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The Ethos of Expert Witnesses: Confusing the Admissibility, Sufficiency and Credibility of Expert Testimony

by

EILEEN A. SCALLEN & WILLIAM E. WIETHOFF*

"I have spoken; you have heard; you know the facts; now give your decision."

—Aristotle, *On Rhetoric*, 4th century B.C.E.

When a sieve is shaken, the husks appear;

so do a man's faults when he speaks.

As the test of what the potter molds is

in the furnace, so in his conversation is the test of a man.

The fruit of a tree shows the care it has had;

so too does a man's speech disclose the bent

of his mind.

Praise no man before he speaks,

for it is then that men are tested.

—Sirach 27:4-7

Perhaps nowhere else is the relationship between natural or social science and rhetoric¹ more practically dangerous and more theoretically intricate than in the civilized combat of trials. The practical danger is clear, whether in adjudicating criminal guilt or liability for

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1. "Rhetoric" is a term that constantly begs for definition, as its negative connotations (as in "mere," "empty," or "just" rhetoric) often overshadow the rich history of the term, which originated in an effort to systemize the training of legal advocates. See Eileen A. Scallen, *Classical Rhetoric, Practical Reasoning and the Law of Evidence*, 44 AM. U. L. REV. 1717 (1995). As used here, the term means argumentation or persuasion directed at the creation of reality in the courtroom, and, in certain publicized trials, in society—as reflected through the media.

tortious harm; we do not want the trier of fact to render an irrational decision based on unreliable expert testimony. Less obvious is the theoretical intricacy of expert testimony. Unwary observers may perceive that disputes are litigated, expert witnesses testify for one or more litigants, and a verdict is reached within a process that excludes rhetorical flourishes except from advocates. In fact, the testimonial discourse of experts, though not cast in the elegant form of oratory, has rhetorical tenor and effect. Expert testimony, even that based on natural or social science, is argumentation, made for, and in, a unique context—the law—and thus requires a unique mode of criticism.

This article focuses on the ways in which the law reifies expert testimony as “evidence” with “weight,”² and how the law fails to view expert testimony as argument, the ultimate success of which rests primarily on the persuasive power of the expert’s *ethos*—the perception of credibility. We argue that while both the judge and the jury have roles in the evaluation of an expert’s *ethos*, the critics of expert testimony have improperly accorded the dominant responsibility for evaluating the expert’s *ethos* to the judge, thus obscuring the fact that expert testimony is, at bottom, “opinion,” traditionally evaluated by the trier of fact, often a jury. This swing of the pendulum—according the primary role in evaluating the testimony of experts from the jury to the judge—appears partly due to the fear that once these expert opinions are placed before the jury, the American legal system is a prisoner of the whims of twelve ignorant laypersons. We note, as others have, that this attitude not only underestimates the competence of jurors but also misunderstands the function of the jury system.³ In addition, we note that while courts might acknowledge the

2. See, e.g., *United States v. Rouse*, 111 F.3d 561, 580 (8th Cir. 1997) (Bright, J., dissenting) (“Because the district court erroneously excluded the expert’s opinion that suggestive interrogation techniques potentially tainted the children’s testimony, defense counsel’s statements reflected only arguments of counsel, not evidence. With Dr. Underwager’s testimony, however, counsel’s argument could constitute substance over rhetoric.”)

3. See, e.g., Richard Lempert, *Civil Juries and Complex Cases: Taking Stock After Twelve Years*, in *VERDICT: ASSESSING THE CIVIL JURY SYSTEM* 234 (Robert E. Litan ed., 1993) (“Throughout this review, strengths of the jury emerge. A close look at a number of cases, including several in which jury verdicts appear mistaken, does not show juries that are befuddled by complexity. Even when juries do not fully understand technical issues, they can usually make enough sense of what is going on to deliberate rationally, and they usually reach defensible decisions.”); Neil Vidmar, *Are Juries Competent to Decide Liability in Tort Cases Involving Scientific/Medical Issues: Some Data From Medical Malpractice*, 43 *EMORY L.J.* 885, 906 (1994) (While noting that additional study is warranted, “[a]necdotes about the widespread malperformance of juries do not stand up to systematic data. . . .” which “indicate that juries are not systematically biased against doctors and that in the preponderance of cases they make reasonable decisions.”).

These scholars confirm what some jurists have learned through first-hand observa-

existence of devices for controlling jury decisions when the evidence is insufficient to permit a rational decision, such as summary judgment, directed verdict and judgment notwithstanding the verdict,⁴ the same courts seriously underestimate the utility of these devices in dealing with expert testimony based on natural or social science evidence. We use the United States Supreme Court's recent decision in *General Electric Co. v. Joiner*⁵ as an example of how a court may confuse the issues of admissibility, sufficiency and credibility of expert testimony.

However, we do not end with a civil procedure lecture. The concern over the use of "junk science"⁶ in the courtroom is a genuine and widespread societal concern. Thus, we conclude by arguing that careful attention to actual expert speech, focusing on the objectionable qualities of it, can generate more thoughtful understanding of societal objections to expert testimony and efforts at law reform. We primarily illustrate our argument by examining expert testimony in the trial of Dan White, who shot and killed San Francisco Mayor George Moscone and San Francisco Supervisor Harvey Milk on November 27, 1978. This testimony was the source of one of the trial's most memorable images and one of the most reviled examples of "junk science"—the "Twinkie defense."

By analyzing the in-courtroom management of the expert's ethos and its ramifications outside the courtroom, we show that the problem of expert testimony cannot be resolved adequately simply by turning judges into "amateur scientists."⁷ Instead, the problem with expert witnesses must be addressed by confronting the problem at bottom: Science and law speak different languages.⁸ A judge, even

tion. See Alex Kozinski, *Post-Mortem Talks With Jury Enlighten Judge*, NAT'L L.J., Sept. 8, 1997, at A21. The author, a judge on the Ninth Circuit Court of Appeals, admits that his observations, made while sitting by designation as a district court judge, are "unscientific," but observed, among other things, that "[o]ften they remember small details and inconsistencies that neither I nor anyone on my staff had noticed. Not every juror remembers everything, but very little passes by the jury as a whole." *Id.*

Finally, some scholars have suggested that jurors have an important function that is separate and independent from their fact-finding role in the dispute resolution process; jurors implement important societal value choices through their verdicts. See SHEILA JASANOFF, *SCIENCE AT THE BAR: LAW, SCIENCE AND TECHNOLOGY IN AMERICA* (1995); Margaret G. Farrell, *Daubert v. Merrell Dow Pharmaceuticals, Inc.: Epistemology and Legal Process*, 15 CARDOZO L. REV. 2183 (1994).

4. "Directed verdict" and "judgment notwithstanding the verdict" or "JNOV," are now called "judgment as a matter of law" in federal practice. See FED. R. CIV. P. 50.

5. 118 S. Ct. 512 (1997).

6. By "junk science," we mean expert testimony based on natural or social science theories that are not accepted as reliable.

7. *Daubert v. Merrell Dow Pharmaceuticals, Inc.*, 509 U.S. 579, 600 (1993) (Rehnquist, C.J., dissenting).

8. Cf. *id.* at 596-97 ("[T]here are important differences between the quest for truth

one trained in the scientific method, cannot alone translate the testimony of expert witnesses into meaningful legal discourse.⁹ The judge, experts, advocates, jury, and, in some notable cases, the scientific, legal and general communities must all play their parts to translate expert testimony into a societally acceptable decision.

I. The Concept of *Ethos*

The power of an expert witness's testimony rests on the expert's *ethos*, which can most readily be translated as character or credibility. Although explanations of a speaker's *ethos* have evolved over time and cultures, the concept of *ethos* was developed to help train orators for the courts of ancient Greece. As it was used in ancient Greece, the term *ethos* is generally translated as the speaker's reputation for wisdom, virtue, and good will toward the audience. In its earliest formulations, *ethos* is one of three modes of persuasion, along with *pathos* (appeals to emotion) and *logos* (appeals to reason). Although Aristotle considered all three elements to be necessary for persuasion, he apparently considered the speaker's *ethos* to be "the most effective means for persuasion."¹⁰ To Aristotle, proofs of *ethos*—or competence, character, and benevolence—are drawn from self-

in the courtroom and the quest for truth in the laboratory." See also Rochelle Cooper Dreyfuss, *Galileo's Tribute: Using Medical Evidence in Court*, 95 MICH. L. REV. 2055 (1997). Professor Dreyfuss elaborates on this theme:

[T]he values furthered by dispute resolution in the courtroom are very different from the values furthered in the laboratory. Court judgments are designed to end the dispute between the plaintiff and the defendant while at the same time reconciling them to the outcome. To have that effect, adjudication must occur openly; it must give each side the sense that a full and fair opportunity to present a case and rebut the other side's position was available; it must engage the community's sense of justice; it must occur in a time frame in which any problems the defenant has been found to have inflicted can be remedied. Or, as Jasanoff puts it, where science is truth-seeking, law is justice-seeking. Not only must justice be done, it must be seen to be done. Because adjudication is an enterprise vastly different from the one in which scientists engage, scientists should not be insulted that it requires processes that are very different from the ones they use.

Id. at 2062 (citing Jasanoff, *supra* note 3, at 6-7, 21).

9. Cf. Dreyfuss, *supra* note 8, at 2074-75 ("the legal system that is partly to blame—not for using juries and taking a liberal view on the admissibility of expert witnesses, but for relying on legal fictions and words, such as causation, that have different meaning to the legal and scientific communities").

10. ARISTOTLE, *THE ART OF RHETORIC*, ¶ 1356a (J.H. Freese trans., 1975).

"We believe good men more fully and more readily than others: This is true generally whatever the question is, and absolutely true where exact certainty is impossible and opinions are divided."

Id. But for Aristotle, it is sufficient that the content of the speech make the speaker "seem" to be truthful; it is not necessary for effective persuasion that the speaker actually "be" truthful.

referential statements by orators and nowhere else. That is, the speaker's general and pre-existing reputation is irrelevant.¹¹

Other ancient Greek philosophers, notably Plato and Isocrates, disagreed. They argued that one's general reputation for virtue and one's special authority on a subject are not only relevant but also essential to persuasive advocacy. Plato does not use the term *ethos*, but the concept is embedded in his dialogues regarding "true" or "right" rhetoric. For Plato, "*ethos* defines the space where language and truth meet are made incarnate within the individual."¹² In Plato's view, the only "good" rhetoric is that which expresses the truth that dwells within the individual's soul: "Throughout the dialogues, Plato is uncompromising in asserting this equation: Truth must be incarnate within the individual and a person's language must express (or first, discover) this truth."¹³

The difference between Plato's and Isocrates' conceptions of *ethos* is one of metaphysical degree; Isocrates speaks more in terms of the speaker's attempts to locate honorable role models for his speech and efforts to develop an honorable reputation and less of the actual nature of the speaker's soul.¹⁴ In other words, for Plato, a speaker's words are simply a conduit of the truth residing in the soul. For Isocrates, it was not necessary to opine on the status of the speaker's soul, for one could comprehend the speaker's excellence of character through the speaker's reputation and the medium of language. Isocrates' notion of *ethos* was later carried into Roman theories of advocacy by Cicero and Quintilian, who defined the ultimate advocate as "the good man speaking well,"¹⁵ that is, the virtuous person who has been trained in advocacy.

From a postmodern and poststructuralist viewpoint, the authority of an advocate is a moot point because the authorship of any advocacy is not individual but intersubjective. No one possesses a

11. See T.B. FARRELL, *NORMS OF RHETORICAL CULTURE* 41 (1993). Farrell has recently disagreed with the conventional interpretation of Aristotelian *ethos* but admits, at least, that it is conventional to test credibility only within the actual saying of this proof.

12. J.S. Baumlin, *Introduction* to *ETHOS: NEW ESSAYS IN RHETORICAL AND CRITICAL THEORY* xiii, xi-xxxi (J.S. Baumlin & T.F. Baumlin eds., Southern Methodist University Press 1994).

13. *Id.* Indeed, consider this passage from one of Plato's dialogues in which Socrates says to Phaedrus: "If we are to address people scientifically, we shall show them precisely what is the real and true nature of that object on which our discourse is brought to bear. And that object, I take it, is the soul." Plato, *Phaedrus*, in *ETHOS: NEW ESSAYS IN RHETORICAL AND CRITICAL THEORY* xiv, 270e (J.S. Baumlin & T.F. Baumlin eds., Southern Methodist University Press 1994).

14. See, e.g., Antidosis, 339 (George Norlin trans., Loeb Classical Library 1954) ("[F]or who does not know that words carry greater conviction when spoken by men of good repute than when spoken by men who live under a cloud . . . ?").

15. QUINTILIAN, *THE INSTITUTIO ORATORIA OF QUINTILIAN* 12.1.1.

unique "voice." Instead, we express our ideas solely from our interaction with surrounding cultures, ideologies, and other influential voices.¹⁶ Thus, critics who long for expert witnesses to speak authoritatively the "truth"—in the Platonic sense of *ethos*—are doomed to frustration. In courtroom advocacy, one "truth" is opposed by another "truth" in the form of opposing experts, and in the mind of the postmodern skeptics, the end product of a trial is not truth or error but rather a winner and a loser.

The battle over the evidentiary treatment of expert testimony reflects these alternative views of the *ethos* of expert witnesses. The battle becomes especially heated in the context of expert testimony utilizing natural or social scientific theories. The stakes are high in these cases—whether measured in dollars in toxic tort cases or in individual liberty in criminal cases.

Our view of the *ethos* of the expert witness is neither as rigid as the Platonic conception of the expert as the "truth-teller" nor as radically relativistic as the extreme postmodern view of the expert as "the hired gun." Our approach to the problem of expert testimony is grounded in modern pragmatism, which has its roots in the classical tradition of Isocrates, Cicero and Quintilian.¹⁷ Although pragmatism is subject to a variety of different definitions,¹⁸ we describe pragmatism as a philosophical perspective that rejects the positivist belief in an unchanging, objective, universal truth while at the same time rejecting the skeptical or relativist proposition that there is no truth. Pragmatism recognizes the tentative and context-dependent quality of knowledge, but posits that practical action is possible and necessary in the face of this uncertainty. Pragmatism embodies respect for the power of argumentation and persuasion in producing such action. Professor Scallen has argued that the Federal Rules of Evidence, including the rules regarding expert testimony, were written from a perspective of pragmatism and should be interpreted from that perspective.¹⁹

Our pragmatic approach to the *ethos* of expert testimony is due in part to our understanding of expert testimony as rhetoric, argumentation, or persuasion,²⁰ and in part to our understanding of the

16. See Baumlín, *supra* note 12, at xxx.

17. See Scallen, *supra* note 1, for more on the connection between pragmatism and classical rhetoric. See also RHETORIC, SOPHISTRY AND PRAGMATISM (Steven Mailloux ed., 1995); RECOVERING PRAGMATISM'S VOICE: THE CLASSICAL TRADITION, RORTY, AND THE PHILOSOPHY OF COMMUNICATION (Lenore Lansdorf & Andrew R. Smith eds., 1995).

18. See Scallen, *supra* note 1, at 1733-34 nn.116-22.

19. See *id.*

20. While others might differentiate among these terms, we see them as essentially synonymous and find the definitional debates over the terms singularly unhelpful and

need to focus on the procedural constraints of the legal context in which that speech is used. Thus, we first focus on the issue of admissibility of expert testimony. However, where others quit, we continue—for the admissibility of expert testimony can only be considered in conjunction with procedural tools designed to control jury decisionmaking to ensure there is sufficient evidence for a rational decision. Finally, the issues of admissibility and sufficiency must be considered in terms of credibility—the credibility of the expert in the eyes of the jury and the credibility of the adversary system in the eyes of the public. All of these elements must be considered to truly understand the *ethos* of experts.

II. A Pragmatic Approach to Distinguishing the Issues of Admissibility, Sufficiency and Credibility of Expert Testimony

Under the prevailing view, presentation of expert testimony is a straightforward process: The judge deals with issues of admissibility and the advocates deal with issues of credibility. The judge “admits” expert testimony as if it were an object, and the jury scrutinizes it for its “weight”—the degree of worthiness of belief, under the lenses of impeachment and rehabilitation which the advocates use to magnify the flaws or the integrity of the testimony.

However, using this dichotomy of admissibility and weight oversimplifies the communicative processes that contribute to the construction of the *ethos* of experts. Our pragmatic view of expert testimony sees it as a complex communication or “translation” process, involving more than just the transmission of information to the jury within the constraints of evidence rules. To better understand this communicative process, one must look both backward and forward—to see how the rules for constructing the *ethos* of experts are made, how they interact with other procedural constraints and then are revised in response to cultural perceptions and reactions to highly visible trials. In this section, we attempt to show how courts have focused on the issue of the admissibility of expert testimony at the expense of understanding how issues of admissibility, sufficiency and credibility all work together to determine the *ethos* of expert testimony presented at trial.

A. The Admissibility of Expert Testimony

The pragmatic approach to the problem of expert *ethos* first looks to the rules of evidence within which the process of creation and translation of expert *ethos* occurs, and then considers the origins

and purposes of these rules. As noted earlier, Professor Scallen has argued elsewhere that the Federal Rules of Evidence as a whole were drafted from a philosophical perspective of pragmatism.²¹ Moreover, although most commentators focus primarily on Federal Rules of Evidence 702 and 703 when discussing the particular problem of expert testimony, these rules were developed in connection with the other provisions of section 700. The aim of section 700 was to liberate expert testimony from the constraints of the common law rules regarding expert testimony.²²

The rules of evidence represent the key constraints on the admissibility of expert testimony. Despite these constraints, expert witnesses are given extraordinary freedom in their courtroom speech, freedom which creates heightened concern with their power to influence decisionmakers.

To appreciate the freedom of expert speech, one must recall the evidentiary constraints placed on ordinary, or lay, witnesses. A layperson ordinarily may not give testimony in the form of an opinion or conclusion.²³ A layperson may be permitted to testify in the form of a "conclusion" or "opinion" when it represents an inference from something he or she has perceived and the witness cannot practically express it in a more precise or helpful way.²⁴

21. See *supra* note 15 and accompanying text.

22. See FED. R. EVID. 702-705 advisory committee's notes; see also GLEN WEISSENBERGER, *FEDERAL EVIDENCE* § 702.3 (2d ed. 1995) (Rule 702 is "more expansive" than pre-Federal Rule practice in the kinds of expert testimony authorized).

23. See FED. R. EVID. 602.

24. FED. R. EVID. 701. A wonderful example of "lay opinion" comes from the movie " Fargo." In one scene, the chief of police of Brainard, Marge Gunderson, is questioning two prostitutes about the identity of two men whom she believes may have committed several murders:

Marge: Okay, I want you to tell me what these fellas looked like.

Woman 1: Well, the little guy, he was kinda funny-looking.

Marge: In what way?

Woman 1: I dunno. Just funny-looking.

Marge: Can you be any more specific?

Woman 1: I couldn't really say. He wasn't circumcised.

Marge: Was he funny-looking apart from that?

Woman 1: Yah.

Marge: So, you were having sex with the little fella, then?

Woman 1: Uh-huh.

Marge: Is there anything else you can tell me about him?

Woman 1: No. Like I say, he was funny-looking. More'n most people even.

Marge: And what about the other fella?

Woman 2: He was a little older. Looked like the Marlboro Man.

Marge: Yah?

Woman 2: Yah. Maybe I'm sayin' that 'cause he smoked Marlboros.

Marge: Uh-huh.

Woman 2: A subconscious-type thing.

Why do we have these limitations on lay witness speech?

One justification is that the layperson is not qualified to testify beyond what he or she has experienced/perceived first-hand. Yet we know that individuals do not communicate their perceptions in a raw "just the facts ma'am" fashion; ordinary mortals often express their perceptions in interpretative language that can reasonably only be called "opinions" or "conclusions." The second and stronger rationale against the general admissibility of lay opinion is that a layperson intrudes on the function of a juror by drawing conclusions or opinions based on the facts perceived. This argument rests on the belief that, as the ultimate decisionmakers, the jurors should draw their own conclusions or opinions based on the first-hand observations of the witnesses whenever possible.

In contrast to lay witnesses, expert witnesses are allowed to speak much more freely in a courtroom. All a party needs to establish is that its expert has the education, training or skill at drawing inferences that the jury does not have.²⁵ Until quite recently, federal courts have been liberal in recognizing individuals as experts. Federal Rule of Evidence 702 provides that a person may be qualified as an expert by experience or special training and may not need any specific academic or professional credentials.²⁶

Once qualified as an expert, a witness has freedom of discourse that a lay person does not. Under the Federal Rules of Evidence, expert witnesses do not have to reveal the bases for their opinions; moreover, they do not have to base their opinions on facts that are already evidence in the case. In addition, experts may base their opinions on materials that would otherwise be inadmissible evidence—such as hearsay statements—if such material is the type of material reasonably relied upon by experts in the relevant field.²⁷ For example, a sufficiently qualified doctor testifying in court about the cause of a plaintiff's injury could base her opinion on the hearsay statements of other physicians or nurses who, while not testifying at trial, had contributed to the care of the plaintiff. These are freedoms of speech permitted to the expert witness that are unavailable to or-

Marge: Yah, that can happen.

FARGO (Coen and Coen 1996). The exchange between Marge and the first woman would most likely be an example of acceptable lay opinion, as it is based on the first-hand observation of the witness and, despite Marge's best efforts, the witness could not break her opinion down into more specific statements. The second woman's description, however, is more questionable. The woman herself admits that she has moved beyond a first-hand description to impose a preconceived "subconscious" association that may be misleading rather than helpful to the trier of fact. However, some lenient judges might even allow this lay opinion.

25. See FED. R. EVID. 702.

26. *Id.*

27. See FED. R. EVID. 703.

dinary lay witnesses.

One cannot examine the admissibility of expert testimony without asking who must decide that issue—the judge or the jury. For to “admit” the evidence means that it may be used as a basis for decision.²⁸ In other words, is this evidentiary issue to be decided by the judge like most other evidentiary questions under Federal Rule of Evidence 104(a), or is this a question of relevance conditioned on factual determinations which requires the jury to take a role in the process under Rule 104(b)?

The Supreme Court, in *Daubert v. Merrell Dow Pharmaceuticals, Inc.* was clear that the determination is to be made by the judge under Rule 104(a), but did not explain its reasoning.²⁹ As Professor Scallen has argued, this may be because the Court did not want to address the inconsistency of its approach with its prior decision in *Huddleston v. United States*,³⁰ and, even more troubling, its decision to prefer the perceived expertise of the judge over the perceived ignorance and incapacity of the jury in evaluating the credibility of such expert testimony.³¹ But therein lies the rub—by giving the power over the creation of the expert’s ethos to the judge under Rule 104(a), the Supreme Court deprived the jury of one of its most cherished historical functions—to evaluate credibility. Supporters of the Court’s decision will argue that this is not the case, since the jury still controls what weight to give the expert’s testimony. But this assumes that the jury will hear the expert speak—which was not the case in *Daubert* and many other toxic tort cases where the case turns on the admissibility of expert testimony on causation.³²

In *Huddleston*, the Supreme Court held that matters of relevance which rely on determinations of reliability are to be decided under Federal Rule of Evidence 104(b).³³ In *Daubert*, the Supreme Court held that issues of expert testimony on issues of science are

28. At times, however, it seems that critics of expert testimony equate the admission of expert testimony with a jury verdict for the plaintiff, ignoring all other procedural constraints on the jury, such as other evidence rules, judgment as a matter of law (directed verdict or judgment notwithstanding the verdict) and the possibility that the jury just might reach a decision that even the critics would reach.

29. *Daubert v. Merrell Dow Pharmaceuticals, Inc.*, 509 U.S. 579, 592 (1993).

30. 485 U.S. 681 (1988).

31. See Scallen, *supra* note 1, at 1788.

32. See *District Court Judge Takes Issue With Circuit Courts’ Application of Gatekeeping Role*, 3 FEDERAL DISCOVERY NEWS 1 (Issue 9: August 1997) (quoting the Hon. Sam C. Pointer, Jr., United States District Court Judge for the Northern District of Alabama, speaking at an ALI-ABA conference in July 1997, “In general, . . . one would have to say that the outcome of *Daubert* has been to restrict the use of opinion experts. And, in general, it has tended to favor the defendants, who most recently are the ones objecting to plaintiff’s expert testimony in a variety of fields.”).

33. *Huddleston*, 485 U.S. at 687-91.

matters of relevance that turn on the reliability of the underlying science, but that these issues are to be decided by the judge alone under Federal Rule of Evidence 104(a).³⁴ What if the *Daubert* Court had been consistent with its precedent in *Huddleston*, and had made the admissibility of expert testimony a Rule 104(b) question? The fundamental difference would be that the trial judge would have to share the power to evaluate the expert's *ethos* with the jury. Certainly the judge would have some power to exclude expert testimony; for example, presumably no rational jury could decide that reading crystal balls, tea leaves or Ouiji boards can tell whether Bendectin causes birth defects.³⁵ It would be irrational for a jury to so conclude, and the evidence would properly be excluded under Rule 104(b).³⁶ However, if reasonable minds could differ as to whether a particular methodology could be used to show that Bendectin causes birth defects, the jury would have to hear the expert testimony (as interpreted by the advocates) and then be instructed to disregard the testimony as irrelevant if they could not find, by a preponderance of the evidence, that such studies are reliable.³⁷ The difference in approach under Rule 104(a) and 104(b) goes to the heart of the matter—should the judge alone have the power under Rule 104(a) to resolve issues of expert credibility; should the judge have the sole power to determine, by a preponderance of the evidence, whether the science is sufficiently reliable to be admissible? Or, using the sufficiency standard of Rule 104(b), should the judge look only to see whether a reasonable person could find that the science is reliable—leaving the jury to decide all credibility issues, whether in finding that the evidence is unreliable and therefore irrelevant, or in finding that the evidence is just not as persuasive as the evidence presented on the other side?³⁸

34. *Daubert*, 509 U.S. at 592.

35. See David L. Faigman, Elise Porter and Michael J. Saks, *Check Your Crystal Ball at the Courthouse Door, Please: Exploring the Past, Understanding the Present, and Worrying About the Future of Scientific Evidence*, 15 CARDOZO L. REV. 1799 (1994) (analogizing expert opinion in *Daubert* to predictions based on reading Ouiji boards or tea leaves). Nor, presumably, can phrenologists predict a defendant's future dangerousness based on the contours of a defendant's skull. See *General Electric Co. v. Joiner*, 118 S. Ct. 512, 522 n.6 (1997) (Stevens, J., concurring in part and dissenting in part). We are not aware of any particular studies that have been conducted on this issue, but judging by the disparaging comments that commentators have made about these methods, we assume they agree that these methods would not produce meaningful predictions if put to such tests.

36. See FED. R. EVID. 104(b).

37. See EDWARD J. DEVITT ET AL., *FEDERAL JURY PRACTICE AND INSTRUCTIONS* § 17.08 (4th ed. 1992).

38. This would certainly be better from a constitutional standpoint. One consequence of the *Daubert* Court's decision to make the admissibility of expert testimony a 104(a) question is that it raises a potential constitutional problem in criminal cases. The

Given the existence of more direct means of ensuring sufficient evidence for rational jury decisionmaking, as discussed in Section B, and the constraint of public rhetoric regarding experts, as discussed in Section C, it is a mistake to make the judge the sole arbiter of the *ethos* of experts.

B. The Sufficiency of Expert Testimony

Moreover, the role of the Federal Rules of Evidence in constructing the *ethos* of experts must be viewed in context with the role of the Federal Rules of Civil Procedure and other procedural rules.³⁹ While a court may pay lip service to this consideration,⁴⁰ few stop to discuss seriously the consequence of taking the role of these other rules seriously. The procedural posture in which *Daubert* came before the 9th Circuit was as a motion for summary judgment. Because the *only* evidence that the plaintiffs could produce of causation in that case turned on controversial expert testimony, the trial court granted—and the Ninth Circuit eventually affirmed—judgment for defendants as a matter of law. Assuming that the court correctly interpreted the unreliability of the expert testimony in *Daubert*, the court should have reached the same result if it had analyzed the issue under Rule 104(b) rather than Rule 104(a). Close examination of Rule 104(b) and Federal Rule of Civil Procedure 56 reveals that they employ the sufficiency of evidence standard.⁴¹ Under this standard, the question is whether a reasonable jury could make a decision

Court's interpretation of the federal rules arguably deprives a criminal defendant of the Sixth Amendment right to a trial by jury. Federal Rule of Evidence 412 was recently amended to eliminate the provision that made the credibility of prior sexual conduct evidence a 104(a) question, in part to deal with a similar constitutional defect. While it is true that criminal defendants have no right to present irrelevant evidence, this argument begs the question, because under 104(b)'s approach, the jury is the fact-finder as to whether the evidence is unreliable and thus irrelevant. If they fail to find the factual considerations, they are instructed to disregard the evidence. See DEVITT, *supra* note 37. § 17.08.

39. See generally William W. Schwarzer, *Management of Expert Evidence*, in REFERENCE MANUAL ON SCIENTIFIC EVIDENCE 7 (Joseph M. McLaughlin ed., 1995) (relating the issue of admissibility of expert testimony to other relevant procedural rules, such as pretrial case management, discovery, and motion practice).

40. See *Daubert v. Merrell Dow Pharmaceuticals, Inc.*, 509 U.S. 579, 596 (1993) ("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.").

41. This, of course, also applies to Federal Rule of Civil Procedure 50, formerly known as the rule on directed verdicts and J.N.O.V., and now referred to as the rule regarding "judgment as a matter of law."

based on the evidence before them. If the animal studies in *Daubert* were as bad as the courts believed they were, the answer to this inquiry has to be the same under Rule 104(b) and Federal Rule of Civil Procedure 56.

Advocates of giving the exclusive role of admitting expert testimony to the judge under Rule 104(a) suggest that application of Rule 104(b) would result in a flood of junk science, since any crackpot theory can generate at least some evidence to support its reliability, and would thus pass muster under Rule 104(b)'s sufficiency standard. This simply is not accurate when one examines how the sufficiency standard is applied in federal civil procedure. The standard for taking an issue away from a federal jury is the same, whether it is applied at the stage of summary judgment⁴² or during trial.⁴³ The standard is that if no reasonable juror could find in favor of the party with the burden of proof on the issue, then judgment as a matter of law should be granted to the other party.⁴⁴ However, case law makes clear that a party cannot avoid judgment as a matter of law by producing just some evidence to produce a factual issue—a scintilla of evidence will not send the case to the jury. The United States Supreme Court in *Anderson v. Liberty Lobby, Inc.*⁴⁵ reiterated the idea that under the sufficiency standard, a judge need not send an issue to the jury just because there is some evidence on both sides:

Formerly it was held that if there was what is called a *scintilla* of evidence in support of a case the judge was bound to leave it to the jury, but recent decisions of high authority have established a more reasonable rule, that in every case, before the evidence is left to the jury, there is a preliminary question for the judge, not whether there is literally no evidence, but whether there is any upon which a jury could properly proceed to find a verdict for the party producing it, upon whom the *onus* of proof is imposed.⁴⁶

Under the sufficiency standard, the judge thus still serves as a gatekeeper but does not use that role to usurp the role of the jury in evaluating the credibility of the evidence.⁴⁷

Applying this analysis to the evidence context, a party has the burden of proving that the party's evidence is relevant, since only relevant evidence is admissible under Federal Rule of Evidence 402.

42. See FED. R. CIV. P. 56.

43. See FED. R. CIV. P. 50 (now called "Judgment as a Matter of Law"; formerly called "Directed Verdict/JNOV").

44. See FED. R. CIV. P. 50; see also *Anderson v. Liberty Lobby, Inc.*, 477 U.S. 242, 251 (1986).

45. 477 U.S. 242 (1986).

46. *Anderson*, 477 U.S. at 251. (quoting *Improvement Co. v. Munson*, 81 U.S. (14 Wall.) 442, 448 (1872)).

47. See *id.* at 255.

As the Supreme Court concluded in *Daubert*, if expert testimony is based on a scientific theory that cannot be shown to have probative value, the evidence is irrelevant. But here is where the sufficiency standard would make a difference. In order to exclude the testimony, the trial court would have to decide that no reasonable person could conclude that the testimony has probative value; certainly the case with a Ouiji board or tea leaf readings, but not as clear in the context of animal studies of the kind at issue in *Daubert*, and in the Supreme Court's recent decision in *General Electric Co. v. Joiner*.⁴⁸

The *Joiner* opinion most clearly demonstrates the federal judiciary's current confusion of the issues of admissibility, sufficiency and credibility. Robert Joiner was an electrician in the Water & Light Department of Thomasville, Georgia.⁴⁹ In the course of repairing the city's electrical transformers, Joiner sometimes immersed his hands and arms in the transformer's coolant, even splashing the fluid on himself, sometimes getting some in his eyes and mouth.⁵⁰ About ten years after he began work for the city, the city discovered that the coolant in some of the transformers was contaminated with polychlorinated biphenyls (PCBs), which are considered hazardous to humans.⁵¹ Joiner was diagnosed with small cell lung cancer in 1991, and sued General Electric and others, who had manufactured the transformers and the coolant.⁵² Joiner alleged that, although he was a smoker and there was a history of lung cancer in the family, his exposure to PCBs and their derivatives, furans and dioxins, "promoted" his cancer—that is, but for his exposure to these toxic substances, his cancer would not have developed for many more years, if ever.⁵³

The defendants removed the state court action to federal court and moved for summary judgment, arguing that (1) Joiner had no evidence that he was significantly exposed to PCBs, furans, or dioxins, and (2) there was no admissible evidence that PCBs promoted Joiner's cancer.⁵⁴ Joiner opposed defendants' motion for summary judgment, relying heavily on depositions from his experts, who testified that PCBs alone can promote cancer, that furans and dioxins can also promote cancer, and that Joiner's exposure to PCBs, furans, and dioxins was likely responsible for Joiner's cancer.⁵⁵ The District Court ruled that although there was a genuine issue of material fact

48. 118 S. Ct. 512 (1997).

49. See *Joiner v. General Elec. Co.*, 864 F. Supp. 1310, 1312 (W.D. Ga. 1994).

50. See *id.* at 1313 n.6.

51. See *id.* at 1312.

52. See *id.* at 1313-14.

53. See *id.* at 1314.

54. See *id.*

55. See *id.*

as to whether Joiner was exposed to PCBs, summary judgment should be granted because there was no genuine issue as to whether Joiner had been exposed to furans and dioxins, and whether there was a link between exposure to PCBs and small cell lung cancer.⁵⁶ The court ruled that Joiner's experts' testimony was inadmissible, and could not be used to oppose the summary judgment motion, because their testimony did not amount to more than "subjective belief or unsupported speculation."⁵⁷

The Court of Appeals for the Eleventh Circuit reversed, holding that the District Court erred by finding there was no genuine issue as to whether Joiner had been exposed to furans and dioxins, as there was evidence of that exposure in the record and that the District Court erred in weighing the credibility of the conflicting expert testimony.⁵⁸ The Court of Appeals stated that the trial court should have restricted itself to determining the "legal reliability of proffered expert testimony, leaving the jury to decide the correctness of competing expert opinions."⁵⁹ The Court of Appeals stated that it was applying a "particularly stringent standard of review to the trial judge's exclusion of expert testimony" because the expert testimony rules display a preference for admissibility.⁶⁰

The United States Supreme Court reversed, holding that the Court of Appeals erred in applying a heightened standard of review to the issue of the admissibility of the expert testimony; the Supreme Court stated that the correct standard of review for evidentiary rulings, including those on the admissibility of expert testimony, is abuse of discretion.⁶¹ The Supreme Court rejected a higher standard of review, although the trial court's ruling was dispositive of the case, because "the question of admissibility of expert testimony is not such an issue of fact, and is reviewable under the abuse of discretion standard."⁶²

The Supreme Court's ruling in *Joiner* demonstrates the problem of the Court conflating the issues of admissibility, sufficiency, and credibility. First, by framing the question as solely one of admissibility, the Court ignored the application of the sufficiency standard that is applicable to a motion for summary judgment. The Court asserted that the admissibility of expert testimony was not a question of fact, but, as in *Daubert*, it refused to explain why this is so when the rele-

56. See *id.* at 1326-27.

57. *Id.* at 1326.

58. See *Joiner v. General Elec. Co.*, 78 F.3d 524, 528 (11th Cir. 1996)

59. *Id.* at 533.

60. *Id.* at 529.

61. See *General Elec. Co. v. Joiner*, 118 S. Ct. 512, 517 (1997).

62. *Id.*

vancy of the evidence turns on finding that the evidence is reliable—a determination that the Court deemed to be a Rule 104(b) factual question in *Huddleston*.⁶³ Thus, although it disparaged the experts' determination regarding the cause of Joiner's cancer as resting on no more than "ipse dixit," the Court felt free to resort to that argumentative technique itself. By refusing to review the district court's ruling under the sufficiency standard, the Court confuses the question of whether the evidence can be heard by the jury with the question of whether the evidence is sufficient to support a finding of liability by the jury. Moreover, as Justice Stevens suggests in his concurring and dissenting opinion, the Court confuses the issue of admissibility and credibility; he challenged his colleagues with this question: "[W]hen qualified experts have reached relevant conclusions on the basis of an acceptable methodology, why are their opinions inadmissible?"⁶⁴ Justice Stevens noted that the Court of Appeals found that Joiner's experts followed a scientifically acceptable method of weighing all the evidence together.⁶⁵ Essentially, the Supreme Court and trial court substituted their judgment of the persuasiveness of the experts' testimony for that of the jury.

What would have happened if *Joiner* had been decided under Rule 104(b), instead of Rule 104(a)? The first question would simply be whether Joiner's expert testimony (in the form of depositions) could be used to oppose the defendants' motion for summary judgment. The trial court would have asked whether a *reasonable juror* could be persuaded by the experts that PCBs promoted Joiner's cancer; whether the trial judge herself was persuaded would be irrelevant. As the *Joiner* Court held, the trial court's ruling under 104(b) would be reviewable, as all other evidentiary decisions are, for abuse of discretion.⁶⁶

Suppose the trial judge decided that the evidence could be used to oppose the summary judgment motion. The second issue, whether to grant summary judgment or not, again would be framed in terms of sufficiency—is this expert testimony sufficient to support a finding of causation? But now the question becomes whether this evidence is the *only* evidence of causation. If, as in *Joiner*, the expert testimony

63. See Scallen, *supra* note 1, at 1788.

64. *Joiner*, 118 S. Ct. at 523 (Stevens, J., concurring and dissenting).

65. See *id.* at 522-23. Justice Stevens noted that the Environmental Protection Agency (EPA) uses the same method to assess risk, although with a higher standard, and that the defendants used the same method in this case.

66. *Id.* at 517. Given the Court of Appeals' conclusion and that of Justice Breyer, if the trial court ruled that the evidence was insufficient, we would have to say that the trial court would be "manifestly wrong" to conclude that no reasonable person could be persuaded on the issue of causation by this expert testimony, and the decision would be reversed for a determination of the merits of the summary judgment motion.

is the only evidence, then the question is whether this expert testimony alone could sustain a finding of causation. However, that determination is subject to the standard of review applicable to motions for summary judgment, or other judgments as a matter of law—*de novo* review.⁶⁷ Such a heightened standard of review is the appropriate one where the trial court's decision has taken the case away from the jury. To put it a different way, the Court of Appeals was correct in finding that a heightened standard of review should apply to the trial court's decision to exclude the evidence in *Joiner*, but not because it dealt with expert testimony, but rather because this scientific testimony was the only evidence linking the exposure to PCBs to cancer produced in opposition to a motion for summary judgment. The issue in *Joiner* was not "what standard of review applies to the trial court's decision on the admissibility of expert testimony." The only issue in *Joiner* was "what standard of review applies to the trial court's decision that no reasonable jury could return a verdict based on the scientific evidence presented in this case." The answer to each issue was clear, but the Supreme Court muddled them by confusing the admissibility and the sufficiency of evidence.

C. The Credibility of Expert Testimony

Both commentators and courts decry the expanding use of scientific expert testimony today. Critics of expert testimony based on "junk science" seem to equate the decision to admit questionable expert testimony at trial with a jury verdict in favor of the side introducing that science. This ignores the fact that under our adversary system, the opponent of the so-called "junk science" is present to explain the defects in the other side's expert testimony and present expert testimony of its own. In *Daubert*, the Supreme Court pointed to the role of the adversary system in dealing with weak scientific evidence: "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"⁶⁸ However, the Court's actions speak louder than these words. By giving the judge control over the admissibility of expert testimony based on natural or social science evidence under Rule 104(a), the Court betrays its irrational fear of the power of one side's expert speech to control the jury. This is odd, given how easily we are ready to dismiss such testimony as "mere" rhetoric.

The corollary of this fear of the Svengali-expert is an elitist con-

67. 10A CHARLES ALAN WRIGHT ET AL., FEDERAL PRACTICE AND PROCEDURE § 2716 (3d ed. 1998).

68. *Daubert v. Merrell Dow Pharmaceuticals, Inc.*, 509 U.S. 579, 596 (1993).

tempt for the decision-making ability of the jury. Plato, the advocate of "truth speakers," held popular juries in similar disregard.⁶⁹ The critics of junk science would solve the problem by conferring the primary power to control the ethos of experts to the modern day counterpart of Plato's philosopher-king—the judge. Yet, turning the problem over to the judge will not solve the problem of the credibility of expert speech. Indeed, even the existence of procedural tools for ensuring sufficient evidence for jury decision-making will not solve the problem, for we are faced with a series of conflicting messages. We respect the jury's decision-making ability but fear the jury's decision-making ability. We know that juries need enlightenment from experts but fear that experts have undue power over juries. It is important to examine actual expert speech to determine what kinds produce public concern and why. Such analysis can lead to more effective management of expert testimony in court, as well as law reform that more adequately attempts to address societal objections to expert speech while preserving the role of the jury. We next illustrate this process by analyzing the rhetoric of the experts in the Dan White case.

III. The Ethos of Experts in the Dan White Trial

In this Section, we attempt to demonstrate how the speech of expert witnesses can be criticized, not only to explain the societal objections to "junk science," but also to show how improper expert speech—that which cannot be adequately or acceptably negotiated or translated—may lead to law reform.

Most of the facts in the trial of Dan White were undisputed.⁷⁰ Dan White resigned his position on the Board of Supervisors for the City and County of San Francisco on November 10, 1978, citing overwhelming personal and financial difficulties which made him unable to perform his duties. Several days later, White changed his mind, and asked Mayor George Moscone, who had the power to appoint White's replacement to the Board, to reinstate him as a Supervisor. Moscone initially indicated that he would reappoint White, but later changed his mind. Supervisor Harvey Milk, the first openly gay man to hold the office, opposed White's reinstatement to the Board. On November 26, 1978, a reporter informed White that Moscone would not reinstate him.

69. See PLATO, GORGAS 481-527 (W.R.M. Lamb trans., Loeb Classical Library 1929); PLATO, PHAEDRUS 272D, 278B-D (discussing how jurors are easily swayed by an advocate who values winning the case more than speaking the truth).

70. This account of the facts of the White case, as well as quotes from the trial transcript, are taken from KENNETH W. SALTER, THE TRIAL OF DAN WHITE (1991).

The next day, at about 10 a.m., White had an aide drop him off at City Hall. Instead of going through the front entrance which contained a metal detector, White walked to the McAllister Street side of City Hall and climbed through a basement window. He went directly to Moscone's office and shot Moscone four times, twice after Moscone had fallen to the floor. White then reloaded his gun and went to Milk's office, where he shot Milk five times, three times in the body and then twice in the back of the head while Milk was on the floor. Although White initially ran, he later surrendered himself to the police, where he gave a full tape-recorded confession.

At the trial, White presented a defense of diminished capacity, using the California Supreme Court's decision in *People v. Wells*,⁷¹ which held that evidence of diminished capacity, whether from intoxication, trauma or mental disease, could be used to show that the defendant did not have a specific mental state such as malice aforethought, or could not premeditate or deliberate to the degree required for a conviction of first degree murder.⁷² Thus, White presented expert testimony regarding his mental state at the time of the killings. This expert testimony was the source of one of the trial's most memorable images and one of the most reviled examples of "junk science"—the "Twinkie defense," as the press referred to the testimony of Dr. Martin Blinder. This defense expert testified that when White became depressed, he ate large amounts of junk food—Twinkies, Coca-Cola, etc. Moreover, Dr. Blinder testified that when "susceptible individuals" like White consume "large quantities of what we call junk food, high sugar content food with lots of preservatives can precipitate anti-social and even violent behavior." However, what is now forgotten is that the defense did not rely solely on the "Twinkie" theory; four other psychiatrists also testified for the defense, uniformly agreeing that White suffered from depression to such a degree that he possessed diminished capacity at the time of the killing and could not premeditate or deliberate.

White was convicted of voluntary manslaughter rather than first degree murder. The verdict was greeted by outrage—in the gay community, which believed that Milk's murder and the verdict were the result of homophobia, and in the general public, which focused on the defense of diminished capacity. The following case study attempts to explore some of the cultural response to the expert testimony presented in the White case and how that response resulted in law reform.

Causal relations are arguably the natural domain of scientists

71. 202 P.2d 53 (Cal. 1949).

72. *People v. Wells*, 202 P.2d 53 (Cal. 1949).

and, more often than not, expert witnesses for the defense in the trial of Dan White addressed cause and effect. The question posed at the trial was not whether Dan White shot Moscone and Milk, but why? How could a man so seemingly normal do such a heinous thing? The focus of the defense expert testimony was not only to answer these questions, but also to do so in a way that conveyed their internal certainty of the accuracy of their analysis.

Jurors repeatedly heard the five defense experts testify about the authority and certainty of their opinions about what had caused Dan White's actions. Dr. Jones, for example, began his direct examination by distinguishing his use of the term "depression" from how it is used "commonly" by the uninitiated.⁷³ Moreover, he phrased his causal analysis in an analogy—"it's as though things were filtered through black glasses"—so that jurors could understand White's distorted perception.⁷⁴ On cross-examination, Dr. Jones defended his authority by testifying that "virtually a hundred percent of psychiatrists" would agree with his diagnosis.⁷⁵

Cross-examination also proved less than daunting to Dr. Blinder. Despite the prosecutor's best efforts, the psychiatrist testified authoritatively on the issue of causation—stressing that Dan White "wanted to have some understanding as to what was going on, but because of his mental state, he could not process this information in a constructive way with lethal consequences."⁷⁶ Pressed further by prosecution questions, Dr. Blinder maintained the aura of certitude. "[T]he psychiatric information that I have," he asserted, "goes towards great impairment of the mental processes . . . as is necessary for the formation of malice."⁷⁷

Later, during direct examination, Dr. Solomon invoked terms of his art—"a uni-polar depressive reaction"—to define Dan White's mental state,⁷⁸ as well as explaining analogously "in laymen's terms" during cross-examination that the defendant "was sort of on automatic pilot" during the shootings.⁷⁹ Without qualification, Dr. Solomon testified that Dan White "did not have a mental capacity, to maturely and meaningfully premeditate and deliberate."⁸⁰

The two other experts testifying for the defense sustained their certainty about Dan White's suffering from mental illness in a more

73. See Salter, *supra* note 70, at 131.

74. *Id.* at 133.

75. *Id.* at 138.

76. *Id.* at 203.

77. *Id.* at 204.

78. *Id.* at 210.

79. *Id.* at 229.

80. *Id.* at 211-12.

qualified manner. On direct examination, Dr. Delman firmly testified that Dan White's "capacity to deliberate and premeditate was substantially impaired," and that the defendant lacked "the capacity to have malice."⁸¹ Cracking under cross-examination, the psychologist was more tentative, responding "I don't believe so" when questioned whether Dan White was capable of deliberation.⁸² And responding to the question why Dan White shot George Moscone twice in the head after the mayor was already down, Dr. Delman responded that he really had "no idea why that happened."⁸³

In subsequent testimony, Dr. Lunde also testified unequivocally on direct examination that Dan White "not only did not premeditate or deliberate these killings, but as a result of his mental condition, he was not capable of any kind of mature, meaningful reflection."⁸⁴ But the psychiatrist qualified the force of a figurative explanation as "contradictory and ironic" when he further testified that "for such a person the American Dream is a nightmare, for somebody like Dan White."⁸⁵ Nonetheless, on cross examination, Dr. Lunde bolstered his position by asserting that he "would be very surprised if more than one out of a thousand psychiatrists did not come up with the same diagnosis."⁸⁶

Suppressing concerns about morality and stressing their objectivity, the defense's experts articulated an otherness in their status that supported their nearly unanimous claims of certitude. They stood above the fray that afflicted mere laypeople, but they were well versed enough to explain scientific concepts in analogies that lay people could understand. In the unshakable opinion of the defense experts, Dan White's actions were caused by his mental illness.

The expert witnesses properly stressed the issue of causation, yet to a remarkable degree they also usurped the jurors' prerogative to decide matters of guilt and innocence. Ironically, Dr. Blinder, the now famous author of the "Twinkie" defense,⁸⁷ opposed this use of psychiatric testimony. Courts, he complained, "tend to place psychiatry in a position where it doesn't belong, where it becomes simply the sole arbiter between guilt and innocence, in certain kinds of crimes, whether or not a man is insane."⁸⁸ Furthermore, he criticized courts for contributing to "the problem in trying to directly equate psychiat-

81. *Id.* at 234.

82. *Id.* at 241.

83. *Id.* at 242.

84. *Id.* at 252.

85. *Id.* at 249.

86. *Id.* at 255.

87. *Id.* at 184.

88. *Id.* at 182.

ric findings, psychiatric concepts with legal concepts.”⁸⁹ Nonetheless, every expert witness for the defense contributed testimony vouching for the dynamic quality of emotional stability.

Dr. Blinder opined on direct examination that brutal changes in Dan White’s world diminished his capacity for criminal guilt: “[I]f it were not for all the tremendous pressures on him the weeks prior to the shooting, and perhaps if it were not for the ingestion of this aggravating factor, this junk food . . . I suspect that these homicides would not have taken place.”⁹⁰

Turning this argument inside out on cross-examination, Dr. Solomon directed jurors’ attention to the permanence in Dan White’s behavior. His otherwise suspicious reloading of his gun after shooting George Moscone was explained away as “the sort of automatic action that he had always been taught.”⁹¹ And yet, Dr. Solomon testified, Dan White “was out of control and in an unreasonable state” during the shooting as opposed to before.⁹² Asserting both poles of permanence and change, Dr. Solomon could be said to have exhausted the rhetorical alternatives but, more likely, he was responding less than adroitly to the pressure of cross-examination.

Finally, but curtly, Dr. Lunde asserted both types of rhetorical claims. On direct examination, he stressed the “change of appetite” that was “quite striking” in Dan White’s case history.⁹³ On cross-examination, the psychiatrist testified that White “was literally not focusing” when he shot George Moscone twice in the head.⁹⁴ Moreover, in both shootings, the defendant “was not necessarily acting in anger.”⁹⁵ Dr. Lunde’s testimony provided the defense with a rhetorical summation of the heartiest argument against the defendant’s guilt: White’s understandable response to irresistible change.

The prosecution confronted the defense team’s battery of five experts testifying about cause and effect, and four experts testifying about guilt and innocence (Dr. Delman was unwilling to frame the issue in those terms), with one expert, Dr. Levy. His testimony, although rhetorically polished, failed to avert a verdict of voluntary manslaughter rather than murder. Addressing cause and effect, he claimed greater scientific accuracy in his opinion because—unlike the defense’s experts—he interviewed Dan White shortly after the

89. *Id.*

90. *Id.* at 191.

91. *Id.* at 226.

92. *Id.* at 226.

93. *Id.* at 248.

94. *Id.* at 267.

95. *Id.* at 270.

shootings.⁹⁶ He also pointedly denied "any prevailing psychiatric opinion" that eating junk food such as Twinkies was related "to any type of mental illness."⁹⁷ Addressing guilt and innocence, he asserted that the defendant was capable of malice in his actions.⁹⁸ The prosecution was content to rest on this simple refutation of the defense's experts, believing that White's confession and the facts spoke for themselves.

What lessons can be drawn from a rhetorical analysis of the expert testimony presented in the White case? A primary lesson is that advocates cannot rely on the facts to tell the whole story. Even expert testimony based on the most reliable scientific methods cannot persuade on its own.⁹⁹ The verdict in the White case was not due to expert testimony on the "Twinkie" defense, but rather due to the prosecution's inability to use expert testimony together with other evidence to tell a compelling story about cause and effect—to explain to the jury *how* a "normal" guy such as Dan White could murder Harvey Milk and George Moscone in cold blood. This point may seem like a tremendous grasp of the obvious, but it is often tempting to reach for a simpler explanation of an unpopular verdict—the jury was simply swayed by another huckster expert witness using a crack-pot pseudo-scientific theory.

A secondary lesson from the White case was the link between expert testimony and substantive and procedural law reform. The expert testimony regarding White's emotional state revealed the societal unacceptability of arguments based on "diminished capacity." The people of California passed an initiative abolishing the use of diminished capacity as a defense in criminal cases.¹⁰⁰ Nonetheless, recent commentators have noted that the constitutional requirement of due process requires that the defendant be permitted to present evidence that negates the existence of the defendant's capacity to premeditate and deliberate, an essential element of the prosecution for first degree murder.¹⁰¹

The major evidentiary law reform that stems from the White case is the limitation of California Penal Code section 29, which prevents the kind of expert testimony given by White's experts where

96. *See id.* at 306.

97. *Id.* at 317.

98. *See id.* at 316.

99. One can attribute the same fault to the prosecution in the state trial of the L.A.P.D. officers accused of beating Rodney King; not even a videotape "speaks for itself." The advocates must shape the evidence, including expert testimony, into a narrative that resolves the conflicts in the minds of the jurors.

100. Initiative, June 8, 1982.

101. *See* DAVID L. FAIGMAN ET AL., MODERN SCIENTIFIC EVIDENCE: THE LAW AND SCIENCE OF EXPERT TESTIMONY § 6-1.3 (1997).

they testified directly on the issue of his guilt or innocence. This provision prohibits the expert from stating an opinion on whether the accused had the mens rea of the offense charged at the time of the crime, something the experts in the White case did repeatedly.¹⁰² A similar revision was made to the Federal Rules of Evidence, following the verdict in the trial of John Hinckley who shot President Ronald Reagan.¹⁰³ Hinckley was found not guilty by reason of insanity. These law reform efforts are direct responses to the societal unacceptability of expert speech. While we may tolerate expert testimony on issues of causation and we permit experts to provide context regarding mental illness or disease, we will not allow them to usurp the role of jurors in passing on guilt and innocence.

Note that, despite the public attention and press surrounding the "Twinkie defense," no law reform was deemed necessary to prohibit that particular "scientific" theory. Indeed, when interviewed following the verdict, the jurors discussed the burden of proof and the prosecution's failure to prove premeditation "beyond a reasonable doubt," but none of them relied on "the Twinkie defense."¹⁰⁴

The ultimate lesson of the use of expert testimony in the White case is that the problem of expert credibility is complex and multifaceted. And yet, commentators and courts are fixated on the one issue of the scientific validity of the basis of expert testimony, conducting and attending seminars on statistics and the scientific method, while the other issues of the *ethos* of experts are neglected.

Conclusion

The stakes surrounding the admissibility of expert testimony are higher than ever before, a fact that has crept into the calculus of what kind of expert testimony should be allowed as the basis for decision. Justice Breyer, in his concurring opinion in *General Electric Co. v. Joiner*, reflects this reality:

[M]odern life, including good health as well as economic well-being, depends upon the use of artificial or manufactured substances, such as chemicals. And it may, therefore, prove particularly important to see that judges fulfill their *Daubert* gatekeeping function, so that they help assure that the powerful engine of tort liability, which can generate strong financial incentives to reduce, or to eliminate, production, points ¹⁰⁵towards the right substances and does not destroy the wrong ones.

102. See CAL. PENAL CODE § 29 (West 1988).

103. See FED. R. EVID. 704(b) and accompanying advisory committee's note.

104. See Dan White, *Juror: It's Been Hell, How Case Changed Their Lives*, S.F. CHRON., July 14, 1983, at 1, 4-5.

105. *General Elec. Co. v. Joiner*, 118 S. Ct. 512, 520 (1997) (Breyer, J., concurring).

While we may all agree with Justice Breyer that the "right substances" should be destroyed through the "powerful engine of tort liability," he begs the essential questions—how, and who, shall determine what those substances are?¹⁰⁶ Evidence law plays a crucial role in answering these questions.

In a speech shortly following the issuance of the *Joiner* decision, Justice Breyer reiterated a theme he began in *Joiner*, urging judges to use their power to appoint special masters or specially trained law clerks under Federal Rule of Evidence 706.¹⁰⁷

Buried in his speech, however, was a paragraph that did not receive as much press attention, but is an exceedingly important statement, given the subject of this Symposium and, in particular, this Article. Justice Breyer stated:

Finally, a court proceeding, such as a trial, is not simply a search for dispassionate truth. It must serve other important values as well. The law must be fair. And, in our country, it must always seek to protect basic human liberties. One important procedural safeguard, guaranteed by our Constitution's Seventh Amendment, is the right to a trial by jury. *Any effort to bring better science into the courtroom must respect the jury's constitutionally specified role—even if doing so means, from time to time, what is, from a scientific perspective, an incorrect result.*¹⁰⁸

The only way Justice Breyer can have an approach that both respects the need to have reliable results and respects the role of the jury in evaluating the ethos of expert testimony is to make the admissibility of expert testimony—whether it is to be used at trial or used to support or to oppose a summary judgment motion—subject to the sufficiency standard of Federal Rule of Evidence 104(b). This may produce some results that Justice Breyer's specially-appointed science experts may not like. However, while we do not permit juries to be irrational, we have always given juries the right to be wrong, at least in the eyes of the losing party.

Expert testimony is opinion, "mere" rhetoric. It may or may not be useful as evidence. When it is admitted into evidence, its probative force is determined by the ethos of its speakers as viewed from the perspective of the audience of judges and juries, who are in turn

106. *Id.*

107. Justice Breyer ventured one possible answer to this question—encouraging judges to appoint their own experts to advise the court. Justice Breyer acknowledged that this alternative is seldom used at present, but speculated that it could become more common with help of the American Association for the Advancement of Science, which has begun a pilot program, developing a list of experts to assist the court in various areas. See Stephen G. Breyer, *The Interdependence of Science and Law*, Address at the Annual Meeting of the American Association for the Advancement of Science (Feb. 16, 1998).

108. *Id.* (emphasis added).

reflecting societal beliefs, attitudes and values about experts. Thus, analyzing and understanding the conceptual frameworks within which expert witnesses express their opinions is as essential as evaluating the basic reliability of any scientific theories on which they rely. Because the community of evidence scholars and judges are, at present, too fixated on the latter issue, they will produce an incomplete and undemocratic response to the problem of expert testimony.

When the expert touches on matters such as guilt or innocence, such as in the White case, or in civil cases, liability, such testimony raises problems for study and criticism by both rhetoricians concerned with law and lawyers concerned with rhetoric, as the expert begins to supplant the role of the jury. At times, as in the White case, the tension among the roles of the expert, judge and jury will reach a critical point in the eyes of those observing public trials. There will be calls for reform of evidence rules regarding expert speech.

The recent critical discussions of expert testimony have taken place in appellate courts, training seminars, law reviews, popular press and television talk shows—far removed from the courthouses wherein such testimony is actually used. We need to look at expert testimony as a process of communication—expert testimony is testimony, speech, argument, rhetoric—and in considering it as such may help us see where we have gone astray. While the natural and social sciences and the law may speak different languages, the constraints of the adversary system demand that we treat the problem of the ethos of experts pragmatically.