule was the controlling test in the majority of federal and state courts. Moreover, it is probable that some of the more conservative Justices are in sympathy with Mr. Huber's contention that relaxed evidentiary standards, permitting the admission of "junk science" in product liability and toxic tort suits, contribute to the competitive disadvantage of American businesses in world markets. Those Justices might have been tempted to strike a blow against "junk" science by affirming the lower courts' power to enforce *Frye* as a common-law restriction. Furthermore, as respected evidence commentators have argued,\(^1\) recognizing that power would give the trial bench authority to flexibly adapt evidentiary rules to the nuances of particular trials.\(^2\) These commentators have quite properly insisted that such authority is "guided by the inherent discretionary powers of the federal trial judiciary."\(^3\)

The *Daubert* Court faced the task of integrating the Federal Rules of Evidence with the federal case or decisional law on evidence. As the above paragraph indicated, the Court could have declared that the federal courts still have extensive authority to supplement the statutory provisions by enforcing uncodified exclusionary rules, at least when the rules were well-settled at common law prior to the adoption of the Federal Rules. Alternatively, the Court could rule that federal judges have limited authority to formulate decisional exclusionary rules only when statutory provisions such as Rule 501 create windows to the common law.

**B. The Court's Ultimate Decision**

The Court chose the latter option. Perhaps more than any of its other decisions in *Daubert*, the Court's resolution of this issue was vital to the future of federal evidence law. The issue transcended the controversy over the admissibility of scientific testimony and raised the question of whether the Court would maintain the momentum for the reform of American Jurisprudence evidence law. The centerpiece in this issue is Federal Rule of Evidence 402. Rule 402 reads: "All relevant evidence is admissible, except as

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\(^2\) Id. at 1325, 1329-30, 1332-39.

\(^3\) Id. at 1339.
otherwise provided by the Constitution of the United States, by Act of Congress, by these rules, or by other rules prescribed by the Supreme Court pursuant to statutory authority. Evidence which is not relevant is not admissible.”

The exceptive language at the end of the first sentence of Rule 402 lists the sources of authority for formulating exclusionary rules of evidence which can bar the introduction of logically relevant evidence. As the introduction to this article noted, the list includes the Constitution, the Federal Rules of Evidence, other congressional statutes, and “rules prescribed by the Supreme Court pursuant to statutory authority.” Conspicuously, though, there is no mention of case or decisional law in the text of the statute. That omission suggests that standing alone, case law cannot serve as a basis for excluding relevant, otherwise admissible evidence. The wording of Rule 402 implies that the federal courts have lost the common-law authority which the amici in Daubert urged the Court to exercise in order to uphold Frye.

In rejecting that urging, the Court refused to frustrate the legislative intention of Rule 402. All the pertinent indicia of legislative intent point to the conclusion that Rule 402 was calculated to deprive the judiciary of the power to enforce categorical, exclusionary rules of evidence which have no basis in the language of the Federal Rules.

The omission of any mention of case law in the text of Rule 402 implies that intent, and the context of the Federal Rules, notably Rule 501, strengthens the implication. When the drafters wanted to preserve the courts' common-law power to evolve a particular type of evidentiary doctrine such as privileges, the drafters expressly said so. For example, in Rule 501 they used the term of art, “the common law.” If the drafters had contemplated that the courts could exercise general common-law power consistently with Rule 402, it would have been a simple matter to have inserted a reference to “the common law” in that statute.

The extrinsic legislative history materials make the implication well nigh irresistible. For its part, the Advisory Committee's Note to Rule 402 precludes any argument that the omission of any mention of common law in Rule 402 is a simple, inadvertent oversight.

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147 Fed. R. Evid. 402.
In another respect, that Advisory Committee's Note refers to the common law. The committee which drafted Rule 402 had the common law on its mind, but it evidently decided not to insert the common law in the list of sources of authority for formulating exclusionary rules. During the committee hearings on the then proposed Federal Rules, the witnesses testified on the assumption that "except where [as in Rule 501] the Federal Rules of Evidence otherwise provide, there would be no decisional law of evidence." One witness testified point blank that if Congress enacted the Federal Rules, the judicial creation of evidentiary doctrine "will in all probability be prevented." The "political context" of Congress's consideration of the Federal Rules lends further support. In construing a statute, a court may consider the "history of the times." The time of Congress's study of the Federal Rules was the period immediately after Watergate. Congress had just battled the President in the federal courts and fought past evidentiary claims to obtain the documents it needed to investigate the Watergate scandal. Congress adopted the Federal Rules at a time when it was especially jealous of its prerogatives vis-à-vis both the Executive and the Judiciary.

Subsequent developments not only confirmed this interpretation of Rule 402, but also demonstrated that the Supreme Court subscribed to this interpretation. In 1978, the reporter for the Federal Rules, the late Professor Edward Cleary, wrote a classic article about the interpretation of the Federal Rules. In that article, Professor Cleary wrote:

[I]n principle, under the Federal Rules of Evidence no common law of evidence remains. "All relevant evidence is admissible, except as otherwise provided . . . ." In reality, of course, the body of common law knowledge continues to exist, though in the somewhat altered form of a source of guidance in the

149 Id.
151 Id. at n.17.
152 See CARLSON ET AL., supra note 82, at 47.
154 See supra note 152 and accompanying text (discussing "political context" of Congress's consideration of Federal Rules of Evidence).
exercise of delegated powers.\textsuperscript{156}

The last sentence of the quotation indicates that federal courts may still look to the common law for the limited purpose of helping them remove any ambiguities in the text of the Rules. The middle sentence is a direct quotation from Rule 402. The initial sentence explains the net effect of Rule 402—"[i]n principle, under the Federal Rules of Evidence no common law of evidence remains." To make his intent even clearer, Professor Cleary footnoted this passage with a citation to a Ninth Circuit opinion stating that the Federal Rules foreclose the common-law development of evidentiary doctrine.\textsuperscript{157} In 1984, in \textit{United States v. Abel},\textsuperscript{158} the Supreme Court cited Rule 402 and approvingly quoted this very passage from Professor Cleary's article.\textsuperscript{159} In \textit{Daubert}, the Court again quoted the same passage.\textsuperscript{160} The \textit{Daubert} Court was even more emphatic about the central role which Rule 402 plays in the structure of the Federal Rules; the Court described Rule 402 as "the baseline" of the statutory scheme.\textsuperscript{161}

Resurrecting the common law, \textit{Frye} rule would not only have frustrated the intent of Rule 402; more importantly, it also would have imperiled the future of federal evidence law. Rule 402 is a pivotal provision because it prevents the federal courts from retrenching on evidence law reform. To be sure, despite the progress made when Congress approved the Federal Rules, the United States still has the most complex, restrictive set of evidentiary rules in the world.\textsuperscript{162} When the Federal Rules went into effect, they legislated a simpler, more liberal set of evidentiary norms biased in favor of the admission of logically relevant evidence; the Federal Rules materially relaxed such exclusionary rules as the best evidence, opinion, and hearsay doctrines.

Although the Federal Rules which revise particular exclusionary rules, such as hearsay, reflect the Rules' bias in favor of admitting relevant evidence, the bias is clearest in the trilogy of Federal Rules 401 to 403. Rule 401 prescribes an expansive definition

\textsuperscript{156} \textit{Id.} at 915.
\textsuperscript{157} \textit{Id.} at 915 n.27 (federal courts no longer "free" to promulgate evidentiary rules independent of Federal Rules (citing U.S. v. Grajeda, 570 F.2d 872 (9th Cir. 1978))).
\textsuperscript{158} 469 U.S. 45 (1984).
\textsuperscript{159} \textit{Id.} at 51-52.
\textsuperscript{160} \textit{Daubert v. Merrell Dow Pharmaceuticals, Inc.}, 113 S. Ct. 2786, 2794 (1993).
\textsuperscript{161} \textit{Id.} at 2793.
\textsuperscript{162} Imwinkelried, \textit{supra} note 64, at 3.
of logically relevant evidence.\textsuperscript{163} The Advisory Committee's Note to Rule 401 clearly indicates that the drafters set out to codify a definition even broader than the supposedly liberal definition in the California Evidence Code.\textsuperscript{164} It is true that in Rule 403, the drafters gave trial judges discretionary authority to exclude logically relevant evidence when the attendant probative dangers such as prejudice substantially outweigh the probative worth of the evidence.\textsuperscript{165} However, trial judges may exercise their power under Rule 403 only on an ad hoc, case-specific basis; they may not utilize Rule 403 as a source of power to formulate categorical, exclusionary rules.\textsuperscript{166} Moreover, Rule 403 assigns the risk of non-persuasion to the party opposing the admission of logically relevant evidence; once the proponent demonstrates the relevance of the evidence under Rule 401, the opponent must shoulder the burden of convincing the trial judge that the incidental probative risks outstrip the probative value by a wide margin.\textsuperscript{167}

As important as Rules 401 and 403 are, "Rule 402 is potentially the most important" component of the Rules' statutory scheme.\textsuperscript{168} As a generalization, the restrictive evidentiary rules still in effect in the United States are the heritage of the common law; for the most part, they are the work product of common-law courts. Those courts have had a veritable fascination with the proliferation of exclusionary rules of evidence.\textsuperscript{169} When Congress enacted the Federal Rules, American evidence law took an important step forward toward rational simplification. However, if the \textit{Daubert} Court had permitted continued adherence to the \textit{Frye} rule as a common-law doctrine, the Court would have empowered the judiciary to undo Congress's work. A decision to uphold a general acceptance rule of common-law origin would certainly have violated the intent of Rule 402. More fundamentally, the decision would necessarily have sanctioned the theory that uncodified, case law exclusionary rules survived the enactment of the Federal Rules.

\textsuperscript{163} McCormick on Evidence, \textit{supra} note 119, at § 184.
\textsuperscript{164} \textit{Fed. R. Evid.} 401 advisory committee's note.
\textsuperscript{165} \textit{Fed. R. Evid.} 403.
\textsuperscript{167} See Wright & Graham, \textit{supra} note 150, at 318-19.
That decision would have been disastrous.

CONCLUSION

It is predictable that in the near future, the commentary on Daubert will focus on the question of whether the Court selected the best test for determining the admissibility of scientific evidence. However, for the long term, it is important to appreciate that the stakes in Daubert were much higher than the future of scientific evidence. If the Daubert Court has approved continued enforcement of the Frye test as a common-law standard, its decision would have invited lower courts to superimpose case law limitations on the admission of relevant evidence; the decision would have been a major setback to the efforts of simplifying and liberalizing federal evidence law. If the Court had strained the language of Rule 702 to read in a general acceptance requirement, its decision would have made a shambles of the relationship among Articles II, VII, and VII of the Federal Rules; given Rule 201, that decision would have reduced Rule 702 to a redundancy. Finally, as we have seen, if the Court had looked to Rule 703 to evaluate the validity of the expert's underlying theory, its decision would have muddled the structure of Article VII. In short, the real stake in Daubert was the future of federal evidence law as a progressive, coherent body of rules. The Daubert Court's decision, deriving a methodological test from "scientific knowledge" in statutory Rule 702, was the only way to safeguard that future.

This article is intended as more than an apologia for Daubert. The same question will now arise in state after state. Although Daubert resolves the question for federal practice, Daubert is merely persuasive authority in the states. Thirty-five states have already adopted evidence codes patterned after the Federal Rules, and similar codes will be taking effect in other jurisdictions, including Indiana and New Jersey, by the beginning of 1994. Those jurisdictions may soon have to decide whether to follow the lead of the Daubert Court.

170 See Bert Black & John A. Singer, From Frye to Daubert: A New Test for Scientific Evidence, 1 Shepard's, July 1993, at 19; Stephen A. Brunette, Daubert Has Immediate Impact?, 1 Shepard's, July 1993, at 107; George W. Conk, Commentary: Daubert v. Merrell Dow, 1 Shepard's, July 1993, at 55; Michael D. Green, Relief at the Frying of Frye: Reflections on Daubert v. Merrell Dow Pharmaceuticals, 1 Shepard's, July 1993, at 43; Kirby, supra note 4, at S38; Barry N. Nace, Reaction to Daubert, 1 Shepard's, July 1993, at 51.
In most states, the wording of the pertinent provisions, Federal Rules 201, 402, 702-03, and 803(18), is virtually identical to that of the Federal Rules.\textsuperscript{171} For that reason, there is a decent likelihood that many, if not most, of the affected states will fall in step with \textit{Daubert}. However, on more than one occasion, courts in these states have displayed an independent streak and refused to adopt the Supreme Court's reading of the corresponding Federal Rule.\textsuperscript{172} Since so many of those states are presently committed to the \textit{Frye} rule,\textsuperscript{173} those courts may be reluctant to shift to the \textit{Daubert} approach. Honesty demands acknowledging that, other factors being equal, a plausible case can be made for \textit{Frye}. The point of this article, though, is that the other factors are not equal. Under the Federal Rules and in the states with similar evidence codes, the question of the standard for admitting scientific evidence must be decided in context, as part of the larger puzzles of Article VII, the Evidence Rules as a whole, and the overall corpus of evidence doctrine. As the Supreme Court observed in the \textit{King} case, the meaning of any statutory language depends on context.\textsuperscript{174} In \textit{Daubert}, the broader contexts compelled the result reached by the Court.

\textsuperscript{171} See \textit{JOSEPH} \& \textit{SALTZBURG}, supra note 64, § 52.3, at 103.
\textsuperscript{173} See \textit{JOSEPH} \& \textit{SALTZBURG}, supra note 64, at § 51.5.