Developing a Coherent Theory of the Structure of Federal Rule of Evidence 703

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"If you wish to converse with me, [first] define your terms."
—Voltaire

Some commentators have suggested that the American judicial hearing is becoming trial by expert. As recently as 1974, the Jury Verdict Reporter for Cook County, Illinois, listed only 188 regularly testifying experts. "Today, there are more than 3,100—a 1,540 percent increase." In the late 1980s, the Cook County state courts averaged one expert per trial. In some areas, the trend is even more pronounced. In the early 1990s, the Rand Corporation released a study of the use of experts in trials in California courts of general jurisdiction. Expert witnesses appeared in eighty-six percent of the trials studied, an average of 3.3 experts per trial.

There is concern about the number of expert witnesses appearing in trials; however, more importantly, there is concern about the quality of the testimony which these witnesses proffer. In his 1991 text, Galileo's

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4. Id.
5. Id.
7. Id. at 1119.
Revenge, the Manhattan Institute's Peter Huber leveled the charge that much of this expert testimony is "junk science." The debate over this charge was spirited and sometimes bitter. This debate spilled over into the courts. In 1993, the United States Supreme Court joined the debate by rendering its decision in Daubert v. Merrell Dow Pharmaceuticals, Inc. Daubert became a cause celebre. Even before the Court handed down its decision, the media fixed on the case. The subsequent decision was greeted with intense media attention.

The level of attention was understandable. In Daubert, the Supreme Court abandoned the traditional general acceptance standard for determining the admissibility of scientific evidence. The standard dated back to the 1923 Frye test, which announced that an expert witness could not base testimony on a scientific technique unless the technique enjoys general acceptance in the pertinent scientific circles. The test was not only hoary; it had also been widespread. At one time, the general acceptance test appeared to be the law in at least forty-five states. Nevertheless, the Court stated that it could find no language in the Federal Rules of Evidence codifying a general acceptance standard. The Court reasoned that by enacting the statutory rules

15. Daubert, 113 S. Ct. at 2798.
16. Id. at 2792.
17. 1 PAUL C. GIANELLI & EDWARD J. IMWINKELRIED, SCIENTIFIC EVIDENCE § 1-5 (2d ed. 1993).
19. Daubert, 113 S. Ct. at 2794.
without codifying the general acceptance standard, Congress had impliedly abolished the standard.\textsuperscript{20}

To fashion a new standard to govern the admissibility of scientific testimony, the Court turned to the text of Federal Rule of Evidence 702. That statute reads: "If scientific, technical, or other specialized knowledge will assist the trier of fact to understand the evidence or to determine a fact in issue, a witness qualified as an expert by knowledge, skill, experience, training, or education, may testify thereto in the form of an opinion or otherwise."\textsuperscript{21} The Court focused on the expression, "scientific . . . knowledge" and refused to equate the expression with a body of immutably true, substantive propositions.\textsuperscript{22} Rather, the Court opted for a methodological definition, explaining that testimony which qualifies as "scientific . . . knowledge" admissible under Rule 702, if the expert's theory is the product of sound scientific methodology.\textsuperscript{23} The Court elaborated that scientific methodology entails the formulation of hypotheses and subsequent conducting of observation or experimentation to disprove or validate the hypotheses.\textsuperscript{24}

By deriving the new standard from the statutory language, "scientific . . . knowledge," the decision in \textit{Daubert} spotlighted Rule 702. However, in truth another statute, Rule 703, has been the most controversial aspect of expert testimony provisions in the Federal Rules.\textsuperscript{25} Rule 703 provides:

\begin{quote}
The 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.\textsuperscript{26}
\end{quote}

Although it has been more than two decades since the Federal Rules of Evidence took effect in 1975,\textsuperscript{27} many thorny questions about the interpretation of Rule 703 persist.\textsuperscript{28} As Part II of this Article notes,
there are five major splits of authority over the proper construction of Rule 703.\textsuperscript{29} Thirty-eight states have evidence codes directly patterned after the Federal Rules of Evidence. Although the majority of those states adopted the federal version of Rule 703 without change, a number of states have amended their version of Rule 703.\textsuperscript{30} Citing the controversies swirling around Rule 703 as a concern, the Massachusetts Supreme Judicial Court decided against adopting the rule for use in that state.\textsuperscript{31}

The purpose of this Article is to help resolve those controversies. This Article's thesis is that the courts must resolve the threshold dispute over the meaning of "[t]he facts or data in the particular case,"\textsuperscript{32} before they can hope to intelligently dispose of the other four splits of authority. On occasion, some writers have at least passingly recognized a possible nexus among the various issues.\textsuperscript{33} However, for the most part, the commentators have been content to discuss individual issues, without endeavoring to develop a coherent theory of the structure of Rule 703.\textsuperscript{34}

Hopefully, this Article will aid the courts and commentators in seeing the interconnected nature of all five splits of authority over Rule 703. Part I of the Article delves into the key dispute over the meaning of "facts or data in the particular case."\textsuperscript{35} Part II describes each of the remaining four splits of authority. In addition, Part II demonstrates that each split relates back to the dispute over the meaning of "facts or data." To paraphrase Voltaire, if we are to have a productive conversation about Rule 703, we must first define our terms. On a previous occasion, I stated my position on the definition of "facts or data."\textsuperscript{36} The purpose of this Article is not to reiterate that position. Instead, my
The intent is to help the courts appreciate that they must stake out a position on this dispute in order to sensibly resolve the other splits of authority. The courts must come to understand the need to formulate a coherent theory of Rule 703; and, as we shall see, a central tenet of that theory must be a definition of "facts or data in the particular case."

I. THE THRESHOLD DISPUTE OVER THE SCOPE OF RULE 703: THE MEANING OF THE "FACTS OR DATA IN THE PARTICULAR CASE"

The fundamental dispute is whether the expression, "the facts or data in the particular case," is limited to case-specific information or whether the expression also embraces research data.38 To illustrate the distinction, consider the Daubert fact pattern. In that case, the plaintiffs were Mr. and Mrs. Daubert and their son, Jason. During the first trimester of her pregnancy with Jason, Mrs. Daubert had used the defendant's antinausea drug, Bendectin. Jason was subsequently born with serious limb defects. The plaintiffs argued generally that Bendectin is capable of causing such limb defects and specifically that Bendectin was the cause of the defects which Jason suffered. The plaintiffs offered several types of evidence to establish general causation, including in vitro (test tube) research, in vivo animal studies, and pharmacological analyses comparing the chemical structure of Bendectin with that of other substances known to cause birth defects.39 In addition, the plaintiffs attempted to introduce testimony about an epidemiological re-analysis of the drug. They conceded that the published epidemiological analyses did not show a statistically significant correlation between the use of Bendectin and congenital limb defects. However, their experts contended that after the data in the published studies was pooled (a meta-analysis), a re-analysis yielded a statistically significant, and therefore potentially causal, relationship.40

There is agreement that the validation test, which the Daubert Court derived from Rule 702, governs the question of the validity of the technique of epidemiological re-analysis.41 However, the unsettled question is which of the remaining components of the expert's reasoning process are governed by Rule 703. One view is that 703 governs everything else, including all the questions related to the research data.

37. FED. R. EVID. 703.
38. See Imwinkelried, Facts or Data, supra note 36.
40. Id.
re-evaluated by the plaintiff’s experts in their meta-analysis. For example, was the size of the research database adequate, and were the individual studies which were pooled sufficiently comparable to permit meta-analysis?

The competing view is that those questions about research data fall under Rule 702, and that Rule 703 applies only to case-specific information. To make out a submissible tort case, the plaintiffs had to prove specific, as well as general, medical causation; they relied on their experts to prove both. In addition to testifying on the general medical causation issue of whether Bendectin can cause limb defects, the plaintiffs’ experts proposed testimony regarding specific medical causation; they contemplated opining that given Mrs. Daubert’s use of Bendectin and the type of defects which Jason incurred, Bendectin was the likely cause of Jason’s limb deficits. Under the competing view, Rule 703 would govern only the question of whether a proper basis existed for the plaintiffs’ experts to assume that Mrs. Daubert ingested Bendectin (as opposed to another product), and that Jason suffered from the specific types of defects which Bendectin is capable of causing. Part of the mission of Rule 702 would be to govern the resolution of the technical, properly scientific questions.

A. The Broad View that Rule 703 Governs the Questions Related to the Research “Data” Supporting the Finding of General Medical Causation

There is certainly a case to be made for this view. The case can be constructed from the text, context, and legislative history of Rule 703.

The title and body of Rule 703 refer to the “bases” of the expert’s opinion—a term expansive enough to include the research data the expert relies upon. The Dauberts’ experts’ opinion that Bendectin caused Jason’s limb defects rested in part on the research data reanalyzed by the experts. In a broad sense then, the experts’ assumptions about the adequacy and quality of the research data were bases for their ultimate opinion.

The context of Rule 703 (other parts of the statutory scheme) lends some support to the expansive reading of “facts or data.” As the

42. Id.
43. Daubert, 113 S. Ct. at 2791.
44. Imwinkelried, Facts or Data, supra note 36.
Dauberts argued in their reply brief before the Supreme Court, at least at first blush, Rule 702 seems to answer only two questions: Is this witness qualified as an expert on this subject, and is there a genuine need for expert opinion testimony on this subject? Common sense suggests, though, that to ensure the reliability of the opinion, there must be some regulation of the validity of the expert's reasoning process. If Rule 702 does not furnish that regulation, by default, the courts must look elsewhere. With the exception of Rule 703, none of the other provisions in Article VII contains language that could be stretched to regulate the validity of the expert's reasoning. The wording of Rule 703, "facts or data," then becomes an even more attractive candidate.

Further, one passage in the legislative history of Rule 703 points toward the conclusion that it was intended to regulate the validity of the reasoning process. The passage in question appears in the official Advisory Committee Note to Rule 703. In pertinent part, the Note states: "The 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."

As Mr. Justice Kennedy pointed out in his lead opinion in Tome v. United States, in the past the Supreme Court has tended to attach great weight to the Notes as evidence of legislative intention. The Notes were not only prepared by a distinguished committee of judges, practitioners, and academics, they also accompanied the draft Federal Rules throughout the Congressional deliberations on the rules. The reference to "validity" in the Rule 703 Note is some evidence that the validity question falls within the ambit of that statute.

It would be fair to say that at least prior to the 1993 decision in Daubert, the majority view was that Rule 703 applied to both the case-specific, and research data, which the expert's opinion is based upon. In a large number of cases, the courts treated Rule 703 as supplying the analytic frame of reference to evaluate the scientific literature,

50. Imwinkelried, Facts or Data, supra note 36, at 360-61.
research, statistical analyses, laboratory tests, and other studies underpinning the expert’s opinion. In their reply brief before the Supreme Court, the Dauberts pointed out that all the lower courts had cited Rule 703 precedents as the basis for evaluating the validity of the plaintiffs’ experts’ reasoning. Indeed, in the lower courts, Merrell Dow itself had relied on Rule 703 as the foundation for its argument.

B. The Narrow View that Rule 703 Governs Only the Questions Related to the Case-Specific Information Supporting the Finding of Special Medical Causation

Although most courts have ruled that “data” in Rule 703 extends to research data such as the epidemiological data re-analyzed in Daubert, there is a minority view, under which data refers to only case-specific information. The identity of the drug Mrs. Daubert consumed and the nature of Jason’s limb defects—facts essential to proving special causation in Daubert—are illustrative.

There are persuasive reasons for preferring the minority view. The minority view has some footing in the text of Rule 703 which does not refer generally to “the facts or data . . . upon which an expert bases an opinion or inference.” Rather, the phrasing is “the facts or data in the particular case upon which an expert bases an opinion or inference.” The popular, dictionary meaning of “particular” is “relating to a single person or thing.” The pooled epidemiological data was neither particular nor peculiar to Daubert. There were over 2,000 Bendectin lawsuits. The testimony about Bendectin research data would be equally relevant and admissible in all 2,000 trials.

n.3 (Vt. 1989).
57. Id.
58. Imwinkelried, Facts or Data, supra note 36, at 360-61.
59. FED. R. EVID. 703.
60. WEBSTER’S SEVENTH NEW COLLEGIATE DICTIONARY 614 (1972).
The minority view can also be grounded in the context of Rule 703. Like Rule 703, Rule 705 is situated within Article VII and therefore serves as part of the context of Rule 703. Rule 705 provides: "The expert may testify in terms of opinion and give reasons therefore 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 underlying facts or data on cross-examination." Significantly, Rule 705 contains the identical expression as Rule 703, that is, "facts or data." When a legislature uses the same language in two statutes, the courts normally assume that the legislature intended the language to mean the same thing in both statutes.

The structure of Rule 705 strongly suggests that facts or data, in that statute, denotes case-specific information. On its face, the first sentence of the statute allows the expert to state the "reasons" for her opinion without stating the underlying facts or data. However, interpreting "facts or data" as including all the research data virtually drains reasons of any possible meaning. Most components of the expert's reasoning would be subsumed under "facts or data," and the expert could therefore withhold any description of those components on direct examination. In Daubert the result would be that the entire direct examination could be the witness's bald assertion: "My epidemiological re-analysis proved that Bendectin causes limb defects like the ones Jason Daubert suffers from." It seems absurd to characterize such testimony as the full statement of "reasons" which Rule 705 mandates. It is far more sensible to conclude that reasons include not only an identification of the methodology employed, epidemiological re-analysis, but also a specification of the research data the methodology was used to analyze, the pooled epidemiological data. The facts or data in Rule 705 would be the case-specific information about the identity of the drug Mrs. Daubert ingested and the specific limb defects Jason incurred. Again, if "facts or data" in Rule 705 has that meaning, it presumably has the same meaning in Rule 703.

Two passages in the Advisory Committee Note to 703 strengthen the case for the minority view. In one passage, the Note gives examples of the types of information which constitute facts or data under Rule 703. The passage alludes to "statements by patients and relatives, reports and opinions from nurses, technicians and other doctors, hospital records, and X-rays." All these examples are case-specific information: "a

62. FED. R. EVID. 705.
64. FED. R. EVID. 703 advisory committee's note.
patient’s statement that he experienced pain, a report by a relative that the patient complained about pain, a nurse’s opinion that the patient was in pain, a hospital record quoting the patient’s complaint about pain, or an X-ray showing the possible cause of the pain. The Note adds that in certain circumstances, an accident reconstruction expert might be able to base an opinion on the statement of a bystander to the accident. The bystander’s statement would unquestionably be case-specific information. The Note makes no mention of generalized scientific research or studies.

Moreover, the thrust of the Note makes it reasonably clear that the drafters’ intent was to create a new, workable alternative to the hypothetical question. Merrell Dow made that very point in its brief to the Court. A hypothetical question in Daubert might be worded:

Professor, I want you to assume the following facts. (1) Mrs. Daubert regularly ingested an anti-nausea drug during her first trimester. (2) That drug was Bendectin. (3) Jason Daubert was born as a result of that pregnancy. And (4) at the time of birth, Jason’s limbs were deformed. Based on those facts, do you have an opinion as to the cause of Jason’s limb defects?

The witness would apply his or her expertise—“scientific ... knowledge”—to evaluate those facts and opine based on that evaluation. However, suppose that the plaintiffs’ attorney tried to add a fifth fact to the hypothesis: “[E]pidemiological studies show that there is a statistically significant relationship between maternal use of Bendectin and birth defects.” Any judge in her right mind would sustain an objection to that phrasing. It is the expert who is supposed to contribute the scientific knowledge to the fact-finding process. "It is wrong-minded for the attorney’s hypothesis to tell the expert what scientific data to assume." Hence, the hypothesis should be confined to case-specific data.

If Rule 703 merely creates an alternative to the hypothetical question—another way of providing the expert with the facts or data to be evaluated—the scope of the rule should be limited to case-specific information. Concededly, Rule 703 makes it unnecessary for the expert’s

65. Imwinkelried, Facts or Data, supra note 36, at 371.
66. Id.
67. Id.
69. Imwinkelried, Facts or Data, supra note 36, at 371-72.
70. Id. at 372.
71. Id.
proponent to put a hypothetical question to the expert and formally introduce technically admissible evidence to support every element of the hypothesis; so long as it is customary in the expert's specialty to consider a particular source of information, the expert may generally rely on hearsay reports from that type of source even if the reports are technically inadmissible. However, there is no indication in the legislative history of Rule 703 that the drafters intended to reverse the roles of attorney and expert, allowing the former to tell the latter which amounts and types of research data suffice to validate a scientific hypothesis. Whether assumed hypothetically, or established by customary sources of information, the facts or data in Rule 703 ought to be restricted to case-specific data.

As previously stated, although there is some respectable authority for the restrictive interpretation of Rule 703, this interpretation is a distinct minority view. The view is somewhat more popular among academic commentators.

II. THE OTHER FOUR SPLITS OF AUTHORITY OVER THE INTERPRETATION OF FEDERAL RULE OF EVIDENCE 703

Part I described the threshold dispute over the meaning of the expression, "facts or data" in Rule 703. That dispute is only one of five major splits of authority over Rule 703 currently troubling the courts. The thesis of this Article is that the remaining four splits of authority cannot be intelligently resolved until the courts have settled the definition of facts or data. To further develop that thesis, Part II reviews the other four splits of authority. Part II describes each split, and then explains how the resolution of that split turns, at least in part, on the antecedent question of the meaning of "facts or data."

A. Split of Authority #1: Whether a Testifying Expert May Purport to Base His or Her Opinion on an Identical Corroborative Opinion by a Nontestifying Expert

The Split of Authority. Although the first sentence of Rule 703 begins with the pivotal expression, "the facts or data in the particular

73. Imwinkelried, Facts or Data, supra note 36, at 360.
74. See Carlson, Conduits, supra note 31, at 870; see Epps, supra note 27, at 70, 75, 77.
case,"\textsuperscript{76} the sentence continues with statutory language which has triggered another split of authority. In its entirety, the sentence reads: "The 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."\textsuperscript{78} The sentence seems to refer in sweeping terms to any material on which, in a general sense, the expert "bases" his or her opinion.

Exactly how sweepingly should that reference be interpreted? The courts agree that in forming an opinion, a testifying expert may build upon a subsidiary opinion furnished by another, nontestifying expert. The Advisory Committee Note to Rule 703 states that "a physician in his own practice bases his diagnosis on information from numerous sources \ldots, including \ldots opinions from nurses [and] technicians \ldots."\textsuperscript{77} Thus, after considering a nurse's opinion that the patient's breathing pattern was abnormal, a treating physician might draw the further inference that the patient had a particular viral infection. Or, after considering a toxicological technician's findings, a forensic pathologist could draw a further inference as to cause of death.\textsuperscript{78} In each case, the testifying expert considers a lower-level opinion on a subsidiary issue, builds upon it, and draws a second inference or opinion.

Suppose, however, that in \textit{Daubert} the plaintiffs had sought recovery for a psychiatric injury allegedly suffered by Mrs. Daubert; they alleged that Mrs. Daubert sustained the injury as a result of the anguish caused by her realization of the extent of Jason's limb defects. There might be agreement in psychiatric circles on the theory of general causation, and there may even be consensus that this sort of psychological shock could trigger the very species of psychosis from which Mrs. Daubert now suffers. To prove special causation, the plaintiffs call a mental health expert who discounts other possible causes in Mrs. Daubert's medical history and opines that Jason's birth, and the consequent anguish, caused Mrs. Daubert's mental state. Could the testifying expert bolster her opinion by stating she consulted another expert who concurred that Jason's birth was the catalyst for Mrs. Daubert's psychosis, and that the testifying expert partially "bases" her opinion on the nontestifying expert's opinion?\textsuperscript{79} In this hypothetical, the testifying expert is not

\begin{itemize}
  \item \textsuperscript{75} \textit{FED. R. EVID.} 703.
  \item \textsuperscript{76} \textit{Id.}
  \item \textsuperscript{77} \textit{FED. R. EVID.} 703 advisory committee's note.
  \item \textsuperscript{78} 2 \textit{PAUL C. GIANELLI \\ & EDWARD J. IMWINKELRIED, SCIENTIFIC EVIDENCE \S 20-5(C) (2d ed. 1993).}
  \item \textsuperscript{79} Carlson, \textit{Collision Course, supra} note 25, at 247, (in which the expert on the stand attempted to testify that "I would say that Doctor Rada is in concurrence with my opinion in this case.") (quoting State v. Towne, 453 A.2d 1133 (1982)).
\end{itemize}
building upon a subsidiary opinion of the nontestifying expert. Rather, both opinions speak to the identical question; the testifying expert is referring to the other opinion to corroborate her own opinion. Does Rule 703 contemplate the admission of such corroborative opinions as well as subsidiary opinions?

The jurisdictions are split over this question.80 Some courts admit corroborative opinions.81 In particular, several courts have condoned this practice in cases involving psychiatric and land valuation experts.82 However, other jurisdictions have prohibited this use of Rule 703. These courts refuse to permit the testifying expert to function as a conduit for the identical opinion of the nontestifying expert.83 In these courts, although an expert may build upon a subsidiary opinion, the expert may not parrot a nontestifying expert's opinion on the same subject.

The Relationship Between the Resolution of this Split of Authority and the Question of the Scope of Rule 703. On the one hand, under the broad view of the scope of Rule 703, it would make eminently good sense to admit some corroborative opinions. According to this view, facts or data include research data. Suppose, for instance, that the question is one of general causation: Is there an adequate scientific showing that experiencing the type of anguish Mrs. Daubert suffered can trigger the specific psychosis which she now alleges? The hypothesis is that there can be such a causal link, and the mental health expert on the stand is vouching for the validity of this hypothesis. It would be proper for that expert to testify that another researcher had also concluded that the hypothesis is valid.

After a scientist conducts an experiment or engages in observations to test a hypothesis, the scientist not only privately records her findings, she also publishes the findings to permit the replication of the test.84 The publication facilitates peer review of the test of the hypothesis.85 The fact that another researcher has duplicated the test and reached an identical conclusion is relevant in deciding whether the hypothesis has

80. Carlson, Conduits, supra note 31, at 865 n.39 (collecting conflicting authorities); Imwinkelried, Minefield, supra note 29, at 262-63 (collecting authorities).
82. Carlson, Collision Course, supra note 25, at 239.
83. Id. at 241 n.24, 244, 248; Carlson, Conduits, supra note 31, at 864 n.30.
been verified.\textsuperscript{86} Each test result, consistent with the hypothesis, increases the scientific community's confidence that the other test findings are the product of the validity of the hypothesis rather than artifact.\textsuperscript{87} In this context, it is wholly appropriate for the testifying researcher to rely on the corroborative opinion of the nontestifying researcher. The testifying researcher is in a better position than any lay juror or judge to determine whether the other researcher has observed proper scientific test procedure, and the testifying researcher may legitimately consider the fact that the hypothesis of general causation has "withstood [another] thoughtful effort[\textsuperscript{88}] at falsification." The determination of the validity of the hypothesis of general causation is "an exercise in scientific analysis" proper.\textsuperscript{89} Reliance on findings on the same issue by other researchers is an integral part of the way Newtonian science works in practice.\textsuperscript{90}

On the other hand, the admission of corroborative opinions is incompatible with the narrow view of the scope of Rule 703.\textsuperscript{91} The expert is no longer attempting to testify as to general causation. Rather, the expert is endeavoring to opine on special causation; assuming the scientific hypothesis of general causation, the expert proposes to discount other possible causative factors and attribute Mrs. Daubert's psychosis to the anguish she experienced upon realizing Jason's limb defects.

The trustworthiness of the opinion as to special causation depends in part on the same factors which the trier of fact is expected to evaluate. How credible was Mr. Daubert's statement that Mrs. Daubert's previous medical history contained no evidence of another possible cause? How dependable was Mrs. Daubert's memory of the onset of one of the symptoms? In making these determinations, the expert is not in a position superior to that of the lay trier of fact:

\begin{quote}
Does the physician's medical degree make the physician a better judge of character than the judge or jury? A physician's medical school coursework does not include any specialized training in determining credibility. Th[is] determination ... is predominantly an exercise in factual analysis rather than true scientific analysis. To make that determination, the expert temporarily "step[s] into the shoes of the factfinder" at trial. We do not assign that final determination to
\end{quote}

\textsuperscript{86} Id.
\textsuperscript{87} Id.
\textsuperscript{88} Id. at 753-74.
\textsuperscript{89} Imwinkelried, Bases, supra note 45, at 10-11.
\textsuperscript{91} See Carlson, Collision Course, supra note 25, at 248 n.60.
experts because the determination amounts to "factfinding, not the application of expertise." Empowering experts to finally decide the[se] facts ... would "usurp[] and derogate[] the function of the fact-finder." 92

It is proper for a testifying expert to draw on another expert's research on the identical question to support a conclusion that a scientific hypothesis of general causation is valid. However, it is improper for the testifying expert to rely on another expert's credibility determinations to support her decision to accept Mr. Daubert's statement or trust Mrs. Daubert's memory. Those determinations lie within the expertise of neither the witness on the stand, nor the expert whom that witness consulted; those determinations are peculiarly for the trier of fact. In the case of the testifying expert, the opponent can at least cross-examine to elicit facts relevant to the determination. For example, the opponent might force the testifying expert to admit the patient had difficulty remembering the precise date of the onset of a symptom. However, the opponent cannot question the nontestifying expert, and the trier of fact is therefore denied the opportunity to second-guess the credibility of the case-specific information on which that expert relied. Thus, if facts or data mean such case-specific information as the subjects of the statement or recollection, corroborative opinions should arguably be excluded.

The upshot is that the resolution of this split of authority is closely tied to the position the court takes on the threshold question of the scope of Rule 703. If the court opts for the broad view, extending Rule 703 to scientific research data, at least in some cases corroborative opinion may legitimately serve as a basis for the testifying expert's opinion; the scientific process of validating a hypothesis has an iterative quality, and findings by other researchers investigating the very same question may figure in an expert's evaluation of the hypothesis. However, if the court adopts the narrow view restricting Rule 703 to case-specific data, the admission of corroborative opinion is suspect at best. On that assumption, the nontestifying expert has assessed the credibility of case-specific evidence such as statements by patients purporting to recall earlier symptoms. That assessment is ordinarily the province of the trier of fact, and admitting a corroborative opinion by a nontestifying expert invades that province.

B. Split of Authority #2: Whether the Judge May Pass on the Credibility of the Specific Data the Expert Considered in Addition to Deciding Whether the Expert Considered a Proper "Type" of Data

The split of authority discussed in subpart A relates to the first sentence in Rule 703. The second sentence of the rule has spawned even more controversy; the text of that sentence has given rise to no less than three splits of authority. That sentence reads: "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." The third and fourth words in the sentence, "a type," are the source of one split of authority.

The Split of Authority. The only inquiry which the statute expressly asks the judge to make is whether the expert contemplates considering a generic "type" of information which experts in her specialty reasonably rely on. Suppose the judge is satisfied that the type or category of information satisfies this standard. May the judge nevertheless bar reliance on the information when there are grave doubts about the credibility of the specific data? The courts are divided over this question. Some courts empower the trial judge to consider the trustworthiness of the specific data, as well as the general reliability of the category of data. Other courts draw a negative implication from the statutory language, reasoning that the only inquiry expressly authorized is an evaluation of the generic category of data, and therefore the statute precludes the judge from going farther and examining the trustworthiness of the particular data.

The differing opinions filed in Christophersen v. Allied-Signal Corp. illustrate the dispute. The plaintiffs in Christophersen were the surviving relatives of a former employee of Marathon Manufacturing Company. The employee had died of cancer. The cancer originated in his colon but had then metastasized to his liver. While he worked for Marathon, the employee was exposed to cadmium and nickel fumes. The plaintiffs contended the exposure was the cause of the employee's cancer and death. As in Daubert, the plaintiffs attempted to establish both general and special causation. On the general causation issue, the plaintiffs proffered evidence that exposure to cadmium and nickel fumes

93. Fed. R. Evid. 703.
94. Epps, supra note 27, at 54.
95. Id. at 75 n.98.
96. Id. at 76 n.99.
can cause small-cell cancer of the colon. On the special causation
question, the plaintiffs proffered a coemployee’s affidavit describing the
extent of the decedent’s exposure to the fumes. The plaintiff’s expert,
Dr. Miller, acknowledged that "the level and duration of the patient’s
exposure are important considerations when evaluating the effect of
exposure to a toxic substance." The trial judge refused to allow Dr.
Miller to opine based on the contents of the affidavit.

On appeal, the majority of the Fifth Circuit Court of Appeals upheld
the trial judge’s refusal. The majority attacked the reliability of the
information set out in the coemployee’s affidavit and ruled that even if
the plaintiff’s experts had considered “the types of information upon
which experts reasonably rely when forming opinions on the subject, . . .
the district court was [nevertheless] justified in excluding Dr. Miller’s
opinion . . . based upon . . . grossly inaccurate dosage or duration
data.” Even assuming *arguendo* that as a general proposition an
expert might rely on exposure data furnished by fellow workers, the
majority concluded that the specific data contained in this affidavit was
vague and “plainly untrustworthy.”

In his separate opinion, Chief Judge Clark protested the majority’s
conclusion. He asserted that the plain meaning of the statutory
language precluded the trial judge from even considering the credibility
of the specific information on which Dr. Miller proposed resting his
opinion. As Chief Judge Clark construed Rule 703, the trial judge’s
scope of inquiry is narrowly confined to the type of information on which
the expert relies. Chief Judge Clark stated that “[t]he court’s inquiry is
not whether experts in the relevant field would reasonably rely on the
particular facts or data used by the expert witness.”

Arguments can be advanced for both interpretations of this passage in
the second sentence of Rule 703. *Daubert* contains a general mandate
that judges police or screen the reliability of scientific testimony. The
expert’s reliance on a wholly untrustworthy category of information
can certainly undermine the reliability of the expert’s opinion, and, as
a matter of logic, it would seem that the expert’s consideration of specific
inaccurate information could have the same effect. Moreover, Federal

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98. 939 F.2d at 1113.
99. *Id.*
100. *Id.*
101. *Id.* at 1114.
102. *Id.* at 1113.
103. Christophersen, 939 F.2d at 1116 (Clark, C.J., concurring).
104. *Id.* at 1118.
Rule of Evidence 403 allows the judge to exclude evidence in her discretion when the probative value of the evidence is outweighed by prejudicial dangers. It could be argued that doubts about the reliability of the specific information the expert considered can diminish the probative value of the expert’s opinion to the point that it becomes vulnerable to a Rule 403 objection.

However, there are counterpoints. To begin with, the prevailing view is that the judge may not factor the credibility of an item of evidence into her assessment of its probative value. The judge may consider factors that are evident on the face of the proffered testimony, such as its indefiniteness, or remoteness in time or place from the key events involved in the litigation. However, most courts that have reached the question have decided that under Rule 403, the judge may not weigh the credibility of the evidence—that evaluation is the task of the trier of fact.

Furthermore, unlike several other provisions in the Federal Rules of Evidence, Rule 703 does not expressly authorize the judge to consider the trustworthiness of specific data. Only three hearsay exceptions—Rules 803(6) and (7) dealing with business entries, and Rule 803(8) governing official records—contain such an authorization. All three statutes include language to the effect that even when there is a prima facie foundation, the trial judge may exclude the proffered evidence if “the [particular] sources of information or other circumstances indicate lack of trustworthiness.” There is no corresponding language in Rule 703, and the contrast strengthens the inference that the drafters intended to limit the judicial inquiry to the general type of information the expert proposes considering.

The Relationship Between the Resolution of this Split of Authority and the Question of the Scope of Rule 703. The point of this Article, though, is that the courts cannot effectively resolve these splits of authority until they have defined the scope of Rule 703. Like the division of sentiment over the admissibility of corroborative opinions, this split of authority proves the point.

Initially, assume the narrow view of the scope of Rule 703 as the starting point. On that assumption, Rule 703 applies only to case-specific information. If Rule 703’s scope is so limited, grave problems

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107. Id. at 856-57 & n.54.

108. FED. R. EVID. 803(6), (7), (8).

109. Id.
exist in allowing the judge to pass on the credibility of the specific information on which the expert contemplates relying. Again, the information is case-specific data such as information indicating Mrs. Daubert ingested Bendectin rather than another antinausea drug, or that Jason was born with particular types of limb defects. This information relates to facts about the historical merits of the case; those issues coincide exactly with ultimate facts determining liability. They are the very facts set out in the complaint. In our trial system, the jury traditionally evaluates the credibility of the testimony relevant to the ultimate facts. Since the Sixth and Seventh Amendments secure constitutional rights to jury trial, reading Rule 703 as allowing the trial judge to assess the credibility of this information raises serious concerns about the constitutionality of Rule 703.111

In many cases, though, the concerns would evaporate if the court adopted the broad view of the scope of Rule 703. Under that view, Rule 703 applies to research data and case-specific data. The questions related to research data—questions such as the size and composition of the database—are mentioned nowhere in the pleadings. They are not ultimate facts on the merits of the case. These questions are farther removed from the merits; they determine the reliability of an evidentiary datum offered to prove an ultimate fact. Empowering the judge to pass on the trustworthiness of the specific research data the expert considered represents much less of an intrusion on the jury's traditional fact finding role.

As in the case of the split of authority over corroborative opinions, an analysis of this split leads back to the question of the scope of Rule 703. In particular, the adoption of the narrow view of the scope of Rule 703 cuts strongly against allowing the trial judge to inquire into the reliability of the specific information that the expert considered. Under the narrow view, excluding corroborative opinions to prevent the expert from usurping the jury's right to evaluate the credibility of the case-specific information is advisable. Likewise, under the narrow view, it would be sound to confine judicial inquiry to the reliability of the general category of information, preventing the judge from usurping the jury's right.

110. Epps, supra note 27, at 78.
C. Split of Authority #3: Whether the Trial Judge May Preclude the Expert from Considering a Type of Information Even if it is the Customary Practice of the Expert's Specialty to Rely on That Type of Information

Subpart B noted the controversy triggered by the words "a type" at the beginning of the second sentence in Rule 703. The third split of authority arises from the language immediately following those two words: "If of a type reasonably relied upon by experts in the particular field in forming opinions or inferences upon the subject . . . ."\textsuperscript{112} The issue is the definition of "reasonably."\textsuperscript{113}

The Split of Authority. Like the issues of corroborative opinions and the scope of judicial inquiry, the definition of "reasonably" has divided the courts.\textsuperscript{114} There are three schools of judicial thought on the definition.

The liberal school equates "reasonably" with "regularly"\textsuperscript{115} or "customarily."\textsuperscript{116} It is true that under this view, the judge must make a finding of fact as to whether it is the customary practice of the expert's specialty to factor a particular type of data into the reasoning process.\textsuperscript{117} But once the judge finds that the custom exists, the judge's hands are tied. The judge must permit the expert to utilize data falling within that category, even if the judge entertains doubts about the reliability of that kind of information.\textsuperscript{118} According to this view, the judge may not independently determine the reliability of the type of information.\textsuperscript{119} The proponents of this school find some support in the

\begin{itemize}
  \item \textsuperscript{112} Fed. R. Evid. 703.
  \item \textsuperscript{113} Epps, supra note 27, at 60.
  \item \textsuperscript{115} Epps, supra note 27, at 78.
  \item \textsuperscript{116} Carlson, Policing, supra note 114, at 582; Carlson, Collision Course, supra note 25, at 240 n.23. See United States v. Scrima, 819 F.2d 996, 1002 (11th Cir. 1987) ("customarily rely").
  \item \textsuperscript{119} Carlson, Policing, supra note 114, at 583; Epps, supra note 27, at 76.
\end{itemize}
Advisory Committee Note accompanying Rule 703. This Note states that one of the purposes of Rule 703 is "to bring judicial practice into line with the practice of experts themselves when not in court." Construing reasonably as if it read customarily makes the practices coincide perfectly.

The competing, restrictive school advocates that "reasonably" denotes objective reliability rather than customary practice. These courts concede that the specialty's customary practice is relevant and entitled to "due regard," but they deny that this factor is dispositive. The courts subscribing to this school believe the trial judge should actively police the basis of the expert's opinion rather than passively deferring to the specialty's customary practice. Accordingly, the trial judge must independently assess the reasonableness of relying on that type of information. This school is probably the majority view in the United States.

A third, compromise school exists. These courts regard the specialty's customary practice as such "strong evidence" of reasonableness that proof of the custom gives rise to a formal presumption of reasonableness. The presumption is rebuttable, but in practice, these courts ordinarily uphold the specialty's customary practice. Formally however, the judge retains the power to reject the experts' practice.

In the past, the battle over this issue has been fought without regard to the relationship the battle has to the threshold question concerning the definition of facts or data. While the advocates of the liberal school point to the Advisory Committee Note, the proponents of the restrictive view have made counter-arguments. One counter-argument rests on the wording of other Federal Rules provisions, notably, Rules 406 and 803(17). Rule 406 governs the admission of habit evidence, and 803(17) creates a hearsay exception for commercial publications "generally used and relied upon by the public or by persons in particular occupations." This counter-argument runs that when the drafters...
wanted to elevate customary practice to the status of a test, they found apt words to manifest their desire. The drafters did not write similar wording into Rule 703; instead, they chose the term, "reasonably." In a tort case, when the issue is whether a defendant business was negligent, the defendant may offer testimony that its practice was customary.\textsuperscript{132} The customary nature of the practice is some relevant evidence that the practice is objectively reasonable.\textsuperscript{133} However, ultimately, the custom is not controlling.\textsuperscript{134} The judge possesses the power to assess the practice independently and second guess the industry's custom.\textsuperscript{135} The restrictive and compromise schools accord the judge the same ultimate decisionmaking power under Rule 703.

The Relationship Between the Resolution of this Split of Authority and the Question of the Scope of Rule 703. This battle ought not occur in a vacuum, divorced from the fundamental question of the scope of Rule 703. Although the meaning of "facts or data" does not dictate the meaning of reasonably, the courts' positions on the meaning of facts or data are as pertinent here as they were under the previous split of authority; while the narrow view of "facts or data" is compatible with all three schools on the interpretation of reasonably, the broad view is at odds with the liberal school's making the specialty's practice controlling.

At first blush, the inconsistency between the broad view and the liberal school may not be evident; on close scrutiny however, the inconsistency becomes clear if we think back to Daubert. In Daubert, the Supreme Court dealt with the evidentiary standard that determines when an expert may rest her testimony on a scientific theory or technique.\textsuperscript{136} The Court affirmatively held that Federal Rule of Evidence 702 supplies the standard;\textsuperscript{137} the underlying theory or technique must qualify as "scientific . . . knowledge" derived from sound scientific methodology.\textsuperscript{138} Negatively, the Court declared that the traditional general acceptance test is no longer good law.\textsuperscript{139} Under that test, the consensus or custom within the scientific field was disposi-

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  \item \textsuperscript{132} W. Page Keeton et al., Prosser and Keeton on the Law of Torts § 33, at 193 (5th ed. 1984).
  \item \textsuperscript{133} Id. at 195.
  \item \textsuperscript{134} Id.
  \item \textsuperscript{135} Id. at 194 n.11.
  \item \textsuperscript{136} Daubert, 113 S. Ct. at 2792.
  \item \textsuperscript{137} Id. at 2793.
  \item \textsuperscript{138} Id. at 2796-97.
  \item \textsuperscript{139} Id. at 2799.
\end{itemize}
tive.\textsuperscript{140} If the consensus was that the technique is valid, the technique passed muster; but conversely, when the consensus was lacking, the test obliged the judge to exclude the testimony even if impressed by the extent and quality of the scientific research supporting the hypothesis that the technique is valid.\textsuperscript{141} Under the new Rule 702 standard, the extent and quality of the scientific research are determinative.\textsuperscript{142} As previously stated, commentators concur that on the facts of \textit{Daubert}, the new empirical validation standard applies at least to the question of the accuracy of the validation methodology used by the plaintiffs’ experts, that is, epidemiological re-analysis.\textsuperscript{143}

Post-\textit{Daubert}, would it make sense for a court subscribing to the broad interpretation of “facts or data” to equate “reasonably” with customarily? If a court favors the broad meaning of “facts or data,” it will extend Rule 703 to at least some of the questions related to the research data—the quantity of the pooled epidemiological data that the plaintiffs’ experts re-analyzed, the quality of the data, and the strength of the inferences from the data. Like the issue of the validity of epidemiological re-analysis, these questions are technical issues falling outside the normal ken of laypersons.\textsuperscript{144} Scientific learning exists concerning the questions of the proper collection of research data,\textsuperscript{145} the requisite size of a database,\textsuperscript{146} and the proper statistical methods for inferring correlations.\textsuperscript{147} \textit{Daubert} teaches that the issue of the validity of epidemiological re-analysis must be decided under Rule 702’s empirical validation test, not the old general acceptance or consensus test. However, if the court liberally interprets “reasonably” as customarily, a consensus will determine the other questions.

If a court adopts the broad interpretation of “facts or data,” embracing the liberal view of “reasonably” would introduce an anomaly into the law of scientific evidence. The validity of epidemiological re-analysis, the adequacy of the size of the database, and the inference of a statistical showing of causation from the database are

\textsuperscript{140} \textit{I. Paul C. Giannelli & Edward J. Imwinkelried, Scientific Evidence} § 1-5 (2d ed. 1993).
\textsuperscript{141} \textit{Id.}
\textsuperscript{142} \textit{Daubert}, 113 S. Ct. at 2799.
\textsuperscript{143} Chesebro, \textit{Daubert’s Focus}; supra note 41.
\textsuperscript{144} Imwinkelried, \textit{Facts or Data}, supra note 36, at 373-74.
\textsuperscript{146} \textit{Id.} § 15-4(B).
\textsuperscript{147} \textit{Id.} § 15-6(A).
all . . . essential components of the scientist's [reasoning] . . . . Under a broad interpretation of Rule 703 [extending it to research data], courts might continue to subject those components of the scientific reasoning process to Frye's popularity test. If consensus and popularity are not the criterion for passing on the general validity of epidemiological re-analysis, they surely should not be the litmus test for these other components.148

In subparts A and B, we saw that what is really at stake is the jury's traditional role in evaluating the credibility of the testimony relevant to the ultimate facts. Allowing the testifying expert to refer to corroborative opinions threatens that role, as would permitting the judge to pass on the believability of case-specific information that the expert considers. So too, the judge's traditional role warrants protection. Daubert underscored that tradition; the Court announced that the trial judge must play an independent gate-keeping role in screening out unreliable scientific evidence.149 Daubert instructs the trial judge that she may consider the general acceptance of a scientific theory in deciding whether to expose the jury to testimony premised on the theory.150 However, the Court makes it clear that general acceptance is merely a factor—it no longer enjoys the status of serving as the exclusive criterion for admissibility.151 The decision in Daubert reaffirms the trial judge's essential responsibility of deciding whether proffered evidence is reliable enough to be admissible.152 This is an inherently judicial decision, especially in a jurisdiction extending Rule 703 to research data. Facilely equating reasonably and customarily would shift some of that decision-making authority from the judge to the expert.

D. Split of Authority #4: Whether the Expert's Proponent May Formally Introduce Any Technically Inadmissible Information Which the Expert Reasonably Relies Upon

Assume the expert contemplates relying on technically inadmissible hearsay information such as an oral report by a nurse or laboratory technician. The trial judge determines that albeit technically inadmissible, the information is nevertheless the type of data "reasonably relied upon by experts in the particular field in forming opinions or inferences upon the subject . . . ."153 Everyone would agree that the expert may

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148. Imwinkelried, Facts or Data, supra note 36, at 376.
149. Daubert, 113 S. Ct. at 2795-99.
150. Id. at 2797.
151. Id. at 2796-98.
153. FED. R. EVID. 703.
then testify to the opinion based on that data;\textsuperscript{154} the opinion itself is admissible as substantive proof.\textsuperscript{155} Perhaps most would also agree that in general terms, the expert could describe the type of information he relied upon in forming the opinion.\textsuperscript{156} For example, the expert could state that he had considered verbal descriptions by ambulance attendants and nurses of the patient's symptoms. The point of controversy is over whether to permit the expert to quote the hearsay verbal reports on direct examination.\textsuperscript{157} Or suppose that the nurse had reduced her report to writing. Could the attorney calling the physician introduce the nurse's report into evidence simply because the physician attests to his reliance on the report in reaching his opinion?\textsuperscript{158} Those questions have sparked the fourth split of authority.

**The Split of Authority.** The split of authority relates to the concluding language in the second sentence of Rule 703: "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."\textsuperscript{159} The quoted language does not explicitly state whether the expert's proponent may formally introduce the technically inadmissible information constituting the basis of the expert's opinion.\textsuperscript{160} As in the case of the split of authority over the scope of judicial inquiry, this split of authority turns on the propriety of an implication from the statutory language: Did the drafters mean to imply that although the data is technically inadmissible, it may be formally admitted and submitted to the jury? As in the case of the split of authority over the meaning of "reasonably," the courts have split into several camps. The courts and commentators are even more badly divided over this issue. Indeed, there are four distinct camps. Professor Carlson has championed the most conservative camp. His position is that on direct examination, the expert may not elaborately

\textsuperscript{154} Carlson, *Collision Course*, supra note 25, at 239-40.
\textsuperscript{155} Epps, supra note 27, at 54.
\textsuperscript{156} Carlson, *Conduits*, supra note 31, at 869; Carlson, *Collision Course*, supra note 25, at 251; Carlson, *Policing*, supra note 114, at 584 n.23.
\textsuperscript{158} Professor Ronald L. Carlson has pondered analogous situations where the question of whether oral and written reports which lack proper foundation may be admitted directly into evidence because a testifying expert relied on such reports in forming his or her opinion. See Carlson, *Collision Course*, supra note 25, at 234, 237, 242, 250-51; Carlson, *Policing*, supra note 114, at 583-84.
\textsuperscript{159} FED. R. EVID. 703.
\textsuperscript{160} Carlson, *Collision Course*, supra note 25, at 235.
describe the bases of the opinion unless the information happens to be independently admissible.\footnote{Id. at 249 n.60; Carlson, Conduits, supra note 31, at 863.} He points out that in these situations, \textit{ex hypothesi} the information is technically inadmissible since it is usually objectionable as hearsay.\footnote{However, in some cases, the difficulty may be that there is inadequate authentication of the writing. Carlson, Policing, supra note 114, at 584.} He concedes that it is theoretically possible to permit a detailed description of the information while providing the jury a limiting instruction that they may not treat the information as substantive evidence.\footnote{Carlson, Conduits, supra note 31, at 861 n.22.} However, he fears that such a "refined distinction will likely escape the jury."\footnote{Id. at 865 n.36.} If so, there is a grave risk that the jurors will misuse the testimony as substantive evidence.\footnote{Carlson, Collision Course, supra note 25, at 243 n.34. \textit{See} Regina A. Schuller, \textit{Expert Evidence and Hearsay: The Influence of "Secondhand" Information on Jurors' Decisions}, 19 LAW \& HUM. BEHAV. 345 (1995).} He finds no evidence that the drafters intended to create a giant, back door hearsay exception;\footnote{Epps, supra note 31, at 872.} although Rules 803 and 804 enumerate tens of exceptions, there is no exception for information serving as the basis of an expert opinion. Little federal case law supports Professor Carlson's view,\footnote{Epps, supra note 27, at 63 \& n.49. \textit{But see} Finchum v. Ford Motor Co., 57 F.3d 526, 531 (7th Cir. 1995).} but some state courts, particularly California, adhere to his position.\footnote{People v. Campos, 38 Cal. Rptr. 2d 113, 114-15 (1995); Lloyd's Ins. Co. v. MacDowell, 769 S.W.2d 954 (Tex. 1989); \textit{EDWARD J. IMWINKELRIED ET AL., CALIFORNIA EVIDENTIARY FOUNDATIONS} 257-58 (2d ed. 1994).} Moreover, in a number of jurisdictions, the state amended its version of Rule 703 to incorporate Professor Carlson's view. The amended Kentucky and Minnesota versions of Rule 703 embody such a view.\footnote{2 GREGORY P. JOSEPH \& STEPHEN A. SALTBURG, \textit{EVIDENCE IN AMERICA: THE FEDERAL RULES IN THE STATES} \S 52.2 (1994 Cum. Supp.).} Professor Epps has served as the leading apologist for the second camp.\footnote{See generally Epps, supra note 27.} To an extent, Professor Epps disagrees with Professor Carlson. Construing Rule 703 in light of Rule 705, she contends that the drafters contemplated that the expert would be permitted to give a detailed account of the information underlying the opinion; she asserts: [A]dmitting the factors relied upon by the expert brings coherence to the Rules of Evidence. Rule 705, in a dramatic break from the cumbersome practice of eliciting expert testimony through the use of...
hypotheticals, permits the expert to offer her opinion without prior disclosure of the underlying facts or data, unless the court requires otherwise. If the facts or data underlying the expert's opinion were not to be routinely disclosed, there would be no need for a rule of sequence that placed the opinion before disclosure of the facts. Moreover, if the only facts or data that could be considered as the basis of the expert's opinion were those that were already admitted in evidence, there would be no need for the rule to say that the expert need not disclose them. Thus, Rule 705 would have been nonsensical unless it contemplated the routine disclosure of otherwise inadmissible facts or data underlying the expert's opinion.\textsuperscript{171}

She concludes that in the typical case, the expert may detail the bases of the opinion, but that under Rule 105 the trial judge should instruct the jury that they may consider this testimony only for the limited purpose of evaluating the quality of the expert's reasoning process.\textsuperscript{172}

However, Professor Epps shares Professor Carlson's concern that the jury might misuse the testimony as substantive proof. She does not believe, though, that the statutory scheme addresses that concern by invariably requiring a detailed mention of the bases of the opinion. Rather, she concludes that the drafters intended that trial judges would meet the concern by exercising their power under Federal Rule of Evidence 403.\textsuperscript{173} As previously stated, Rule 403 empowers the judge to exclude otherwise admissible evidence when the judge concludes that the incidental prejudicial dangers substantially outweigh the probative worth of the item of evidence.\textsuperscript{174} A premier prejudicial danger is the risk that the jury will misuse the evidence.\textsuperscript{175} With few exceptions,\textsuperscript{176} all proffered evidence is subject to discretionary exclusion under Rule 403.\textsuperscript{177} Thus, the judge has the power to bar a detailed description of the underlying bases of the expert's opinion when the judge believes there is a realistic danger the jurors will treat the testimony as substantive evidence.\textsuperscript{178} Exclusion under Rule 403, however, is likely to be the exception rather than the rule. There is a strong statutory construction argument that the drafters intended judges

\begin{enumerate}
\item[171.] Id. at 71.
\item[172.] Id. at 72.
\item[173.] Id. at 70.
\item[174.] FED. R. EVID. 403.
\item[175.] FED. R. EVID. 403 advisory committee's note.
\item[177.] Paul F. Rothstein, Some Themes in the Proposed Federal Rules of Evidence, 33 FED. B.J. 21, 29 (1974) (Rule 403 "apparently cuts across the entire body of the Rules").
\item[178.] Epps, supra note 27, at 70 n.79, 84.
\end{enumerate}
to employ Rule 403 sparingly,\textsuperscript{179} excluding evidence only in extreme cases\textsuperscript{180}—a reflection of the Rules' pervasive bias in favor of admitting logically relevant evidence.\textsuperscript{181} After surveying the federal case law, Professor Epps concludes that most courts probably subscribe to this camp.\textsuperscript{182}

Just as Professor Epps' view is more liberal than Professor Carlson's, there is a camp embracing a view still more permissive than Professor Epps'. In part, the courts embracing this view accept Professor Epps' position; they agree that under Rules 105 and 703, the expert's proponent is generally entitled to elicit a detailed description of the bases of the expert's opinion.\textsuperscript{183} They further agree that the description may be elicited only for the limited purpose of helping the jury evaluate the credibility or weight of the expert's testimony.\textsuperscript{184} The adherents of this camp reason that informing the jury of the opinion's bases is "arguably a rational way of enabling the trier [of fact] to determine the value of that opinion."\textsuperscript{185} The principal difference between Professor Epps' view and the approach taken by these courts is that the courts tend to focus on Rule 105\textsuperscript{186} and overlook Rule 403. Professor Epps believes that the courts must be vigilant, invoking Rule 403 to guard against the risk that the jurors will misuse the testimony as substantive evidence. In contrast, once these courts are satisfied that the testimony comports with the Article VII prescriptions, they tend to neglect related Rule 403 problems. If a court finds Rule 703 is satisfied, and slights related Rule 403 problems, in effect the expert has license to freely relate the bases of her opinion to the jury.\textsuperscript{187}

\textsuperscript{179} EDWARD J. IMWINKELRIED, UNCHARGED MISCONDUCT EVIDENCE § 8:28 (1984).
\textsuperscript{180} Id. (1984 & 1995 Cum. Supp.).
\textsuperscript{182} Epps, supra note 27, at 68.
\textsuperscript{183} Carlson, Collision Course, supra note 25, at 241 n.24, 242 (discussing State v. Davis, 269 N.W.2d 434 (Iowa 1978)); Carlson, Conduits, supra note 31, at 862 & n.21; Epps, supra note 27, at 55 n.12, 60.
\textsuperscript{184} Paul R. Rice, Inadmissible Evidence as a Basis for Expert Opinion Testimony: A Response to Professor Carlson, 40 VAND. L. REV. 583, 583-84 (1987) [hereinafter Rice, Response].
\textsuperscript{185} Carlson, Collision Course, supra note 25, at 249 n.60 (quoting JACK B. WEINSTEIN ET AL., CASES AND MATERIALS ON EVIDENCE 399 (7th ed. 1983)).
\textsuperscript{186} Epps, supra note 27, at 67.
\textsuperscript{187} Carlson, Policing, supra note 114, at 592.
However, there is an even more liberal view, urged by Professor Rice. Professor Rice argues that the jury should both receive a detailed recounting of the bases of the expert's opinion and be permitted to treat that information as substantive evidence. To begin with, Professor Rice contends that the jurors must receive an in-depth description to enable them to intelligently gauge the value of the expert's opinion. He adds that once the jury is exposed to such a description, it is an absurd fiction—a charade—to expect the jury to consider the information only for credibility purposes. In his mind, the jurors will regard the limiting instruction as judicial double talk, since logically they cannot accept the opinion without accepting the underlying facts. Lastly, he contends that the information deserves the status of substantive evidence. Pointing to Rule 803(4), codifying a hearsay exception for certain statements made to physicians, he argues that experts can separate the wheat from the chaff. The drafters' approval of Rule 803(4) is an implicit recognition that experts have "special talents in screening" the trustworthiness of information. Thus, the fact that the expert is willing to venture an opinion based on the information is enough to qualify it for admission under the residual hearsay exceptions embodied in Rules 803(24) and 804(b)(5).

Professor Epps characterizes Professor Rice's view as the "most fearsome," and reports she can locate no cases adopting this view.

As in the case of the other splits of authority, the disputants in this controversy have largely conducted their debate without reference to the definitional question of the meaning of "facts or data" in Rule 703. All the disputants have advanced contextual arguments, based on other provisions of the Federal Rules. Professor Carlson analogizes to Rule 612 to support his position. That statute governs the handling of writings used to refresh a witness's recollection. Under Rule 612,

188. Rice, Response, supra note 184.
189. See id. at 584-85.
190. Id. at 585 & n.9.
191. Id. at 585, 596.
192. Id. at 584-85.
193. Id. at 590.
194. Id. at 588.
195. Id. at 591.
196. Id.
197. Epps, supra note 27, at 64.
198. Id.
199. Carlson, Policing, supra note 114, at 583-86.
200. FED. R. EVID. 612.
the witness's proponent may merely present the writing to the witness and invite the witness to read the writing silently to himself or herself. Only the "adverse party is entitled . . . to introduce in evidence those portions which relate to the testimony of the witness." Professor Carlson favors a parallel procedure under Rule 703; the direct examiner should be forbidden from detailing the bases for the expert's opinion, but the cross-examiner ought to be allowed to elicit the information. For her part, Professor Epps stresses the light which Rule 705 can shed on this split of authority. Again, she believes that the wording of Rule 705 indicates the drafters contemplated allowing the direct examiner to elicit an elaborate description of the bases of the opinion. Lastly, Professor Rice cites Rule 803(4) to lend analogical support to his position. If the addressee's identity as a physician suffices to justify admitting a statement under Rule 803(4), a fortiori the addressee's expert status should permit the substantive introduction of statements qualifying under Rule 703.

The Relationship Between the Resolution of this Split of Authority and the Question of the Scope of Rule 703. As the preceding paragraph demonstrates, most of the contextual arguments marshalled in the dispute relate to provisions other than Rule 703. However, in looking beyond Rule 703, these arguments overlook another critical part of the context, namely, the even more proximate context, the beginning language in Rule 703 itself referring to "facts or data." A court's decision whether to adopt the broad or narrow reading of "facts or data" should influence its resolution of this split of authority.

Simply stated, if a court chose to read "facts or data" narrowly as subsuming only case-specific data, that choice would cut strongly in favor of adopting either Professor Carlson's or Professor Epps' position on the final split of authority, that is, the first two camps. Professor Carlson has noted the close connection between that choice and the resolution of this division of authority. Distinguishing "general [scientific] theories, research and studies . . . from case-specific information," he has argued that the latter type of information is "particularly subject to exclusion." That argument has great merit. As subpart B pointed out, under the narrow view of "facts or data," the information constituting facts or data will usually relate to the ultimate facts on the merits which the jury

201. Id.
203. Rice, Response, supra note 184, at 590.
204. Carlson, Conduits, supra note 31, at 870-71.
must determine. Revisiting *Daubert*, the plaintiffs' experts might rely on information indicating that the drug Mrs. Daubert used was Bendectin rather than another antinausea medication. This information could be technically inadmissible hearsay; for example, an out-of-court declaration by Mr. Daubert that he recalled seeing a bottle labeled Bendectin in the medicine cabinet he shared with his wife. Of course, to decide the issue of liability, the jurors must determine the identical question of whether Mrs. Daubert used the defendant's product, Bendectin. There would seem to be no applicable hearsay exception that would permit the introduction of Mr. Daubert's extrajudicial statement as substantive evidence. If the trial judge allowed the plaintiff's expert to describe Mr. Daubert's statement in detail, there is a significant risk that the jury would treat the testimony as substantive proof of the identity of the drug that Mrs. Daubert used. In turn, if the linchpin of the defense was that Mrs. Daubert had used another manufacturer's product, the misuse of that testimony might be the catalyst for a wrongful verdict.

However, embracing the broad view of facts or data would make the third and fourth camps more attractive. Under the broad view, facts or data encompass the scientific research and studies to which Professor Carlson alludes. The subject matter of those studies does not coincide with the ultimate facts alleged in the pleadings. "[T]he danger that the jury will misuse the information contained [in the studies] is minimal, since that information rarely overlaps with the disputed adjudicative facts in the case." In *Daubert*, the pleadings contain no allegations about the size of databases or statistical inferences from epidemiological studies; the jury could consider testimony about those issues in deciding what weight to ascribe to the plaintiff's evidence of general causation, but there is no risk the admission of that testimony would spill over into the jury's deliberation on special causation.

In short, while the risk of misuse of evidence is relatively small under the broad view of facts or data, the magnitude of the risk grows to significant proportions under the narrow view. In subpart C, we saw that the dispute over the meaning of "reasonably" implicates the judicial responsibility to decide whether the substance of proffered evidence is reliable enough to serve as a trustworthy basis for an expert opinion. By the same token, the dispute over the exposure of juries to technically inadmissible information touches upon a peculiarly judicial responsibility. Under Rule 403, it is an essentially judicial responsibility to shield the jury from testimony that is technically logically relevant but which

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205. *Id.* at 870.
realistically is prone to misuse. By construing "reasonably" to prescribe
an objective standard capable of overriding the specialty's customary
practice, the court discharges the traditional judicial duty of ensuring
that the substance of the proffered evidence is reliably probative of a fact
in issue. But at the very least, by following Professor Epps' suggestion
and employing Rule 403 in conjunction with Rule 703, the court
discharges the kindred judicial duty to guard against the risk that the
admission of the evidence will distort the jury's deliberation on another
fact in issue.

III. CONCLUSION

The courts must come to appreciate the importance of the stakes in
the Rule 703 controversies. The most obvious stake is the coherence of
Rule 703 itself. In the past, most commentators on Rule 703 have
focused on only one of the five different splits of authority in the
published opinions. However, as this Article has demonstrated, these
seemingly distinct issues are closely connected. More specifically, the
other four splits of authority tie back to the fundamental question of how
to define the expression, "[t]he facts or data." Voltaire was right. We
must first define our terms. Until the courts grapple with that question,
they cannot hope to satisfactorily resolve the remaining four controver-
sies. The courts must initially settle that definition. Once they have
selected a definition, they can then develop a coherent structure for Rule
703. On reflection, it will become patent that some of the positions
urged on the other four splits of authority are plainly inconsistent with
the definition and, for that reason, must be rejected out of hand.

In truth, the stakes are greater; they include the coherence of Article
VII of the Federal Rules. As subpart II.C explained, until the courts
define the expression "facts or data" in Rule 703, they cannot draw the
boundaries between Rules 702 and 703. Subpart II.D demonstrated
further that the interpretation of Rule 703 also impacts the application
of Rule 705. Professor Epps has convincingly argued that Rule 705
sheds light on the proper construction of Rule 703; the wording of "Rule
705 would [be] nonsensical unless it contemplated the routine disclosure
of otherwise inadmissible facts or data underlying the expert's opin-
ion." The relationship between Rules 703 and 705 is a two-way
street; the text of Rule 703 has a bearing on the proper construction of
Rule 705. Both statutes use the expression, "facts or data."

207. Imwinkelried, Facts or Data, supra note 36, at 375; see also Carlson, Conduits,
supra note 31, at 873.
208. Imwinkelried, Facts or Data, supra note 36, at 375.
209. Epps, supra note 27, at 71.
Construing the facts or data to include the scientific data as well as the case-specific data would reduce Rule 705 to an absurdity. Rule 705 explicitly requires the direct examiner to elicit the "reasons" for the opinion, but construing the facts or data expansively renders that requirement meaningless. If the facts or data include both the scientific research underlying the expert's theory or technique and the case-specific information, there is virtually no information left to which the term "reasons" can apply. As a practical matter, a broad interpretation of the facts or data obliterates the distinction Rule 705 is obviously attempting to make.\(^2\)

Finally, the courts should come to understand that what is really at stake is the traditional division of labor among the jury, judge, and expert. The judge's responsibility includes deciding whether an item of evidence is substantively reliable proof of a fact in issue, and further whether the jury is likely to misuse the item as proof of another fact. Equating "reasonably" with customarily diminishes the judicial power to police the substantive reliability of evidence and transfers some of that power to the expert. A ruling that the expert's proponent has an absolute right to elicit a detailed description of any technically inadmissible information that the expert opts to rely on as a basis for her opinion would constrict judicial power. The recognition of that right would conflict with the judge's duty to exclude testimony subject to misuse by the jury. No legislative history even faintly suggests that by approving Rule 703, the drafters intended to sharply curb the judge's power and institute trial by expert.\(^2\)

Nor is there any convincing proof that the drafters intended to radically curtail the jury's power. It is the jury's province to pass on the credibility of the evidence relevant to the ultimate facts in issue. Allowing the expert to refer to corroborative opinions by other experts would impinge upon that power. The nontestifying expert has made credibility determinations about information relevant to the ultimate facts, and admitting that expert's opinion through the conduit of the testifying expert denies the jury the opportunity to second guess the nontestifying expert's credibility determinations. So too, permitting the judge to pass on both the reliability of the type of information that the expert relies on and the trustworthiness of the specific data the expert considers would imperil the jury's traditional role. The specific data will often relate to the ultimate facts the jury must resolve, and neither the

\(^2\) Imwinkelried, Facts or Data, supra note 36, at 369.

\(^2\) See Epps, supra note 27, at 65.
judge nor the expert should arrogate the power to evaluate the credibility of such data.

The threats to the traditional division of labor among jury, judge, and expert emerge with particular clarity if we posit the narrow view of facts or data. The text and legislative history of Rule 703 are devoid of any indication the drafters wanted to work a profound realignment of the roles of the jury, judge, and expert. The drafters respected the traditional roles but wanted to effect modest improvements to modernize expert testimony. Cumulatively, the various shifts in decision making power would revolutionize the American trial.212 Here too, the courts can learn from Voltaire. To a degree, his rationalism paved the way for the French Revolution;213 his writings helped inspire the rise of liberal thought on the Continent.214 Yet Voltaire himself distrusted revolutionary movements.215 Voltaire neither foresaw nor advocated the coming upheaval.216 He favored slow but steady progress and reform.217 A gradual, reformist approach is often as advisable in law as it is in politics.

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212. Carlson, Policing, supra note 114, at 577.
213. WILL DURANT, THE STORY OF PHILOSOPHY 159 (1961) [hereinafter DURANT].
215. DURANT, supra note 213, at 245.
216. ENCYCLOPEDIA, supra note 214, at 269.
217. Id.