

Opinion of STEVENS, J.

**SUPREME COURT OF THE UNITED STATES**

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No. 96-188  
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GENERAL ELECTRIC COMPANY, ET AL., PETI-  
TIONERS v. ROBERT K. JOINER ET UX.

ON WRIT OF CERTIORARI TO THE UNITED STATES COURT OF  
APPEALS FOR THE ELEVENTH CIRCUIT

[December 15, 1997]

JUSTICE STEVENS, concurring in part and dissenting in part.

The question that we granted certiorari to decide is whether the Court of Appeals applied the correct standard of review. That question is fully answered in Parts I and II of the Court's opinion. Part III answers the quite different question whether the District Court properly held that the testimony of plaintiff's expert witnesses was inadmissible. Because I am not sure that the parties have adequately briefed that question, or that the Court has adequately explained why the Court of Appeals' disposition was erroneous, I do not join Part III. Moreover, because a proper answer to that question requires a study of the record that can be performed more efficiently by the Court of Appeals than by the nine members of this Court, I would remand the case to that court for application of the proper standard of review.

One aspect of the record will illustrate my concern. As the Court of Appeals pointed out, Joiner's experts relied on "the studies of at least thirteen different researchers, and referred to several reports of the World Health Organization that address the question of whether PCBs cause cancer." 78 F. 3d 524, 533 (CA11 1996). Only one of those studies is in the record, and only six of them were dis-

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cussed in the District Court opinion. Whether a fair appraisal of either the methodology or the conclusions of Joiner's experts can be made on the basis of such an incomplete record is a question that I do not feel prepared to answer.

It does seem clear, however, that the Court has not adequately explained why its holding is consistent with Federal Rule of Evidence 702,<sup>1</sup> as interpreted in *Daubert v. Merrell Dow Pharmaceuticals, Inc.*, 509 U. S. 579 (1993).<sup>2</sup> In general, scientific testimony that is both relevant and reliable must be admitted and testimony that is irrelevant or unreliable must be excluded. *Id.*, at 597. In this case, the District Court relied on both grounds for exclusion.

The relevance ruling was straightforward. The District Court correctly reasoned that an expert opinion that exposure to PCBs, "furans" and "dioxins" together may cause lung cancer would be irrelevant unless the plaintiff had been exposed to those substances. Having already found that there was no evidence of exposure to furans and dioxins, 864 F. Supp. 1310, 1318–1319 (ND Ga. 1994), it necessarily followed that this expert opinion testimony was inadmissible. Correctly applying *Daubert*, the District Court explained that the experts' testimony "mani-

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<sup>1</sup> Rule 702 states: "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."

<sup>2</sup> The specific question on which the Court granted certiorari in *Daubert* was whether the rule of *Frye v. United States*, 54 App. D. C. 46, 293 F. 1013 (1923), remained valid after the enactment of the Federal Rules of Evidence, but the Court went beyond that issue and set forth alternative requirements for admissibility in place of the *Frye* test. Even though the *Daubert* test was announced in dicta, see 509 U. S., at 598–601 (REHNQUIST, C. J., concurring in part and dissenting in part), we should not simply ignore its analysis in reviewing the District Court's rulings.

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festly does not fit the facts of this case, and is therefore inadmissible.” 864 F. Supp., at 1322. Of course, if the evidence raised a genuine issue of fact on the question of Joiner’s exposure to furans and dioxins— as the Court of Appeals held that it did— then this basis for the ruling on admissibility was erroneous, but not because the district judge either abused her discretion or misapplied the law.<sup>3</sup>

The reliability ruling was more complex and arguably is not faithful to the statement in *Daubert* that “[t]he focus, of course, must be solely on principles and methodology, not on the conclusions that they generate.” 509 U. S., at 595. Joiner’s experts used a “weight of the evidence” methodology to assess whether Joiner’s exposure to transformer fluids promoted his lung cancer.<sup>4</sup> They did not suggest that any one study provided adequate support for their conclusions, but instead relied on all the studies taken together (along with their interviews of Joiner and

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<sup>3</sup> Petitioners do not challenge the Court of Appeals’ straightforward review of the District Court’s summary judgment ruling on exposure to furans and dioxins. As today’s opinion indicates, *ante*, at 10, it remains an open question on remand whether the District Court should admit expert testimony that PCBs, furans and dioxins *together* promoted Joiner’s cancer.

<sup>4</sup> Dr. Daniel Teitelbaum elaborated on that approach in his deposition testimony: “[A]s a toxicologist when I look at a study, I am going to require that that study meet the general criteria for methodology and statistical analysis, but that when all of that data is collected and you ask me as a patient, ‘Doctor, have I got a risk of getting cancer from this?’ That those studies don’t answer the question, that I have to put them all together in my mind and look at them in relation to everything I know about the substance and everything I know about the exposure and come to a conclusion. I think when I say, ‘To a reasonable medical probability as a medical toxicologist, this substance was a contributing cause,’ . . . to his cancer, that that is a valid conclusion based on the totality of the evidence presented to me. And I think that that is an appropriate thing for a toxicologist to do, and it has been the basis of diagnosis for several hundred years, anyway.” Supp. App. to Brief for Respondents 19.

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their review of his medical records). The District Court, however, examined the studies one by one and concluded that none was sufficient to show a link between PCBs and lung cancer. 864 F. Supp., at 1324–1326. The focus of the opinion was on the separate studies and the conclusions of the experts, not on the experts' methodology. *Id.*, at 1322 (“Defendants . . . persuade the court that Plaintiffs' expert testimony would not be admissible . . . by attacking the conclusions that Plaintiffs' experts draw from the studies they cite”).

Unlike the District Court, the Court of Appeals expressly decided that a “weight of the evidence” methodology was scientifically acceptable.<sup>5</sup> To this extent, the Court of Appeals' opinion is persuasive. It is not intrinsically “unscientific” for experienced professionals to arrive at a conclusion by weighing all available scientific evidence—this is not the sort of “junk science” with which *Daubert* was concerned.<sup>6</sup> After all, as Joiner points out, the Environmental Protection Agency (EPA) uses the same methodology to assess risks, albeit using a somewhat different threshold than that required in a trial. Brief for Respondents 40–41 (quoting EPA, Guidelines for Carcinogen Risk Assessment, 51 Fed. Reg. 33992, 33996 (1986)). Petitioners' own experts used the same scientific approach as well.<sup>7</sup> And using this

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<sup>5</sup> The court explained: “Opinions of any kind are derived from individual pieces of evidence, each of which by itself might not be conclusive, but when viewed in their entirety are the building blocks of a perfectly reasonable conclusion, one reliable enough to be submitted to a jury along with the tests and criticisms cross-examination and contrary evidence would supply.” 78 F. 3d 524, 532 (CA11 1996).

<sup>6</sup> An example of “junk science” that should be excluded under *Daubert* as too unreliable would be the testimony of a phrenologist who would purport to prove a defendant's future dangerousness based on the contours of the defendant's skull.

<sup>7</sup> See, e.g., Deposition of Dr. William Charles Bailey, Supp. App. to Brief for Respondents 56 (“I've just reviewed a lot of literature and come to some conclusions . . .”).

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methodology, it would seem that an expert could reasonably have concluded that the study of workers at an Italian capacitor plant, coupled with data from Monsanto's study and other studies, raises an inference that PCBs promote lung cancer.<sup>8</sup>

The Court of Appeals' discussion of admissibility is faithful to the dictum in *Daubert* that the reliability inquiry must focus on methodology, not conclusions. Thus, even though I fully agree with both the District Court's and this Court's explanation of why each of the studies on which the experts relied was by itself unpersuasive, a critical question remains unanswered: When qualified experts have reached relevant conclusions on the basis of an acceptable methodology, why are their opinions inadmissible?

*Daubert* quite clearly forbids trial judges from assessing the validity or strength of an expert's scientific conclusions, which is a matter for the jury.<sup>9</sup> Because I am per-

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<sup>8</sup> The Italian capacitor plant study found that workers exposed to PCBs had a higher-than-expected rate of lung cancer death, though "the numbers were small [and] the value of the risk estimate was not statistically significant." 864 F. Supp. 1310, 1324 (ND Ga. 1994). The Monsanto study also found a correlation between PCB exposure and lung cancer death, but the results were not statistically significant. *Id.*, at 1325. Moreover, it should be noted that under Georgia law, which applies in this diversity suit, Joiner need only show that his exposure to PCBs "promoted" his lung cancer, not that it was the sole cause of his cancer. Brief for Respondents 7, n. 16 (quoting Brief for Appellants in No. 94-9131 (CA 11), pp. 7-10).

<sup>9</sup> The Court stated in *Daubert*: "Vigorous cross-examination, presentation of contrary evidence, and careful instruction on the burden of proof are the traditional and appropriate means of attacking shaky but admissible evidence. . . . Additionally, in the event the trial court concludes that the scintilla of evidence presented supporting a position is insufficient to allow a reasonable juror to conclude that the position more likely than not is true, the court remains free to direct a judgment, Fed. Rule Civ. Proc. 50(a), and likewise to grant summary judgment, Fed. Rule Civ. Proc. 56. . . . These conventional devices, rather

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suaded that the difference between methodology and conclusions is just as categorical as the distinction between means and ends, I do not think the statement that “conclusions and methodology are not entirely distinct from one another,” *ante*, at 9, is either accurate or helps us answer the difficult admissibility question presented by this record.

In any event, it bears emphasis that the Court has not held that it would have been an abuse of discretion to admit the expert testimony. The very point of today’s holding is that the abuse of discretion standard of review applies whether the district judge has excluded or admitted evidence. *Ante*, at 5. And nothing in either *Daubert* or the Federal Rules of Evidence requires a district judge to reject an expert’s conclusions and keep them from the jury when they fit the facts of the case and are based on reliable scientific methodology.

Accordingly, while I join Parts I and II of the Court’s opinion, I do not concur in the judgment or in Part III of its opinion.

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than wholesale exclusion under an uncompromising ‘general acceptance’ test, are the appropriate safeguards where the basis of scientific testimony meets the standards of Rule 702.” 509 U. S., at 596.