

3-2001

Judges Cooperating with Scientists: A Proposal for More Effective Limits on the Federal Trial Judge's Inherent Power to Appoint Technical Advisors

Robert L. Hess, II

Follow this and additional works at: <https://scholarship.law.vanderbilt.edu/vlr>



Part of the [Judges Commons](#)

Recommended Citation

Robert L. Hess, II, Judges Cooperating with Scientists: A Proposal for More Effective Limits on the Federal Trial Judge's Inherent Power to Appoint Technical Advisors, 54 *Vanderbilt Law Review* 547 (2001)
Available at: <https://scholarship.law.vanderbilt.edu/vlr/vol54/iss2/8>

This Note is brought to you for free and open access by Scholarship@Vanderbilt Law. It has been accepted for inclusion in Vanderbilt Law Review by an authorized editor of Scholarship@Vanderbilt Law. For more information, please contact mark.j.williams@vanderbilt.edu.

Judges Cooperating with Scientists: A Proposal for More Effective Limits on the Federal Trial Judge's Inherent Power to Appoint Technical Advisors

I.	INTRODUCTION	548
II.	COPING WITH SCIENTIFIC ISSUES IN THE FEDERAL TRIAL COURTS	552
	A. <i>Science and the Federal Trial Judge</i>	553
	B. <i>The Distribution of Power Between the Trial Judge and an Appointee</i>	558
	C. <i>The Distribution of Power Between the Trial Judge and the Parties</i>	559
	D. <i>The Advantages and Disadvantages of Technical Advisors</i>	562
	E. <i>Guidance from the United States Supreme Court</i> ...	563
	1. <i>Daubert v. Merrell Dow Pharmaceuticals, Inc.</i>	564
	2. <i>General Electric Co. v. Joiner</i>	566
III.	BACKGROUND ON TECHNICAL ADVISORS	568
	A. <i>Judicial Power to Appoint Technical Advisors: Reilly v. United States</i>	569
	B. <i>Factors Affecting a Trial Judge's Decision to Appoint a Technical Advisor</i>	573
	1. <i>The Cecil-Willging Study</i>	574
	2. <i>The Cases</i>	576
IV.	THE COURT APPOINTED SCIENTIFIC EXPERTS ("CASE") PROJECT	580
V.	CURRENT LIMITS ON THE INHERENT POWER TO APPOINT TECHNICAL ADVISORS	582
VI.	MORE EFFECTIVE LIMITS ON THE INHERENT POWER TO APPOINT TECHNICAL ADVISORS.....	586

A.	<i>Procedural Safeguards as a Constitutional Requirement</i>	586
B.	<i>Statutory Limit</i>	587
C.	<i>Prudential Self-Restraint</i>	588
VII.	CONCLUSION.....	589

I. INTRODUCTION

Scientifically complex cases challenge the expertise of federal trial judges.¹ Nonetheless, the United States Supreme Court has held that federal trial judges must take an active role in determining the admissibility of scientific evidence.² The Court in *Daubert v. Merrell Dow Pharmaceuticals, Inc.* expressed its view that the adversary system is capable of handling most scientific issues,³ and noted that trial judges may seek the help of third-party experts.⁴ Thus, the federal trial judge confronted with a scientifically complex case may rely on the adversaries or may seek help from a third-party expert. When faced with this choice, judges usually rely on the adversaries.⁵ Some commentators lament this choice.⁶ They cite systematic flaws within the adversary system and argue that judges should rely on third-party experts more frequently.⁷ To combat judicial reluctance, influential observers including Justice

1. See *Gen. Elec. Co. v. Joiner*, 522 U.S. 136, 147-48 (1997) (Breyer, J., concurring) (noting that judges must make "subtle and sophisticated determinations about scientific methodology . . . [even though] judges are not scientists and do not have the scientific training that can facilitate the making of such decisions"); *Daubert v. Merrell Dow Pharms., Inc.*, 509 U.S. 579, 596-97 (1993) (distinguishing broad and wide ranging scientific analyses from quick and final legal analyses); *id.* at 599 (Rehnquist, C.J., concurring in part and dissenting in part) (observing that scientific knowledge, scientific methods, scientific validity, and peer review are not within judges' expertise).

2. *Daubert*, 509 U.S. at 592-93, 597 (requiring federal trial judges to function as "gatekeepers" to scientific evidence); see also Joe S. Cecil & Thomas E. Willging, *Accepting Daubert's Invitation: Defining a Role for Court-Appointed Experts in Assessing Scientific Validity*, 43 EMORY L.J. 995, 996 n.5 (1994) (citing articles discussing the rigidity of the *Daubert* admissibility standard).

3. *Daubert*, 509 U.S. at 596.

4. *Id.* at 595 (citing FED. R. EVID. 706).

5. See Cecil & Willging, *supra* note 2, at 1015-19 (discussing the reasons why judges do not appoint third-party experts).

6. E.g., Ellen E. Deason, *Court Appointed Expert Witnesses: Scientific Positivism Meets Bias and Deference*, 77 OR. L. REV. 59, 61 & n.3 (1998) (citing commentators who have argued in favor of more liberal use of court-appointed experts); Samuel H. Jackson, *Technical Advisors Deserve Equal Billing with Court Appointed Experts in Novel and Complex Scientific Cases: Does the Federal Judicial Center Agree?*, 28 ENVTL. L. 431, 432-34 (1998) (observing some difficulties lay fact-finders may have with complex scientific issues).

7. E.g., Deason, *supra* note 6, at 61 & n.3; Jackson, *supra* note 6, at 432-34.

Breyer have called for greater "cooperative efforts" between scientists and judges.⁸ The Court Appointed Scientific Experts ("CASE") demonstration project is such an effort.⁹ CASE facilitates appointment of third-party experts by identifying qualified and willing scientists for judges who wish to appoint a third-party expert.¹⁰

The conclusion that judges should seek help from people with more knowledge about the subject at hand makes common sense: If you do not know, ask somebody who does. Recourse to third-party experts, however, creates its own problems. Article III vests the federal judicial power in judges who are appointed to serve life terms and whose compensation cannot be lowered.¹¹ If third-party experts exercise too much judicial power, judges abdicate their constitutional role, and Article III is violated.¹² Thus, the Constitution limits judges' ability to delegate authority to non-Article III actors.

Trial judges are also reluctant to assume power traditionally reserved to the parties. The federal courts operate under the adversary system.¹³ In the adversary system, the parties are responsible for educating the judge regarding the law and the facts.¹⁴ This system promotes personal autonomy, the search for the truth, and judicial impartiality.¹⁵

Notwithstanding the issues raised by the appointment of third-party experts, trial judges have inherent power to appoint outside experts, and the federal rules explicitly define two applications of this power. Federal Rule of Civil Procedure ("FRCP") 53

8. *Gen. Elec. Co. v. Joiner*, 522 U.S. 136, 150 (1997) (Breyer, J., concurring) (suggesting that judges and scientists should cooperate to solve complex and technical problems that face the modern legal system); HOUSE COMMITTEE ON SCIENCE, 105TH CONG., UNLOCKING OUR FUTURE: TOWARD A NEW NATIONAL SCIENCE POLICY (Comm. Print 1998) [hereinafter, UNLOCKING] (stating that "Justice Breyer ha[s] specifically endorsed . . . [e]fforts designed to identify highly qualified and impartial scientific experts to provide advice to the courts for scientific and technical decisions"), available at http://www.house.gov/science/science_policy_report.htm.

9. Deborah Runkle, *Court-Appointed Scientific Experts: A Demonstration Project of the American Association for the Advancement of Science*, BLAST, Jan. 2000, available at <http://www.abanet.org/scitech/eblast/jan00/2jan00.html#CASE>.

10. *Id.*

11. U.S. CONST. art. III, § 1 ("The judicial Power of the United States, shall be vested in one supreme Court, and in such inferior Courts as the Congress may from time to time ordain and establish.").

12. *La Buy v. Howes Leather Co.*, 352 U.S. 249, 256 (1957); *Reilly v. United States*, 863 F.2d 149, 157-58 (1st Cir. 1988); see also discussion *infra* Part II.B.

13. See generally FLEMING JAMES, JR. ET AL., CIVIL PROCEDURE §§ 1.2-1.3 (4th ed. 1992).

14. *Id.* § 1.2.

15. See Stephen A. Saltzburg, *The Unnecessarily Expanding Role of the American Trial Judge*, 64 VA. L. REV. 1, 11-19 (1978).

allows the court to appoint special masters,¹⁶ and Federal Rule of Evidence ("FRE") 706 allows the court to appoint experts who can testify at trial.¹⁷ Independent of these rules, the judge's inherent power also justifies technical advisor appointments.¹⁸ Technical advisors are non-testifying experts who help the judge understand complicated technical issues.¹⁹ Even though judges generally have the power to appoint outside experts, they normally defer to the adversarial process.²⁰

Technical advisor appointments are particularly rare.²¹ Two factors most likely control judicial use of technical advisors: deference to the adversary system and the burden of finding a suitable technical advisor.²² In a survey of federal judges, two researchers found that trial judges highly esteem the adversary system,²³ and this respect partially accounts for the low incidence of technical advisor appointments.²⁴ The administrative burden of identifying prospective qualified technical advisors probably also deters judges from appointing technical advisors.²⁵ Some judges have relied on personal or professional contacts to identify potential technical advisors.²⁶ For judges without these contacts, the selection process is more cumbersome.²⁷

The CASE project is calculated to decrease traditional judicial deference to the adversary system and to lessen the administrative burden associated with finding a third-party expert.²⁸ The project endorses technical advisors generally and provides interested judges with a specific list of qualified and willing experts.²⁹ Thus, judges who are concerned about the ill-effects of consulting

16. FED. R. CIV. P. 53(a); see *Ex parte Peterson*, 253 U.S. 300, 312-313 (1920) (acknowledging the inherent power of trial courts to appoint special masters).

17. FED. R. EVID. 706(a).

18. *Reilly v. United States*, 863 F.2d 149, 155-56 (1st Cir. 1988) (distinguishing a testifying expert appointed under FRE 706 from a technical advisor appointed under the trial court's inherent power).

19. *Id.* at 157-58.

20. Cecil & Willging, *supra* note 2, at 997, 1018-19.

21. See *id.* at 1002-03 (noting few cases deal with technical advisor appointments).

22. See *infra* notes 226-39 and accompanying text.

23. Cecil & Willging, *supra* note 2, at 1018-19.

24. *Id.*

25. *Cf., e.g., Reilly v. United States*, 682 F. Supp. 150, 152-53 (D.R.I. 1988) (recounting the steps a judge took to find a technical advisor, including phone calls to three experts before finding a suitable technical advisor).

26. See *infra* notes 234-43, 264-67 and accompanying text.

27. See *infra* notes 234-43, 264-67 and accompanying text.

28. See Runkle, *supra* note 9.

29. See *id.* (describing the purpose of the CASE project).

an outside expert are assured that the practice is consistent with good judging, and judges who do not know any experts simply get a list and call the expert of their choosing.³⁰ Justice Breyer's endorsement of third-party experts has encouraged at least one federal trial judge to appoint a technical advisor.³¹ By further decreasing judicial reluctance and facilitating communication between judges and scientists, a cooperative effort like CASE could greatly increase the frequency with which judges consult outside experts.

Frequent use of technical advisors, however, is troubling. Federal rules circumscribe judicial authority to appoint expert witnesses and special masters,³² but no federal rule addresses technical advisor appointments.³³ Technical advisors represent one of the most significant departures from the adversary system.³⁴ Appellate courts review technical advisor appointments only for abuse of discretion, a very deferential standard.³⁵ The lack of clear limits has not been a problem in the past because technical advisors were reserved for exceptional cases and did not threaten adversarial values. If judges are persuaded that deference to the adversary system is less appropriate when scientific issues are involved, the protections of the adversary system may be compromised.³⁶

This Note considers the checks and limits on the trial judge's inherent power to appoint technical advisors. Part II of this Note considers the role of the trial judge in scientifically complex cases. Part III discusses judicial power to appoint technical advisors and the factors judges consider when appointing a technical advisor. Part IV summarizes the CASE project. Part V predicts that cooperative efforts between judges and scientists such as CASE will increase the frequency of technical advisor appointments and posits

30. *See id.*

31. *MediaCom Corp. v. Rates Tech., Inc.*, 4 F. Supp. 2d 17, 29 (D. Mass. 1998) (appointing a technical advisor and citing Justice Breyer's concurring opinion in *Joiner*).

32. FED. R. CIV. P. 53 (special masters); FED. R. EVID. 706 (court-appointed expert witnesses).

33. *See Reilly v. United States*, 863 F.2d 149, 155 (1st Cir. 1988).

34. *See infra* notes 81-82, 115-18 and accompanying text. *Compare Reilly*, 863 F.2d at 156-58, with FED R. EVID. 706(a).

35. *See Reilly*, 863 F.2d at 156-57 (finding that the district court did not abuse its discretion by appointing a technical advisor in a case involving complex economic theories); Daniel J. Meador, *Inherent Judicial Authority in the Conduct of Civil Litigation*, 73 TEX. L. REV. 1805, 1816-19 (1995) (enumerating limits on inherent authority and noting appellate review for abuse of discretion specifically); *cf. Eash v. Riggins Trucking Inc.*, 757 F.2d 557, 561 (3d Cir. 1985) (en banc) (describing the inherent power as nebulous with shadowy boundaries); Roger A. Silver, *The Inherent Power of the Florida Courts*, 39 U. MIAMI L. REV. 257, 258-62 (1985) (reviewing the history of federal separation of powers with the inherent powers of courts in mind).

36. *See discussion infra* Part V.

that the current limits on the inherent power to appoint technical advisors do not adequately protect the role of the parties.³⁷

Part VI proposes alternative limits. Appellate courts could mandate procedural safeguards in all jurisdictions.³⁸ The legislature could implement statutory limits. A rule analogous to FRE 706 might be enacted to coordinate technical advisors and adversarial procedures.³⁹ Finally, even without affirmative action by appellate courts or the legislature, trial judges should recognize the dangers accompanying the frequent use of technical advisors and exercise prudential self-restraint.⁴⁰

II. COPING WITH SCIENTIFIC ISSUES IN THE FEDERAL TRIAL COURTS

The American litigation system is based on the adversarial process,⁴¹ as opposed to the inquisitorial process.⁴² In the pure adversarial process, the parties bear sole responsibility for factual and legal development.⁴³ This framework is intended to promote the truth-finding process, judicial impartiality, and personal

37. See *Reilly*, 863 F.2d at 156-57; Meador, *supra* note 35, at 1816.

38. See discussion *infra* Part VI.A.

39. See discussion *infra* Part VI.B.

40. See discussion *infra* Part VI.C.

41. See Monroe H. Freedman, *Our Constitutionalized Adversary System*, 1 CHAP. L. REV. 57, 57 (1998) [hereinafter Freedman, *Constitutionalized*] (noting that the Framers constitutionalized the American adversary system). See generally MONROE H. FREEDMAN, UNDERSTANDING LAWYERS' ETHICS 13-42 (1990); JAMES ET AL., *supra* note 13, §§ 1.2-1.3. The Due Process Clauses of the Fifth and Fourteenth Amendments may refer to adversarial procedures. See Freedman, *Constitutionalized*, *supra*, at 82 (equating due process with adversary procedures). But see JAMES ET AL., *supra* note 13, § 1.2 (observing that the principles underlying the adversary system do not need to be fully equated with due process).

42. This Note treats "inquisitorial" and "non-adversarial" as synonyms. Cf. Saltzburg, *supra* note 15, at 14 (noting that American observers traditionally have invoked the modifier "inquisitorial" to describe non-adversarial alternatives to the American system). Many European countries operate under the competing inquisitorial system. Geoffrey C. Hazard, Jr., *Discovery and the Role of the Judge in Civil Law Jurisdictions*, 73 NOTRE DAME L. REV. 1017, 1019-20 (1998); see also Freedman, *Constitutionalized*, *supra* note 41, at 74. In inquisitorial systems, the judge is primarily responsible for the development of the legal case, and the search for the truth is a collaborative effort between the judge and parties. *Id.* Inquisitorial systems are criticized just as heavily as their adversarial counterpart. See, e.g., *id.* at 76-79. Because the incentive is to find the sometimes elusive truth and not to elicit the parties' best arguments, examination of the facts and laws may be less rigorous. *Id.* at 79. Judges who take an active role early in the case may form preliminary opinions that cannot be dispelled. *Id.* Thus, under the inquisitorial system, parties may be less likely to receive a fair hearing as measured by contemporary American standards. Cf. *id.* at 87-88, 90.

43. See Lon L. Fuller, *The Adversary System*, in TALKS ON AMERICAN LAW 34, 35-36 (Harold J. Berman ed., Vintage Books 2d ed. 1971) (observing that the adversary system requires parties to develop their own cases to maintain the impartiality of the judge and jury).

autonomy.⁴⁴ In practice, the adversarial process displays certain systematic deficiencies, and courts sometimes supplement the pure adversarial model with non-adversarial devices.⁴⁵

A. Science and the Federal Trial Judge

Federal trial judges are generalists.⁴⁶ When these judges face complex scientific questions, they may be pushed to the edge of, and perhaps beyond, their expertise.⁴⁷ Technical issues can arise at various stages and in various types of adjudication.⁴⁸ For example, trial judges must determine the admissibility of scientific evidence.⁴⁹ In patent cases, they must construe patent claims, a task that requires knowledge of the underlying art.⁵⁰ In a bench trial, the judge is responsible for all legal and factual conclusions, and the judge must be comfortable enough with the subject matter to control the trial and to reach conclusions.⁵¹ In a jury trial, the jury has responsibility for factual determinations.⁵² Because lay

44. See Saltzburg, *supra* note 15, at 11-13, 15-19 (observing that the American adversary system is used to search for the truth, decreases the chance that a judge will form an early bias, and gives parties control over their own cases).

45. See *infra* notes 104-13 and accompanying text.

46. Justice Breyer states this proposition in the negative. He notes that judges "are not scientists" and may have a "comparative lack of expertise." *Gen. Elec. Co. v. Joiner*, 522 U.S. 136, 148 (1997) (Breyer, J., concurring).

47. See 3 JACK B. WEINSTEIN ET AL., WEINSTEIN'S EVIDENCE ¶ 706[01], at 706-09 ("[I]t is naïve to expect the trier of fact to be capable of assessing the validity of diametrically opposed [highly technical] testimony."); *cf. Joiner*, 522 U.S. at 148 (Breyer, J., concurring); Learned Hand, *Historical and Practical Considerations Regarding Expert Testimony*, 15 HARV. L. REV. 40, 51-52 (1901) (arguing that expert testimony is offered as a supplement when the jury's personal knowledge is lacking). Judge Hand noted that using conflicting experts exacerbates the problem. *Id.* at 54-55. Lacking knowledge about a technical subject by hypothesis, a layman is not competent to decide which competing claim is correct. *Id.* at 55.

48. See, e.g., *Daubert v. Merrell Dow Pharms., Inc.*, 509 U.S. 579, 589 (1993) (relevance and reliability of evidence); *id.* at 596 (sufficiency of evidence, including directed verdicts and summary judgments). "[Scientific and technological] issues may arise across the entire spectrum of litigation: from mass toxic tort and product liability cases to patent and trademark cases, from medical malpractice cases to contract cases, from environmental, security, and antitrust cases even to criminal cases." William W. Schwarzer, *Introduction*, in REFERENCE MANUAL ON SCIENTIFIC EVIDENCE 1, 1 (1994).

49. *Daubert*, 509 U.S. at 589.

50. E.g., *Data Gen. Corp. v. IBM Corp.*, 93 F. Supp. 2d 89, 91 (D. Mass. 2000) (describing a judge's recourse to a technical advisor to help understand underlying subject technology before construing the language of a patent). See generally Si-Hung Choy, Comment, *Judicial Education After Markman v. Westview Instruments, Inc.: The Use of Court-Appointed Experts*, 47 UCLA L. REV. 1423 (2000) (discussing judicial use of technical advisors and court-appointed in experts in *Markman* hearings).

51. See JAMES ET AL., *supra* note 13, §§ 7.1, 7.2 (stating that the judge is always responsible for questions of law and is responsible for questions of fact if the case is not tried before a jury).

52. *Id.* § 7.2.

jurors may have even more trouble with technical subject matter than the generalist judge, the judge, although divested of responsibility for factual conclusions, remains active in a jury trial.⁵³ Thus, whether jury or bench trial, the judge must have some working knowledge of the science involved. If the scientific issues are complex or particularly technical, the generalist judge may not be able to acquire this knowledge through his own efforts.

Assuming judicial decisions must be principled,⁵⁴ two solutions are apparent. First, generalist judges could be replaced with specialists in scientifically complex cases.⁵⁵ The specialist judges of a science court would be technically skilled.⁵⁶ These science courts would have subject matter jurisdiction over complex or highly technical scientific cases.⁵⁷ The Court of Appeals for the Federal Circuit, which has exclusive appellate jurisdiction over patent cases, is an example of a specialized court.⁵⁸ Special science courts might assume an analogous structure. Ostensibly, the specialists would be

53. See John W. Wesley, Note, *Scientific Evidence and the Question of Judicial Capacity*, 25 WM. & MARY L. REV. 675, 684-85 & n.57 (1984). For example, a judge can admit more questionable testimony in a bench trial than in a jury trial. See *id.* at 684 n.57. In any trial, the judge must determine evidence admissibility. See FED. R. EVID. 104(a) (requiring the court to determine admissibility of evidence). In a bench trial, the judge is the fact-finder, and whether the judge admits or excludes the evidence, the fact-finder has seen the evidence. See Wesley, *supra*, at 684-85 n.57 (reciting presumption that a trial judge who mistakenly admits evidence can ignore that evidence). When the jury is the fact-finder, the judge's decision to admit or exclude the evidence has greater ramifications because the fact-finder sees the evidence only if the judge admits it. See FED. R. EVID. 104(a). Without focusing on the differences between bench and jury trials, this Note considers only the manner in which judges handle technical subject matter.

54. Instead of considering the merits of the disputed issue, the judge could resolve the issue in favor of the party he liked the best. This solution, however, would violate fundamental American notions of judicial impartiality and rule of law. Cf. Lon L. Fuller, *The Forms and Limits of Adjudication*, 92 HARV. L. REV. 353, 365-67 (1978) (emphasizing the role of reasoned argument in adjudication).

55. See *Developments in the Law—Confronting the New Challenges of Scientific Evidence*, 108 HARV. L. REV. 1481, 1603-04 (1995) [hereinafter *New Challenges*] (explaining the concept of science courts); Edward V. Di Lello, Note, *Fighting Fire with Firefighters: A Proposal for Expert Judges at the Trial Level*, 93 COLUM. L. REV. 473, 493-98 (1993) (proposing expert magistrate judges); cf. *New Challenges, supra*, at 1596-97 (explaining the concept of blue ribbon juries). Blue ribbon juries are analogous to science courts. A blue ribbon jury is composed of technically competent or proficient individuals. *Id.* at 1596. While a blue ribbon jury may ameliorate jury comprehension concerns, the device raises a question of constitutionality under the Seventh Amendment. *Id.* at 1596-97; see U.S. CONST. amend. VII ("In Suits at common law . . . the right of trial by jury shall be preserved . . .").

56. *New Challenges, supra* note 55, at 1603.

57. *Id.* at 1603-04.

58. 28 U.S.C. § 1295 (1994) (vesting exclusive jurisdiction over patent appeals in the Court of Appeals for the Federal Circuit when the district court's jurisdiction was based on 28 U.S.C. § 1338); see Di Lello, *supra* note 55, at 490-93 (chronicling the history of the Court of Customs and Patent Appeals (CCPA) which became the Court of Appeals for the Federal Circuit (CAFC)).

selected based on their previous experience or training.⁵⁹ Because the specialist judges would hear only one type of case, they would accumulate additional experience and knowledge, thus increasing the judge's competency in that area.⁶⁰ While science courts have been proposed, Congress has never implemented the proposal, and for now, federal trial judges must deal with scientific issues in some other manner.⁶¹

Second, and more commonly, judges can rely on outside sources of specialized information. The adversaries or the court typically choose these outside experts. In the federal courts, the adversaries inform the judge regarding the facts and the law.⁶² The parties select and present expert witnesses who testify about the scientific issues in the case.⁶³ The parties' desire to win the case provides an incentive to select witnesses whose testimony will illuminate their particular theory of the case.

Judges, however, are not strictly limited to the adversaries' presentations. Judges also may seek help from non-adversarial third-party experts.⁶⁴ Experts can assist the court in a number of ways including educating the judge about the technical subject, providing the judge with additional information about the subject, providing an independent opinion, and evaluating the parties' experts.⁶⁵ *Ex parte* contacts with third parties are generally prohibited and judges must appoint these third-party experts to legitimate their role.⁶⁶ Depending on the assistance rendered, third-party experts are labeled differently and are appointed under different sources of authority.⁶⁷ Special masters, court-appointed expert wit-

59. *Cf. Di Lello, supra* note 55, at 492 (noting some CCPA and CAFC judges "possessed technical expertise when they were appointed").

60. *Cf. id.* (speculating that the experience CCPA and CAFC judges accumulated made them more effective).

61. *See New Challenges, supra* note 55, at 1603-04.

62. *See JAMES ET AL., supra* note 13, § 1.2.

63. *See id.*

64. *See Ex parte Peterson*, 253 U.S. 300, 312 (1920) ("Courts have (at least in the absence of legislation to the contrary) inherent power to provide themselves with appropriate instruments required for the performance of their duties.").

65. *See Deason, supra* note 6, at 84-98.

66. *See CODE OF CONDUCT FOR UNITED STATES JUDGES* Canon 3A(4) (1998) (admonishing judges not to consider *ex parte* communications on the merits except as authorized by law); *id.* Canon 3B(4) (advising judges not to make unnecessary appointments and to avoid favoritism in making appointments).

67. *See generally* FED. R. CIV. P. 53 (special masters); FED. R. EVID. 706 (court-appointed expert witnesses); *Reilly v. United States*, 863 F.2d. 149, 154-61 (1st Cir. 1988) (technical advisors).

nesses, and technical advisors all fall into this category.⁶⁸ Court-appointed expert witnesses and technical advisors only provide or comment on evidence, but special masters may receive evidence and perform other judicial functions.⁶⁹ Because they perform traditional judicial functions, special masters are unique and generally are beyond the scope of this Note.

All expert appointments originally were justified as exercises of the trial judge's inherent power.⁷⁰ Inherent powers are powers the courts receive when they are created.⁷¹ Basically, a trial judge's inherent power gives the judge the flexibility to run a courtroom and try cases.⁷² Although not explicitly granted, the powers are implied to the courts, because courts require these powers to carry out their assigned duties.⁷³

The inherent power to appoint expert witnesses and special masters was eventually codified in federal rules.⁷⁴ No federal rule addresses the inherent power to appoint a technical advisor.⁷⁵ Article III limits the amount of judicial power a technical advisor may

68. See FED. R. CIV. P. 53 (special masters); FED. R. EVID. 706 (court-appointed expert witnesses); *Reilly*, 863 F.2d. at 155-56 (technical advisors).

69. See, e.g., *Active Prods. Corp. v. A.H. Choitz & Co.*, 163 F.R.D. 274, 282-83 (N.D. Ind. 1995) (listing discovery master, case manager, settlement master, fact-finder, expert advisor, remedial master, monitor, or claims evaluator as various roles that courts can appoint special masters to perform); see also Margaret G. Farrell, *Special Masters*, in REFERENCE MANUAL ON SCIENTIFIC EVIDENCE 575, 621 (1994) (listing advantages and disadvantages of special master appointments). Special masters are appointed under FRCP 53. FED. R. CIV. P. 53. Judges often appoint special masters to help with case management. See Ellen E. Deason, *Managing the Managerial Expert*, 1998 U. ILL. L. REV. 341, 363 (noting that the modern judge performs many managerial tasks and that judges faced with a "challenging expansion of their role" often delegate managerial tasks to experts).

70. See, e.g., *Ex parte Peterson*, 253 U.S. 300, 312 (1920) (recognizing inherent power of courts "to provide themselves with appropriate instruments required for the performance of their duties"). See generally Meador, *supra* note 35, at 1820. "The inherent power of a trial judge to appoint an expert of his own choosing is virtually unquestioned." FED. R. EVID. 706 advisory committee's note.

71. See *Chambers v. NASCO, Inc.*, 501 U.S. 32, 43 (1991) (recognizing inherent power to sanction); see also *United States v. Hudson*, 11 U.S. (7 Cranch) 32, 34 (1812) ("Certain implied powers must necessarily result to our Courts of justice from the nature of their institution.").

72. See Meador, *supra* note 35, at 1805. A variety of the trial judge's actions are grounded in the inherent power. E.g., *Chambers*, 501 U.S. at 43-44 (recognizing the inherent power of courts to control admission to their bars and to discipline attorneys appearing before them); *Ex parte Peterson*, 253 U.S. at 312 (inherent power allows courts to appoint persons unconnected with the court).

73. *Chambers*, 501 U.S. at 43.

74. FED. R. CIV. P. 53; FED. R. EVID. 706.

75. This Note argues that technical advisors should be addressed under a rule similar to FRE 706. *Infra* Part VI.B.

exercise,⁷⁶ and the First Circuit has described procedural safeguards that trial judges appointing technical advisors should follow.⁷⁷ Otherwise, technical advisor appointments are subject only to general appellate review for abuse of discretion.

Court-appointed expert witnesses are testifying experts appointed under FRE 706 and are often used when the parties have presented irreconcilable expert testimony or have not presented adequate expert testimony.⁷⁸ The court appoints and ultimately selects the witness, although the parties may suggest potential experts.⁷⁹ FRE 706(a) explicitly guarantees the parties' right to cross-examine a court-appointed expert witness.⁸⁰ Thus, these witnesses represent a modest departure from adversarial norms.

By contrast, technical advisors are non-testifying experts appointed under the court's inherent power and used as sounding boards to further the judge's understanding of technical concepts.⁸¹ Compared to an expert witness, a technical advisor is a more sig-

76. See *Reilly v. United States*, 863 F.2d 149, 157-58 (1st Cir. 1988); see also discussion *infra* Part II.B.

77. *Reilly*, 863 F.2d at 159-60.

78. FED. R. EVID. 706. See generally Cecil & Willging, *supra* note 2. FRE 706 is titled "Court Appointed Experts" and provides:

(a) Appointment. The court may on its own motion or on the motion of any party enter an order to show cause why expert witnesses should not be appointed, and may request the parties to submit nominations. The court may appoint any expert witnesses agreed upon by the parties, and may appoint expert witnesses of its own selection. An expert witness shall not be appointed by the court unless the witness consents to act. A witness so appointed shall be informed of the witness' duties by the court in writing, a copy of which shall be filed with the clerk, or at a conference in which the parties shall have opportunity to participate. A witness so appointed shall advise the parties of the witness' findings, if any; the witness' deposition may be taken by any party; and the witness may be called to testify by the court or any party. The witness shall be subject to cross-examination by each party, including a party calling the witness.

(b) Compensation. Expert witnesses so appointed are entitled to reasonable compensation in whatever sum the court may allow. The compensation thus fixed is payable from funds which may be provided by law in criminal cases and civil actions and proceedings involving just compensation under the fifth amendment. In other civil actions and proceedings the compensation shall be paid by the parties in such proportion and at such time as the court directs, and thereafter charged in like manner as other costs.

(c) Disclosure of appointment. In the exercise of its discretion, the court may authorize disclosure to the jury of the fact that the court appointed the expert witness.

(d) Parties' experts of own selection. Nothing in this rule limits the parties in calling expert witnesses of their own selection.

FED. R. EVID. 706.

79. FED. R. EVID. 706(a).

80. *Id.* ("The witness *shall* be subject to cross examination by each party . . .") (emphasis added).

81. *Reilly*, 863 F.2d at 157-58 (defining appropriate functions of a technical advisor).

nificant departure from the adversary system because parties are not entitled to cross-examine technical advisors.⁸² Also, judges may consult technical advisors *ex parte* without informing the parties of these consultations. Without cross-examination, the technical advisor's opinions are subjected only to judicial scrutiny.

Judges faced with complex scientific issues may rely on the traditional adversary system or non-adversarial alternatives.⁸³ Non-adversarial alternatives differ in the degree to which they depart from adversarial norms. The decision to rely solely on the adversaries' presentations or to resort to a non-adversarial alternative raises fundamental questions about the role of the federal trial judge.

B. The Distribution of Power Between the Trial Judge and an Appointee

Article III secures the independence of the judiciary by guaranteeing judges a salary which "shall not be diminished during their Continuance in Office" and by giving them life tenure conditioned only on "good Behaviour."⁸⁴ Outside experts do not enjoy these insulations. If a judge delegates too much Article III power to a non-Article III actor, the judge abdicates the Article III role or, phrased a bit differently, the delegatee usurps the judicial function.⁸⁵ Abdication and usurpation refer to the same basic transgression—a non-Article III actor exercising excessive Article III power.⁸⁶ Examples of unconstitutional delegation in the technical advisor context include letting an advisor brief the judge on legal

82. *Id.* at 156.

83. See discussion *infra* Part II.A.

84. U.S. CONST. art. III, § 1.

85. See *La Buy v. Howes Leather Co.*, 352 U.S. 249, 256 (1957) (finding abdication of the judicial function when a judge who could handle litigation most efficiently referred the cases to a special master); *Reilly*, 863 F.2d at 157 (stating that technical advisors are not judges and may not be allowed to usurp the judicial function). The abdication issue is usually raised in connection with appointees or delegates that perform quintessentially judicial functions. For example, special masters, bankruptcy judges, and administrative agencies have been the focus of Article III challenges. See *Commodity Futures Trading Comm'n v. Schor*, 478 U.S. 833 (1986) (an administrative agency); *N. Pipeline Constr. Co. v. Marathon Pipe Line Co.*, 485 U.S. 50, 87 (1982) (plurality opinion) (bankruptcy judges); *La Buy*, 352 U.S. at 256 (special master); *cf.* Margaret G. Farrell, *The Function and Legitimacy of Special Masters*, 2 WIDENER L. SYMP. J. 235, 289-295 (1997) (considering the constitutionality of the special master rule, FRCP 53).

86. See *Reilly*, 863 F.2d at 157-58 (referring to the danger as usurpation and citing *La Buy* as analogous support).

issues and deploying an advisor on an independent fact-finding mission.⁸⁷

C. The Distribution of Power Between the Trial Judge and the Parties

The federal courts employ adversarial procedures.⁸⁸ The adversary system gives the parties primary responsibility in developing the case⁸⁹ and presumes interested parties will research and develop the best arguments for their respective sides.⁹⁰ Ideally, this research and development is conducted within the bounds of the truth.⁹¹ In the simplest two-party case, the opposing parties present the most persuasive argument for their respective sides.⁹² The judge has little or no role in the formation of these arguments.⁹³ After scrutinizing the competing arguments, the judge decides the case.⁹⁴ The judge's decision is based on the parties' presentation of the law and facts, and the parties therefore have a powerful incentive to present their most persuasive case and to undermine their opponent's case to the greatest extent possible.⁹⁵

In theory, the adversary system promotes judicial impartiality, personal autonomy, and rigorous pursuit of the truth.⁹⁶ Adversarial parties investigate and develop their own arguments.⁹⁷ If

87. See *id.* at 158.

88. See JAMES ET AL., *supra* note 13, § 1.2.

89. *Id.*

90. *Id.* (declaring that the adversary system assumes that the truth is more likely to emerge when self-interested parties conduct investigations than when non-interested officials conduct investigations); Fuller, *supra* note 43, at 35 (arguing that judges can best weigh the sides of a controversy when partisan advocates advance competing arguments).

91. See JAMES ET AL., *supra* note 13, § 1.2 (asserting that, while the adversary system seeks to find the truth, it also allows the parties to engage in conduct not designed to elicit the truth); William W. Schwarzer, *The Federal Rules, the Adversarial Process, and Discovery Reform*, 50 U. PITT. L. REV. 703, 712 (1989) (observing that, in theory, the adversary system is designed to find the truth, but arguing that, in practice, parties direct their efforts towards winning the case and not towards uncovering the truth).

92. See JAMES ET AL., *supra* note 13, § 1.2 (noting that parties are responsible for both the initial prosecution and subsequent presentation of their cases).

93. See Fuller, *supra* note 43, at 35 (stating that separating the functions of advocate and judge assures that the judge's final decision is as objective and unbiased as possible).

94. JAMES ET AL., *supra* note 13, § 1.2 (characterizing the court in an adversary system as "an essentially passive arbiter"). *But see* Fuller, *supra* note 43, at 45 ("A more active participation by the judge—assuming it stops short of a prejudgment of the case itself—can . . . enhance the meaning and effectiveness of an adversary presentation.")

95. JAMES ET AL., *supra* note 13, at § 1.2.

96. An impartial judge is essential to any adjudication system. Fuller, *supra* note 54, at 365 (arguing that an adjudication system that allows parties to present evidence and reasoned arguments implies a need for impartial judges).

97. See JAMES ET AL., *supra* note 13, at § 1.2.

judges developed the case themselves, they might form an early impression that would shape their perception of all subsequent evidence.⁹⁸ This tendency to pre-judge would threaten judicial impartiality and could skew the truth finding process.⁹⁹ Adversarial case development lets the parties present the case as they see fit and enhances the acceptability of decisions.¹⁰⁰

Judges are also responsible for maintaining the institutional legitimacy of the judiciary,¹⁰¹ because public deference to judgments and rulings depends on the integrity and independence of judges.¹⁰² To the extent the adversary system actually fosters impartiality and the search for the truth, judicial ethics suggest deference to that system.¹⁰³

The adversarial process has drawbacks.¹⁰⁴ With scientific issues, the parties may present irreconcilable evidence (the so called "battle of the experts").¹⁰⁵ Adversarial presentations may not represent all affected interests, and the judge may be forced to choose

98. See Fuller, *supra* note 54, at 382-84 (quoting Lon Fuller & John D. Randall, *Professional Responsibility: Report of the Joint Conference*, 44 A.B.A.J. 1159 (1958)) (arguing that adversarial presentation of evidence and legal arguments keeps the judge from reaching premature conclusions about a case).

99. *Id.*; Saltzburg, *supra* note 15, at 16-17.

100. See JAMES ET AL., *supra* note 13, § 1.2 ("[T]he moral force and acceptability of a decision will be greatest when it is made by one who does not have, and does not appear to have, the kind of psychological commitment to the result that is implied in initiating and conducting the presentation of a case."); see also Saltzburg, *supra* note 15, at 16-17.

101. CODE OF CONDUCT FOR UNITED STATES JUDGES Canon 1 (1998) ("A judge . . . should personally observe . . . [high standards of conduct], so that the integrity and independence of the judiciary may be preserved.").

102. *Id.* Canon 1 cmt. Judges are obligated to act in a manner that promotes public confidence in the integrity and impartiality of the judiciary. *Id.* Canon 2A. In consulting outside experts, the judge must consider the public's perception of the consultation and must not give the appearance of impropriety. *Id.* Canon 2A cmt. A judge has acted with the appearance of impropriety if the conduct in question would lead a reasonable person, with knowledge of the relevant circumstances, to believe that the judge's ability to act with impartiality was impaired. *Id.* The judge's duty to carefully consider the appearance created by an appointment does not change even though the parties consent to the appointment. *Id.* Canon 3B(4) cmt.

103. *But cf.* Richard A. Posner, *Coping with the Caseload: A Comment on Magistrates and Masters*, 137 U. PA. L. REV. 2215, 2217-18 (1989). Judge Posner is less certain that rules protecting the public image of the judiciary always serve the best interests of justice: "The conflict of interest rules governing judges are widely recognized to be absurd; their principal function is to protect judges from adverse newspaper publicity by causing them to steer clear of conflicts so attenuated that only a journalist would think them worthy of comment (worthy, indeed, of raising the hue and cry)." *Id.*

104. See generally JAMES ET AL., *supra* note 13, § 1.3.

105. See Deason, *supra* note 6, at 92-93. In the adversary system, parties have an incentive to choose experts whose testimony will support their theory of the case. *Id.* at 66. The parties are by definition adversaries, and the testimony of their chosen experts is likely to point in opposite directions. See *id.* These conflicts have been characterized as a battle. *Id.* at 92. Lay judges and juries are in no position to choose between battling experts. *Id.* at 66.

between making an uninformed decision and looking outside the adversary system for help.¹⁰⁶ Furthermore, the adversarial process assumes equally competent and financed advocates for each side when, in reality, resources and talents are uneven.¹⁰⁷ Also, the parties' incentive to present the most persuasive case encourages them to ignore or bend the truth when the truth is harmful to their case.¹⁰⁸ Pressures on judges also distort the adversarial process. Modern federal judges have caseloads that rarely allow the type of time-consuming monitoring necessary to constrain over-zealous adversaries.¹⁰⁹

Despite its flaws, the adversary system will not likely be displaced in the federal courts.¹¹⁰ Instead, lawmakers have imported inquisitorial devices to cure the most obvious shortcomings of the pure adversary system. The Federal Rules of Civil Procedure are representative. Parties conduct discovery, but may be disciplined for adversarial behavior that the court deems counterproductive.¹¹¹ Most pertinent in this discussion, the judge may appoint technical advisors and other third-party experts.¹¹² The ad-

106. See JAMES ET AL., *supra* note 13, § 1.2 ("Party-presentation . . . offers no assurance that parties will present to the court evidence and argument vital to protect the concerns of nonparties, whose interests a case may affect."); Deason, *supra* note 6, at 95-96 (noting adversarial presentations are likely to be inadequate when litigation involves public issues or institutions because the parties will not represent all affected interests).

107. See Freedman, *Constitutionalized*, *supra* note 41, at 88-89 (admitting that the adversary system may deliver different kinds of justice depending on the socioeconomic status of the parties); see also Deason, *supra* note 6, at 96 ("The discrepancy in resources and access to information in cases brought by prison inmates and others housed in state institutions undoubtedly has contributed to the frequent court appointment of experts during the liability phase of such litigation.").

108. Schwarzer, *supra* note 91, at 714 (arguing that adversarial techniques are generally counterproductive during discovery and pretrial). The emphasis in discovery and pre-trial is party collaboration; however, confrontational adversarial procedures discourage such desired collaboration. *Id.*

109. See RICHARD A. POSNER, *THE FEDERAL COURTS: CHALLENGE AND REFORM* 62 fig.3.1, 63 fig.3.2 (1996) (depicting the growth of the federal caseload on an absolute and a proportional scale); *id.* at 160-189 (noting the streamlining of the adjudication process to meet the demands of the expanded federal caseload). The burgeoning federal caseload induces trial judges to encourage early settlements, and judges focus on the pre-trial development of the case more closely. See Schwarzer, *supra* note 91, at 703. Modern judges employ proactive techniques to keep the parties on track and to control the inefficient excesses of the adversary system. *Id.* at 704-05.

110. The inquisitorial system has critical failings from an American viewpoint. For a brief comparison of the inquisitorial and adversary systems, see *supra* note 42.

111. Compare FED. R. CIV. P. 26(b)(1) (establishing that parties may obtain discovery of information "reasonably calculated to lead to the discovery of admissible evidence"), with FED. R. CIV. P. 37 (providing for sanctions against parties who fail to comply with discovery requests). FRCP 11 gives the judge a more general power to sanction counter-productive adversarial behavior. FED. R. CIV. P. 11(c).

112. See FED. R. CIV. P. 53 (special masters); FED. R. EVID. 706 (court-appointed expert witnesses); *Reilly v. United States*, 863 F.2d 149, 154-56 (1st Cir. 1988) (technical advisors); see also

versary system presumes the parties can adequately educate the judge regarding technical issues,¹¹³ but if the parties do not, a judge may compensate by appointing a technical advisor.

D. The Advantages and Disadvantages of Technical Advisors

A technical advisor appointment disrupts the adversary system's traditional distribution of power between the trial judge and the parties.¹¹⁴ Experts appointed as technical advisors are not subject to cross-examination and may be consulted *ex parte* by the judge.¹¹⁵ The technical advisor may convey a significant amount of information to the judge without party knowledge or scrutiny.¹¹⁶ This likelihood substantially decreases the parties' roles in case development and impinges on their personal autonomy. Technical advisor appointments may also undermine the truth-finding process and judicial impartiality. For example, judges may "give up" on the push and pull of the adversary system when a top-flight technical advisor is just a phone call away. Or, judges may be overly deferential to scientific experts.¹¹⁷ Without adversarial testing, the parties cannot expose the shortcomings of a one-sided presentation or the potential biases of the advisor.¹¹⁸

On the other hand, technical advisors might remedy some failings of the adversary system. When informing the judge about scientific issues, adversarial parties often select diametrically opposed experts.¹¹⁹ The generalist judge, by definition, lacks knowledge about the subject of their testimony and may not be able to weigh the merits of experts' testimony.¹²⁰ A disinterested technical advisor might help the judge evaluate the conflicting testimony.¹²¹

Furthermore, shielding technical advisors from the parties might help courts get better scientific advice in the first instance. Many scientists believe that adversarial procedures distort their

Ex parte Peterson, 253 U.S. 300, 312-13 (1920) (acknowledging the inherent power of trial courts to appoint outside assistance).

113. See JAMES ET AL., *supra* note 13, § 1.2.

114. See *supra* notes 81-82 and accompanying text.

115. *Reilly*, 863 F.2d at 159, 160 n.8.

116. See *id.* at 160 n.8 (stating that a trial judge and technical advisor should be permitted to communicate informally).

117. Deason, *supra* note 6, at 122, 138-41; *cf.* discussion *infra* note 271 (distinguishing between the level of deference likely afforded to scientific experts and law clerks).

118. Deason, *supra* note 6, at 136.

119. A battle of experts results. See *supra* note 105 and accompanying text.

120. See *supra* note 47 and sources cited therein.

121. Jackson, *supra* note 6, at 453-54.

testimony and feel alienated by the adversarial process.¹²² As a result, some scientists will not testify as expert witnesses.¹²³ Some commentators believe the remaining experts who do testify are not legitimate scientists, but are actually "expert witnesses for hire" who testify in favor of parties without regard for the actual scientific issues involved.¹²⁴ The technical advisor role might be more appealing to "real" scientific experts and thus some commentators argue more frequent use of technical advisors would elevate the quality of science in the courts.¹²⁵

Technical advisors occupy uneasy middle ground. Article III limits the duties a judge may delegate to a technical advisor.¹²⁶ Otherwise, limits are a matter of judicial discretion.¹²⁷ The adversary system normally reserves significant control to the parties, and the use of technical advisors runs counter to this central adversarial tenet.¹²⁸ Freedom from adversarial constraints, however, allows technical advisors to provide information in a manner untainted by allegiance to one of the parties and may make participation in trials more attractive to better scientists.¹²⁹ Although technical advisors are appointed under the trial judge's inherent power, and no federal rule guides the exercise of the power,¹³⁰ the judge's discretion is not completely unfettered. The United States Supreme Court has given guidance to trial judges attempting to balance traditional deference to the adversary system against the desire for innovation.

E. Guidance from the United States Supreme Court

In recent admissibility cases, the United States Supreme Court has addressed the trial judge's responsibility with regard to

122. *Id.* at 453; see Deason, *supra* note 6, at 67-69 (noting scientists historically have been ill-disposed toward adversarial methods of searching for the truth); see also Jackson, *supra* note 6, at 453; cf. Di Lello, *supra* note 55, at 480-82 (describing difficulties associated with the adversarial presentation of scientific testimony).

123. Jackson, *supra* note 6, at 453.

124. *E.g.*, Di Lello, *supra* note 55, at 474-75; Jackson, *supra* note 6, at 453; see Deason, *supra* note 6, at 66-67 (noting that this criticism is long-standing).

125. *E.g.*, Jackson, *supra* note 6, at 453; cf. Di Lello, *supra* note 55, at 474-75.

126. See *Reilly v. United States*, 863 F.2d 149, 157-58 (1st Cir. 1988); see also discussion *supra* Part II.B.

127. See discussion *supra* Part II.C.

128. See *supra* notes 115-18 and accompanying text.

129. See *supra* notes 119-25 and accompanying text.

130. *Reilly*, 863 F.2d at 155 (concluding that FRE 706 does not reach the subject of non-testifying experts).

scientific issues.¹³¹ The “gatekeeping” demands placed on federal judges under the Court’s ruling in *Daubert v. Merrell Dow Pharmaceuticals, Inc.*, force trial judges to attempt to understand often complex scientific issues.¹³² Adversarial procedures are the default, but not exclusive, method for dealing with scientific issues.¹³³ Two years after *Daubert* in *General Electric Co. v. Joiner*, Justice Breyer issued a concurring opinion that encouraged more frequent consultation of outside experts.¹³⁴ These opinions guide trial judges in the discharge of the judicial function when scientific issues are involved.

1. *Daubert v. Merrell Dow Pharmaceuticals, Inc.*

In *Daubert*, despite plaintiffs’ evidence that the anti-nausea drug Bendectin caused birth defects, the district court granted defendant’s request for summary judgment because the plaintiffs’ scientific evidence was not generally accepted in the relevant scientific community.¹³⁵ The Supreme Court vacated the Ninth Circuit’s decision affirming the district court and remanded.¹³⁶ The Court held trial judges may not exclude scientific evidence solely on the basis that it was not derived using generally accepted methods.¹³⁷ Nor can the trial judge admit scientific evidence as a matter of course relying on the adversary system to distinguish between good and bad evidence.¹³⁸ Under the Federal Rules of Evidence, the trial judge must assess scientific evidence for relevance and reliability.¹³⁹ The *Daubert* Court suggested four factors that the trial judge could consult in determining admissibility.¹⁴⁰ Theories and techniques

131. See generally *Kumho Tire Co. v. Carmichael*, 526 U.S. 137 (1999); *Gen. Elec. Co. v. Joiner*, 522 U.S. 136 (1997); *Daubert v. Merrell Dow Pharms., Inc.*, 509 U.S. 579 (1993).

132. *Daubert*, 509 U.S. at 592-95.

133. *Daubert*, 509 U.S. at 597; *id.* at 600 (Rehnquist, C.J., concurring in part and dissenting in part) (acknowledging that FRE 702 requires the judge to perform some “gatekeeping” role to scientific evidence).

134. *Joiner*, 522 U.S. at 149-50 (Breyer, J., concurring).

135. *Daubert*, 509 U.S. at 582-84. Prior to *Daubert*, general acceptance was a widely accepted test for determining admissibility of scientific evidence. *Id.* at 585. The “general acceptance” test originated in *Frye v. United States*, 293 F. 1013 (D.C. Cir. 1923), and was called the *Frye* test. *Daubert*, 509 U.S. at 585-86.

136. *Id.* at 597-98.

137. *Id.* at 589.

138. *Id.*

139. *Id.*

140. *Id.* at 592-95. This holding has been codified in the new FRE 702. See generally Catherine E. Brixen & Christine M. Meis, Note, *Codifying the “Daubert Trilogy:” The Amendment to Federal Rule of Evidence 702*, 40 JURIMETRICS J. 527 (2000).

that have been tested,¹⁴¹ subjected to peer review and publication,¹⁴² and generally accepted by the scientific community are more likely to produce admissible evidence.¹⁴³ The fourth factor that may be considered is whether a particular scientific technique has a known or potential rate of error and standards that control the operation of the technique.¹⁴⁴

The Court noted in passing the trial judge's ability to appoint experts under FRE 706,¹⁴⁵ and observed that adversarial procedures could determine the merit of questionable evidence.¹⁴⁶ The defendant worried that an admissibility standard other than general acceptance in the scientific community would lead to jury confusion.¹⁴⁷ The Court replied: "In this regard respondent seems to us to be overly pessimistic about the capabilities of the jury and of the adversary system generally. 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."¹⁴⁸ The Federal Rules of Evidence provide for summary judgment orders and directed verdicts if evidence does not survive adversarial testing.¹⁴⁹ The adversary system, it seems, should be presumed equal to the challenges scientific issues may present.

At a general level, the Court held that the Federal Rules of Evidence require trial judges to attempt to understand scientific evidence.¹⁵⁰ Trial judges cannot avoid their "gatekeeping" duty by relying on the adversarial process.¹⁵¹ The Court then established a framework for resolving scientific evidence admissibility disputes;¹⁵² judges should resolve most admissibility disputes

141. *Daubert*, 509 U.S. at 593.

142. *Id.* The court noted that admissibility did not depend on publication and that publication was not necessarily correlated with reliability. *Id.* Nonetheless, peer review and publication "increase[] the likelihood that substantive flaws in methodology will be detected." *Id.*

143. *Id.* at 594. Although the Court held that admissibility could not be conditioned on general acceptance in the scientific community, the Court did not say that general acceptance was immaterial. *Id.* at 589, 594. Rather, general acceptance was a factor to consider in determining relevance and reliability. *Id.*

144. *Id.* at 594.

145. *Id.* at 595.

146. *Id.* at 596 (expressing optimism about the capabilities of the jury and the adversary system).

147. *Id.* at 595.

148. *Id.* at 596.

149. *Id.* (citing FRCP 50(a) and FRCP 56).

150. *Id.* at 592.

151. *Id.* at 589.

152. *Id.* at 592-95.

within this framework based on adversarial presentations.¹⁵³ If pure adversarial resolution is not feasible, the Federal Rules provide remedies such as court-appointed expert witnesses, summary judgment orders, and directed verdicts.¹⁵⁴

Daubert addressed only the admissibility of scientific evidence, but the principles are general. The Court clearly indicated that the mere presence of scientific issues in a case does not warrant a wholesale shift away from adversarial procedures.¹⁵⁵ The Court expressed confidence in the adversarial process's adaptability to scientific issues.¹⁵⁶ A federal trial judge could depart from the adversary system, but the Court discussed only departures authorized by the Federal Rules of Evidence.¹⁵⁷

2. *General Electric Co. v. Joiner*

The Court returned to the question of admissibility of scientific evidence in *General Electric Co. v. Joiner*.¹⁵⁸ The Court held that appellate courts should not apply a more stringent standard of review to trial court exclusions of scientific testimony.¹⁵⁹ Justice Breyer filed a concurring opinion that addressed the difficult position of trial judges.¹⁶⁰ Trial judges are not scientists, but they are called upon to evaluate the reliability of scientific evidence.¹⁶¹ He noted that trial judges could appoint special masters and specialized law clerks, and cited FRE 706 as a vehicle by which judges could appoint their own experts.¹⁶² Justice Breyer drew particular

153. *Id.* at 595-96.

154. *Id.*

155. *Id.* at 596.

156. *Id.*

157. *Id.* at 595-96.

158. *Gen. Elec. Co. v. Joiner*, 522 U.S. 136 (1997).

159. *Id.* at 143. In *Joiner*, the plaintiff had offered expert testimony to support his case. *Id.* at 140. The district court believed that the testimony was inadmissible because it did not rise above subjective belief or unsupported speculation and granted summary judgment for the defendants. *Id.* The Court of Appeals for the Eleventh Circuit reversed. *Id.* The court held that exclusion of expert testimony should be subjected to a standard of review more stringent than abuse of discretion and found that the district court should have admitted the testimony of plaintiff's expert witnesses. *Id.* at 140-41. The Supreme Court found that the Eleventh Circuit incorrectly applied this more stringent level of review and reversed. *Id.* at 141, 143. The proper standard of review was abuse of discretion. *Id.* at 146. Furthermore, the Court found that the district court did not abuse its discretion. *Id.* at 146-47.

160. *Id.* at 147-50 (Breyer, J., concurring).

161. *Id.* at 147-48 (Breyer, J., concurring).

162. *Id.* at 149, 150 (Breyer, J., concurring). Observers have drawn an analogy between law clerks and technical advisors. See, e.g., Ass'n of Mexican-American Educators v. California, 195 F.3d 465, 493 & n.31 (9th Cir. 1999) (likening a technical advisor to a law clerk), *withdrawn*, 208

attention to a New England Journal of Medicine *amici* brief that encouraged judges to use their inherent authority to appoint experts.¹⁶³ The *amici* brief suggested the American Association for the Advancement of Science ("AAAS") as a body that might recommend reputable experts to courts.¹⁶⁴ Justice Breyer opined that, with help from the scientific community, judges could successfully discharge their role as gatekeepers.¹⁶⁵

At first glance, Justice Breyer's concurrence and *Daubert* seem at odds. *Daubert* suggested deference to the adversary system, whereas Justice Breyer invites trial judges to experiment with non-adversarial methods when confronted with scientific issues.¹⁶⁶ The two opinions may be harmonized by recognizing that *Daubert* counseled deference to the adversary system, yet left the door open to non-adversarial alternatives authorized by federal rules.¹⁶⁷ Justice Breyer expanded on this opening and identified other non-adversarial alternatives including options not codified in the federal rules.¹⁶⁸

Justice Breyer's message of cooperative innovation resonates with some judges and scientists. Several judges recently have appointed technical advisors and have cited his concurring opinion as support.¹⁶⁹ Moreover, CASE puts judges in contact with scientists who are willing to serve as court-appointed experts and thereby facilitates cooperation between judges and scientists.¹⁷⁰ Despite this gaining momentum, the cooperative spirit should be balanced against *Daubert's* rule of deference. *Daubert*, a majority opinion of

F.3d 786 (9th Cir. 2000); see also Justice Stephen G. Breyer, Address at the American Association for the Advancement of Science Annual Meeting and Science Innovation Exposition (Feb. 16, 1998) (transcript available at <http://www.aaas.org/meetings/1998/breyer98.htm>) (approving of technical advisors). *Contra* Deason, *supra* note 6, at 139-141. For an argument against this law clerk analogy, see *infra* note 271.

163. *Joiner*, 522 U.S. at 149-50 (Breyer, J., concurring).

164. *Id.* at 150 (Breyer, J., concurring). The AAAS is the organization sponsoring CASE. Runkle, *supra* note 9.

165. *Joiner*, 522 U.S. at 150 (Breyer, J., concurring); see also Stephen Breyer, *Introduction*, in REFERENCE MANUAL ON SCIENTIFIC EVIDENCE 1, 7 (2d ed. 2000) (endorsing CASE).

166. Compare *Daubert v. Merrell Dow Pharms., Inc.*, 509 U.S. 579, 596 (1993), with *Joiner*, 522 U.S. at 150 (Breyer, J., concurring) (suggesting that the legal community should cooperate with the scientific community).

167. *Daubert*, 509 U.S. at 596; *supra* notes 150-57 and accompanying text.

168. *Joiner*, 522 U.S. at 150 (Breyer, J., concurring).

169. *MediaCom Corp. v. Rates Tech., Inc.*, 4 F. Supp. 2d 17, 29 (D. Mass. 1998) (citing Justice Breyer's *Joiner* concurrence to support cooperative work between courts and the scientific community and proceeding to appoint a technical advisor); see also *Ass'n of Mexican-American Educators v. California*, 231 F.3d 572, 590 (9th Cir. 2000) (citing Justice Breyer's concurrence to support the appointment of a technical advisor).

170. Runkle, *supra* note 9.

the Court, indicates judges should defer to adversarial procedures for most cases involving scientific issues.¹⁷¹ For cases in which a third-party expert may be helpful, trial judges can still accommodate adversarial norms by involving the adversaries to the extent possible.¹⁷² *Daubert* suggests a conservative approach to third party appointments, emphasizing party involvement.

III. BACKGROUND ON TECHNICAL ADVISORS

In *Ex parte Peterson*, the United States Supreme Court acknowledged that trial courts have inherent power to appoint persons unconnected with the court to aid in the dispatch of judicial duties.¹⁷³ The tasks these appointees may properly perform include taking and reporting on testimony, auditing and stating accounts, making computations, determining the actual questions at issue in complicated trials, and hearing conflicting evidence and making findings.¹⁷⁴ *Ex parte Peterson* supports the appointment of special masters, testifying experts, and technical advisors.¹⁷⁵

Subsequent to *Ex parte Peterson*, FRCP 53(b) and FRE 706 respectively codified the inherent power of the trial judge to appoint special masters and expert witnesses. Following this codification, questions arose concerning the relationship between the specific Federal Rules and the trial judge's broader inherent power to appoint experts. Technical advisors were appointed under FRCP 53(b),¹⁷⁶ and some litigants argued that FRCP 53(b) and FRE 706 were the exclusive repositories of inherent power to appoint experts.¹⁷⁷ These litigants viewed the Rules as exclusive grants of

171. *Daubert*, 509 U.S. at 596.

172. *Id.*

173. *Ex parte Peterson*, 253 U.S. 300, 312 (1920).

174. *Id.* at 313.

175. *Id.* (special masters); see *Reilly v. United States*, 863 F.2d 144, 154 n.4 (1st Cir. 1988) (citing *Ex parte Peterson* as support for a technical advisor appointment); *Scott v. Spanjer Bros., Inc.*, 298 F.2d 928, 930 (2d Cir. 1961) (citing *Ex parte Peterson* as support for a testifying expert appointment).

176. See *Reed v. Cleveland Bd. of Educ.*, 607 F.2d 737, 746 (6th Cir. 1979) (advancing FRCP 53(b) or the trial court's inherent power, but not FRE 706, as a source of authority for the district court's appointment of technical advisors); *Hart v. Cmty. Sch. Bd.*, 383 F. Supp. 699, 762 (E.D.N.Y. 1974) (Weinstein, J.) (describing FRCP 53(b) as broad enough to support appointment of a technical adviser).

177. See *Reilly*, 863 F.2d at 154 (rejecting appellant's argument that FRE 706 subsumed the inherent power of trial judge's to appoint technical advisors); *Reilly v. United States*, 682 F. Supp. 150, 153 (D.R.I. 1988) (rejecting defendant's argument that the trial court did not have authority to appoint a technical advisor), *aff'd*, 863 F.2d 149 (1st Cir. 1988); *Hemstreet v. Burroughs Corp.*, 666 F. Supp. 1096, 1124 (N.D. Ill. 1987) (rejecting plaintiff's argument that an expert who did not offer his or her own expert opinion regarding the merits of the case was still

power and argued that a judge could appoint an expert only if that judge complied with either FRCP 53(b) or FRE 706.¹⁷⁸ Confronted with these arguments, the threshold issue for the First Circuit in *Reilly v. United States* was whether FRCP 53(b) or FRE 706 subsumed the trial judge's inherent power to appoint technical advisors.¹⁷⁹

*A. Judicial Power to Appoint Technical Advisors:
Reilly v. United States*

The district judge in *Reilly v. United States* needed to estimate future earning capacity for an infant negligently injured at birth.¹⁸⁰ The court characterized the issues presented as "issues of profound economic complexity" and appointed a university faculty member as a technical advisor.¹⁸¹ At the urging of the United States,¹⁸² the district judge held a hearing regarding his intent to appoint this technical advisor.¹⁸³ At this hearing, the United States did not object to the appointment and even indicated acquiescence.¹⁸⁴ After the trial, the United States moved for a new trial and, following the denial of its motion, appealed to the First Circuit Court of Appeals.¹⁸⁵ Among other claims, the United States asserted that a technical advisor appointed under the district court's inherent authority was subject to FRE 706; that the district court abused its discretion in appointing a technical advisor at all; that the technical advisor exceeded his proper role; and that fun-

subject to FRE 706(a)), *rev'd on other grounds*, No. 87-1512, 1988 WL 93121, at *1 (Fed. Cir. Sept. 9, 1988).

178. *See infra* notes 187-193 and accompanying text.

179. *Reilly*, 863 F.2d at 149.

180. *Reilly*, 682 F. Supp. at 152.

181. *Id.*

182. The assistant United States Attorney learned that the judge was looking for a technical advisor when he contacted a faculty member the judge had previously contacted. *Reilly*, 863 F.2d at 153. The faculty member told the attorney the judge had previously contacted him. *Id.* The attorney immediately requested a chambers conference. *Id.* The court held such a conference and informed the parties of his intent to appoint a technical advisor and the steps the judge had already followed to that end. *Id.* at 153-54.

183. *Id.* at 160.

184. *Id.* at 160 n.9. When the court indicated it wanted further expertise, the attorney for the United States responded, "Sure. We were thinking the same way." *Id.* Following an adverse outcome in the district court, the United States appealed and argued that the technical advisor appointment was improper. *Id.* at 154. Although the First Circuit agreed that the trial judge should have implemented some basic procedural safeguards, it construed the United States' initial acquiescence as a waiver. *Id.* at 160.

185. *Id.* at 154.

damental fairness required that technical advisor appointments comply with certain procedural safeguards.¹⁸⁶

The First Circuit addressed these issues in turn. The court first noted the district court had inherent authority to appoint an expert as a technical advisor.¹⁸⁷ In a footnote, the court declined to address whether FRCP 53(b) might also support a technical advisor appointment.¹⁸⁸ The court then examined FRE 706 to determine if the Rule encompassed all expert appointments.¹⁸⁹ The court reasoned that the language of FRE 706 addresses only expert witnesses,¹⁹⁰ and that "[t]he Civil Rules . . . were never meant to become the sole repository of all of a federal court's authority."¹⁹¹ Therefore, the court held that FRE 706 applies only to court-appointed expert witnesses and that trial judges have inherent authority to appoint technical advisors independent of the Federal Rules.¹⁹² Because technical advisors were not court-appointed expert witnesses, FRE 706's mandatory cross-examination and deposition provisions did not apply to them.¹⁹³

In reviewing the district court's decision to appoint a technical advisor for abuse of discretion, the appellate court articulated different standards.¹⁹⁴ The court noted that technical advisor appointments should be rare.¹⁹⁵ Such appointments should be resorted to only when the subject matter exceeds the judge's expertise¹⁹⁶ and when doing so will not disrupt the judge's proper role.¹⁹⁷ Because

186. *Id.* at 154-61.

187. *Id.* at 154.

188. *Id.* at 154 n.4

189. *Id.* at 156.

190. *Id.* The text of FRE 706 refers not to "experts," but to "expert witnesses." FED. R. EVID. 706. The court inferred from this language that FRE 706 was not meant to include all expert appointments, but only expert witness appointments. *Reilly*, 863 F.2d at 156.

191. *Id.* at 156.

192. *Id.* at 154 & n.4, 155-56.

193. *Id.* at 155.

194. *Id.* at 156-57.

195. *Id.* at 156-57. In an oft-quoted passage, the court speculated that circumstances warranting an appointment would be "hen's-teeth rare." *Id.* at 156-57, *quoted in* Cecil & Willging, *supra* note 2, at 1003. The court also declared that "such appointments should be the exception and not the rule . . . [and] if not a last, a near-to-last resort." *Id.* at 156, 157; *cf.* FED. R. CIV. P. 53(b) ("A reference to a master shall be the exception and not the rule.").

196. *Reilly*, 863 F.2d at 156-57. The court explained that a trial could appoint a technical advisor "where the introduction of outside skills and expertise, not possessed by the judge, will hasten the just adjudication of a dispute without dislodging the delicate balance of the juristic role;" or in response to a "cognizable judicial need for specialized skills;" or when "faced with problems of unusual difficulty, sophistication, and complexity, involving something well beyond the regular questions of fact and law with which judges must routinely grapple." *Id.*

197. *Id.* at 156-57.

Reilly involved complex economic theories and the parties had failed to adequately inform the judge,¹⁹⁸ the appellate court found that the trial judge did not abuse his discretion when he appointed the technical advisor.¹⁹⁹

The court next held that the technical advisor performed his duties consistent with the limits inherent in the role.²⁰⁰ Properly employed, a technical advisor acts as a sounding board to the judge.²⁰¹ The advisor helps the judge with technical language and assists the judge in thinking through complex issues.²⁰² The technical advisor does not testify and does not contribute evidence.²⁰³ If a judge permits an appointee to overstep these bounds, the judge effectively abdicates the Article III role and thereby violates the Constitution.²⁰⁴ Although the court agreed that it would have been better if the trial judge had explained the way in which he intended to use the advisor in writing,²⁰⁵ the court found that the trial judge properly defined the technical advisor's role and adhered to those limits.²⁰⁶

Finally, the court examined procedural safeguards necessary to ensure fundamental fairness.²⁰⁷ The court noted several advisable safeguards: notice to the parties of a proposed expert's identity with an opportunity to object to the appointment, a description of the technical advisor's job available for party examination, and an affidavit in which the technical advisor avers compliance with the job description.²⁰⁸ The court specifically found that a written report of the advisor's findings was not necessary.²⁰⁹ While omission of one of these safeguards might warrant reversal in another case, the appellant waived its claim to procedural safeguards when it did not

198. The party experts conflicted on some points, and the government's presentation was inadequate. *Id.* at 157. The First Circuit also noted that the technical issues were important in the case. *Id.*

199. *Id.* at 157.

200. *Id.* at 159.

201. *Id.*

202. *Id.*

203. *Id.*

204. *Id.* at 157-58; *cf.* *La Buy v. Howes Leather Co.*, 352 U.S. 249, 255-56 (1957) (holding that referring the general issues of two suits to a special master constituted an abdication of the judicial function).

205. *Reilly*, 863 F.2d at 158.

206. *Id.* at 157.

207. *Id.* at 159.

208. *Id.*

209. *Id.* at 160 n.8. In the court's view, a written report would serve no function because the technical advisor cannot introduce new evidence. *Id.* Furthermore, a written report could not capture the "freewheeling" conversations the court anticipated between trial judges and technical advisors. *Id.*

object to the advisor appointment at the hearing convened at its request.²¹⁰

The *Reilly* court's approach to technical advisors has been adopted by the Federal Judicial Center²¹¹ and has influenced judges outside of the First Circuit.²¹² Particularly, a Ninth Circuit dissent recently advocated adoption of procedural safeguards substantially similar to the *Reilly* safeguards.²¹³ To summarize the *Reilly* safeguards, the judge's inherent power to appoint a technical advisor is not circumscribed or subsumed by FRCP 53(b) or FRE 706.²¹⁴ None-

210. *Id.* at 160.

211. Joe S. Cecil & Thomas E. Willging, *Court Appointed Experts*, in REFERENCE MANUAL ON SCIENTIFIC EVIDENCE 534, 569 (1994).

212. *See, e.g.*, *Renaud v. Martin Marietta Corp.*, 972 F.2d 304, 308 n.8 (10th Cir. 1992) (finding that a district court did not abuse its discretion by refusing to allow a party to depose or cross-examine a technical advisor and citing *Reilly*); *United States v. Hsu*, 185 F.R.D. 192, 196-97 (E.D. Pa. 1999) (recounting procedures used to appoint a technical advisor and citing *Reilly*).

213. *Ass'n of Mexican-American Educators v. California*, 231 F.3d 572, 609-15 (9th Cir. 2000) (Tashima, J., dissenting). The *Mexican-American Educators* majority opinion did not consider whether procedural safeguards were appropriate. *Id.* at 612 (Tashima, J., dissenting).

Although Judge Tashima classifies the procedural safeguards a bit differently and draws from other sources, *id.* at 610-13 (Tashima, J., dissenting) (citing Note, *Improving Judicial Gatekeeping: Technical Advisors and Scientific Evidence*, 110 HARV. L. REV. 941 (1997) [hereinafter *Improving Judicial Gatekeeping*]), his dissent approves of and elaborates on the procedural safeguards proposed in *Reilly*, *id.* at 609-15 (Tashima, J., dissenting). He would require the district court to:

- (1) utilize a fair and open procedure for appointing a neutral technical advisor;
- (2) address any allegations of bias, partiality, or lack of qualification;
- (3) clearly define and limit the technical advisor's duties;
- (4) make clear to the technical advisor that any advice he gives to the court cannot be based on any extra-record information; and
- (5) make explicit, either through an expert's report or a record of ex parte communications, the nature and content of the technical advisor's advice.

Id. at 611 (footnote omitted).

Judge Tashima's first two safeguards correspond with the *Reilly* court's requirements for notice and an opportunity to object safeguard. *Id.* at 611-12 (Tashima, J., dissenting) (citing *Reilly*, 863 F.2d at 159). The third safeguard is the same as *Reilly*'s requirement of a written job description. *Id.* at 612-13 (Tashima, J., dissenting) (citing *Reilly*, 863 F.2d at 158). The fourth safeguard is a clarification and corollary to the written job description safeguard; in defining the technical advisor's role, the judge should emphasize the limited universe of information that may be considered. *Id.* (Tashima, J., dissenting). The fifth safeguard is the only truly new safeguard. Whereas *Reilly* would not have required a written record of the technical advisor's advice, Judge Tashima would require some type of written record. *Id.* (Tashima, J., dissenting). He thinks technical advisors, unlike law clerks, may have too much sway with judges and that a written record of their advice would facilitate appellate review to guard against this abuse. *Id.* at 613 (Tashima, J., dissenting); *see also infra* note 271 (briefly summarizing the argument against a law clerk analogy).

214. *Reilly*, 863 F.2d at 154 n.4, 156. *But see Improving Judicial Gatekeeping, supra* note 213, at 951-52 (arguing that *Daubert* may have implicitly overruled *Reilly* and might require that all experts be appointed under FRE 706).

theless, appointments should be rare.²¹⁵ A technical advisor appointment is warranted only if the adversary system cannot provide a judge with needed information.²¹⁶ While the parties do not have a right to cross-examine or depose the technical advisor, party involvement decreases the disruption to the adversarial process.²¹⁷ Therefore, procedural safeguards such as notice and an opportunity to object, a written job description, and the technical advisor's sworn statement that he or she did not exceed his or her job description are desirable.²¹⁸ These safeguards define and memorialize the proposed and actual role of the technical advisor and give the parties a chance to object when a judge may be improperly using an advisor.²¹⁹ Party objections may become the basis of an appeal, and if so, the written job description and the affidavit demonstrating the advisor's compliance or non-compliance with the job description will facilitate appellate review. The end result should be more effective appellate review that should translate into a better check on the trial court's inherent power to appoint technical advisors.

B. Factors Affecting a Trial Judge's Decision to Appoint a Technical Advisor

Consistent with the *Reilly* court's admonitions, cases reporting technical advisor appointments have been relatively rare.²²⁰ While it would seem that the number of reported cases should be proportional to the prevalence of technical advisors, the number of cases may not be a reliable indicator of the frequency with which judges appoint technical advisors. Two researchers found that judges use FRE 706 expert witnesses far more often than the relatively small number of reported cases might suggest.²²¹ The researchers opined that reported cases did not represent the actual

215. *Reilly*, 863 F.2d at 156-57; see Cecil & Willging, *supra* note 211, at 534 (quoting *Reilly* for the proposition that technical advisor appointments should be "hen's-teeth rare" or a "near-to-last resort").

216. *Reilly*, 863 F.2d at 156-57.

217. *Id.* at 159-60; see Cecil & Willging, *supra* note 211, at 568-69 (contending that the court's need for assistance must be balanced against the interest of the parties in participating in the presentation and refutation of the evidence).

218. Cecil & Willging, *supra* note 211, at 568-69.

219. *Id.* For example, a party might object that a suggested expert was biased or inexperienced. *Reilly*, 863 F.2d at 159.

220. *Cf.* Cecil & Willging, *supra* note 2, at 1002-03 (noting few cases discuss technical advisors).

221. See Cecil & Willging, *supra* note 2, at 1004 (estimating that judges responding to their survey had made 225 appointments and characterizing this number as far greater than "the paucity of published opinions dealing with the exercise of this authority").

number of appointments, because reported cases address only disputed appointments.²²² Furthermore, appointments in settled cases are not reported.²²³ Assuming that these considerations apply to expert witness and technical advisor appointments alike, judges probably appoint technical advisors more often than the number of reported cases suggests. Even so, technical advisor appointments appear to occur infrequently.²²⁴

One explanation for the low incidence of technical advisor appointments is that the respect the *Reilly* court indicated for the adversary system pervades the thinking of judges inside and outside of the First Circuit.²²⁵ This intuition is borne out in a recent survey of federal judges and in cases following *Reilly*.

1. The Cecil-Willging Study

The survey of Federal Judicial Center researchers Joe S. Cecil and Thomas E. Willging offers further insight into the reasons judges decide not to appoint a technical advisor.²²⁶ While the survey focused on expert witnesses,²²⁷ the issues raised by technical advisor and testifying expert appointments are similar enough to permit an analogy.²²⁸ The researchers found that judges decided not to appoint an expert for two main reasons.²²⁹ First, the judges indicated that cases requiring the assistance of an expert are few.²³⁰

222. *Id.* at 1004 n.35.

223. *Id.*

224. *Id.* at 1004; see also *Gen. Elec. Co. v. Joiner*, 522 U.S. 136, 149-50 (1997) (Breyer, J., concurring) (advising judges to make greater use of their power to appoint experts).

225. *Reilly v. United States*, 863 F.2d 149, 156-57 (1st Cir. 1988).

226. Cecil & Willging, *supra* note 2, at 1015-19.

227. *Id.* at 997 n.7. The researchers first sent a one-page questionnaire to all federal district court judges. *Id.* Based on questionnaire responses, the researchers conducted telephone interviews with willing judges who had made FRE 706 appointments in the past or who had strong feelings about FRE 706 appointments. *Id.*

228. The power to appoint a testifying expert under FRE 706 is a particularized codification of the judge's more general inherent power. FED. R. EVID. 706 advisory committee's notes; *Reilly*, 863 F.2d at 156 (holding that FRE 706 circumscribes the power of a court to designate expert witnesses, but does not subsume the inherent power to appoint experts); Deason, *supra* note 6, at 79-80 (stating that, although the title of FRE 706, "Court Appointed Experts," seemingly includes all experts the court appoints, courts have held that the rule addresses only testifying experts). Testifying experts can be deposed and cross-examined by the parties, and so, from the standpoint of the adversary system, represent a smaller incursion than technical advisors. FED. R. EVID. 706(a); see also discussion *supra* notes 122-25. Since technical advisors are more disruptive to the adversary system than testifying experts, factors weighing against appointment of a testifying expert could be expected to weigh just as heavily against the appointment of a technical advisor.

229. Cecil & Willging, *supra* note 2, at 1015.

230. *Id.* at 1015-16.

Second, the judges intimated respect for the adversary system.²³¹ In articulating this respect, some judges indicated general esteem for the adversary system, and other judges indicated a more specified choice to accede to the parties' desire not to involve outside experts.²³² Judges preferred not to appoint an expert unless the adversary system could not or did not provide the judge with the information necessary to settle the dispute.²³³

The researchers' survey also reported on expert selection. Some judges experienced trouble with the selection process,²³⁴ but most judges who actually appointed experts had little trouble finding an expert.²³⁵ While this response might indicate that judges generally have little trouble contacting qualified experts, another explanation exists. The researchers primarily contacted judges who had appointed experts under FRE 706 in the past.²³⁶ These particular judges, representing only twenty percent of all federal trial judges, may have contacts with scientists that facilitate expert identification.²³⁷ Indeed, the researchers found that, in twenty-nine of the forty-one cases in which the judge appointed an expert with-

231. *Id.* at 1018-19.

232. *Id.* Comments such as the following expressed judicial support for the adversary system:

I believe in the adversary system I don't feel comfortable taking over the case I don't know why I would be better equipped than the lawyers to find a top-flight person.

[T]he lawyers are pretty good about shooting holes in each others' experts. It's generally a credibility question and the jury can sort it out.

We're conditioned to respect the adversary system. If a lawyer fails to explain the basis for a case, that's his problem.

In general, it conflicts with my sense of the judicial role, which is to trust the adversaries to present information and arguments. I do not believe the judge should normally be an inquisitor.

Id.

233. *Id.* at 1009-12. Some judges also suggested that appointing an expert might aid settlement. *Id.* at 1012. *Contra id.* (reporting that some judges will not appoint an expert if settlement is likely). Such appointments may be viewed as responses to adversarial failings. Polarized expert testimony may prevent the parties from reaching a settlement agreement. *Id.* at 1013. Therefore, settlement may be more likely when the court's neutral expert resolves the divisive issue. *Id.* at 1013-14. Even the threat of an appointment may keep the parties "honest" and deter partisan conduct that does not facilitate the truth-finding process. FED. R. EVID. 706 advisory committee's note ("The ever-present possibility that the judge *may* appoint an expert in a given case must inevitably exert a sobering effect on the expert witness of a party and upon the person utilizing his services."); Cecil & Willging, *supra* note 2, at 1014 (suggesting threat of appointment may have an *in terrorem* effect).

234. Cecil & Willging, *supra* note 2, at 1022. Fourteen judges said they had trouble identifying a suitable neutral expert. *Id.* Some judges had trouble finding an unbiased expert with the necessary knowledge. *Id.* Still, other judges did not know how to initiate the process. *Id.*

235. *Id.*

236. *Id.* at 997 n.7.

237. *Id.* at 1004, 1023.

out suggestions by the party, the judge used pre-existing personal or professional contacts to identify an expert.²³⁸ A system relying on personal and professional contacts has drawbacks. Selection based on the judge's contacts does not ensure that the expert is unbiased or well informed.²³⁹

Furthermore, compensation issues might deter judges from appointing technical advisors.²⁴⁰ FRE 706(b) explicitly provides for compensation for FRE 706 appointees,²⁴¹ but compensation for technical advisors is left to the judge's discretion.²⁴² The researchers specifically noted technical advisor compensation problems.²⁴³ All things considered, it is likely that the practical burdens associated with appointing a technical advisor impede appointments by the judiciary as a whole even though many interviewed judges did not cite the selection process as a barrier to appointment.

2. The Cases

Judicial opinions also provide insight into the reasons judges do and, largely by negative implication, do not appoint technical advisors. Consistent with their articulated respect for the adversary system, judges try to limit appointments to instances in which that system is ineffective.²⁴⁴ In recent years, technical advisors have

238. *Id.* at 1023.

239. *Id.*

240. *Id.* at 1053-54.

241. FED. R. EVID. 706(b).

242. *See, e.g., MediaCom Corp. v. Rates Tech., Inc.*, 4 F. Supp. 2d 17, 29-30, 36 (D. Mass. 1998) (taxing technical advisor costs to the parties).

243. *See Cecil & Willging, supra* note 2, at 1053-54. The courts have not derived a dependable and satisfactory method for compensating technical advisors. *Id.* In the past, judges have used three imperfect options. First, the parties may agree to compensate the technical advisor. *Id.* This method leaves the court and technical advisor at the mercy of the same parties whose non-constructive adversarial behavior may have led to the appointment in the first place. Second, if a technical advisor serves under FRE 706, the court may compensate the advisor under FRE 706(b). FED. R. EVID. 706(b); Cecil & Willging, *supra* note 2, at 1053-54. But courts prefer to appoint technical advisors using their inherent power because the technical advisors appointed under the inherent power can be consulted more freely. *Compare* FED. R. EVID. 706(a) (subjecting experts appointed under FRE 706 to cross-examination and depositions), *with* Reilly v. United States, 863 F.2d 149, 157-58 (1st Cir. 1988) (declaring that technical advisors appointed under the inherent power are not subject to deposition or cross-examination). Finally, in unusual circumstances, the Administrative Offices of the United States Courts may compensate the technical advisor. *See Cecil & Willging, supra* note 2, at 1053-54.

244. *See, e.g., United States v. Hsu*, 185 F.R.D. 192, 196 (E.D. Pa. 1999) (reporting use of a technical advisor to survey technical literature related to the drug Taxol); *MediaCom*, 4 F. Supp. 2d at 30 n.11 (explaining the judge's preference for a more inquisitorial approach when the adversary system is ineffectual).

been appointed to assist with complex medical issues,²⁴⁵ technological issues,²⁴⁶ and educational issues involving psychometrics.²⁴⁷ These kinds of technical and scientific cases are good candidates for technical advisor appointments, because they will likely involve unusual, difficult, sophisticated, and complex problems.²⁴⁸

When judges decide to exercise their inherent power to appoint a technical advisor, the next step is for the judge to select an expert and define that expert's role.²⁴⁹ As *Daubert* and other opinions have suggested,²⁵⁰ a technical advisor should not unduly disrupt the normal adversarial process.²⁵¹ Because the adversary system attempts to promote judicial impartiality, personal autonomy, and the search for the truth, concerns about these factors arise when a non-adversarial technical advisor is employed.²⁵² A judge can ameliorate the personal autonomy concern by obtaining the consent of the parties.²⁵³ Party consent to a technical advisor appointment also may suggest that the adversaries cannot effectively uncover the truth and that judicial bias is unlikely.²⁵⁴ If a party consents *ex ante* to certain procedures or a technical advisor ap-

245. See *Hall v. Baxter Healthcare Corp.*, 947 F. Supp. 1387, 1392 (D. Or. 1996) ("complicated scientific and medical issues").

246. See *Data Gen. Corp. v. IBM Corp.*, 93 F. Supp. 2d 89, 91 (D. Mass. 2000) (patent case); *TM Patents, L.P. v. IBM Corp.*, 72 F. Supp. 2d 370, 374 (S.D.N.Y. 1999) (patent case); *Hsu*, 185 F.R.D. at 196 (trade secret case); *MediaCom*, 4 F. Supp. 2d at 29 (patent case); *Xilinx Inc. v. Altera Corp.*, No. 93-20409 SW, 1997 WL 581426, at *1 (N.D. Cal. June 3, 1997) (patent case).

247. See Ass'n of Mexican-American Educators v. California, 195 F.3d 465, 492 (9th Cir. 1999), *aff'd on reh'g*, 231 F.3d 572, 590-91 (9th Cir. 2000) (en banc). "[P]sychometrics is the measurement of psychological traits and characteristics." PAUL KLINE, *THE NEW PSYCHOMETRICS: SCIENCE, PSYCHOLOGY AND MEASUREMENT* 24 (1998). Psychometrics is a challenging subject area, in part, because psychological traits are not easily measured and quantified. *Id.* at 25. When some trait is purportedly measured, experts may not agree that the trait has been measured in fact. *Id.* For example, it may be hard to prove that a test reliably measures personality or motivation. *Id.*

248. See *Reilly v. United States*, 863 F.2d 149, 157 (1st Cir. 1988).

249. *E.g.*, *MediaCom*, 4 F. Supp. 2d at 29-30 (directing the parties to search for an appropriate technical advisor or advisors); *Hall*, 947 F. Supp. at 1392-1393 (recounting the judge's search for technical advisors).

250. *Daubert v. Merrell Dow Pharms., Inc.*, 509 U.S. 570, 596 (1993) (expressing confidence in the adversary system); see *Allison v. McGhan Med. Corp.*, 184 F.3d 1300, 1311 (11th Cir. 1999) (noting that the trial judge's gatekeeper role is not meant to replace the adversary system); *cf. La Buy v. Howes Leather Co.*, 352 U.S. 249, 256 (1957) (holding that a trial judge could not refer a case to a special master if the reference would result in an abdication of the judicial function).

251. See, *e.g.*, *Reilly*, 863 F.2d at 159-60; *Hsu*, 185 F.R.D. at 197; *MediaCom*, 4 F. Supp. 2d at 29-30 & n.11.

252. See discussion *supra* Part II.C.

253. Judges tend to initiate appointments on their own. *Cecil & Willging*, *supra* note 2, at 1023. But, a court that initiates an appointment may still involve the parties in subsequent proceedings.

254. Because the litigants will be directly affected by the outcome of the case, their consent may ratify a deviation from adversarial procedures.

pointment, appellate courts are unlikely to permit an ex post challenge to the procedure or appointment.²⁵⁵ Whether the parties consent or not, some judges try to involve the parties in the selection process.²⁵⁶ Parties are asked to help select an expert or to raise objections to court-selected experts.²⁵⁷ Thus, the parties take a role in educating the judge and in presenting competing visions of good experts.²⁵⁸ This involvement preserves some party autonomy and should lessen fears of judicial impartiality and impairment of the truth-finding process.

Party consent and involvement in the selection process are not necessary.²⁵⁹ Without party involvement, the judge must "go it alone."²⁶⁰ Judges have searched for technical advisors by contacting university faculty,²⁶¹ other professionals,²⁶² and research institutes.²⁶³ The search for a competent, unbiased, and disinterested expert can be time consuming without assistance.²⁶⁴ In *Reilly*, the district judge inquired of three faculty members before finding an expert who had no direct contact with the case.²⁶⁵ In *Hall*, the district judge enlisted a doctor to help him screen and select four technical advisors.²⁶⁶ Read together, *Hall* and *Reilly* lend credence

255. *Ass'n of Mexican-American Educators v. California*, 195 F.3d 492, 465 (9th Cir. 1999) (noting that appellant failed to object even though the district court gave the parties an opportunity to do so), *aff'd on reh'g*, 231 F.3d 572, 590-91 (9th Cir. 2000) (en banc); *Reilly*, 863 F.2d at 160 & n.9 (holding that a party waived its right to procedural safeguards when it "sat back and knowingly acquiesced in the court's unconditional hiring of an unidentified technical advisor").

256. *Hsu*, 185 F.R.D. at 197 (consulting the parties regarding the selection of a technical advisor); *MediaCom*, 4 F. Supp. 2d at 29-30 & n.11 (preferring party involvement, but indicating a willingness to "go it alone").

257. *Reilly*, 863 F.2d at 159-60; *Hsu*, 185 F.R.D. at 197; *MediaCom*, 4 F. Supp. 2d at 29-30.

258. *Cf. JAMES ET AL.*, *supra* note 13, § 1.2 (explaining that allowing parties to present their own cases secures their role in the adjudication process).

259. *Hall v. Baxter Healthcare Corp.*, 947 F. Supp. 1387, 1392-93 (D. Or. 1996) (submitting party questions to technical advisors, but not requiring the advisors to answer those questions); *MediaCom*, 4 F. Supp. 2d at 30 n.11 (expressing judge's willingness to proceed without party involvement). *But see Reilly*, 863 F.2d at 159 (suggesting that parties be notified of the court's intent to appoint a technical advisor).

260. *MediaCom*, 4 F. Supp. 2d at 30 & n.11.

261. *Reilly v. United States*, 682 F. Supp. 150, 152-53 (D.R.I. 1988) (Brown University and University of Rhode Island).

262. *See Hall*, 947 F. Supp. at 1393 (employing a M.D./Ph.D to assist in screening and selecting advisors).

263. *See Ass'n of Mexican-American Educators v. California*, 195 F.3d 465, 492 (9th Cir. 1999) (RAND Corporation), *withdrawn*, 208 F.3d 786 (9th Cir. 2000); *United States v. Hsu*, 185 F.R.D. 192, 196 (E.D. Pa. 1999) (National Cancer Institute).

264. When the process involves the parties, the burden of finding and screening experts is divided between the judge and the parties. *See Hsu*, 185 F.R.D. at 197; *MediaCom*, 4 F. Supp. 2d at 29-30.

265. *Reilly*, 863 F. Supp. at 152-53.

266. *Hall*, 947 F. Supp. at 1393.

to the theory that judges who know members of the scientific community may appoint experts more often because the burden of finding a suitable expert is lessened for these judges.²⁶⁷

Judicial reluctance to intrude upon the adversary system and the practical burdens associated with facilitating an appointment apparently have kept appointments rare. Recent opinions, however, suggest that judges are becoming more receptive to the use of technical advisors.²⁶⁸ These opinions justify technical advisor appointments not on the sole ground that the adversary system had failed, but rather on the alternate ground that appointing a technical advisor was consistent with good judging.²⁶⁹ These judges point to Justice Breyer's concurrence in *Joiner* as support for this proposition²⁷⁰ and may depict technical advisors as specialized law clerks rather than overbearing tutors.²⁷¹ The Court Appointed Scientific

267. See *supra* notes 234-39 and accompanying text.

268. See *Mexican-American Educators*, 195 F.3d at 492; *Hsu*, 185 F.R.D. at 196-97; *MediaCom*, 4 F. Supp. 2d at 29; see also *Allison v. McGhan Med. Corp.*, 184 F.3d 1300, 1310-11 (11th Cir. 1999); cf. MaryAnn Fenicato, *\$12 Million Patent Case Warrants Appointment of Court Technical Advisor and Jury Tutor*, *LAWYER'S J.*, June 16, 2000, at 1 (describing a state judge's appointment of a technical advisor). But see *Mexican-American Educators*, 231 F.3d 572, 611 (9th Cir. 2000) (en banc) (Tashima, J., dissenting). In the first *Mexican-American Educators* opinion, the court suggested that Justice Breyer's concurrence simply endorses technical advisors as proposed in *Reilly*. *Mexican-American Educators*, 195 F.3d at 492; see also *Mexican-American Educators*, 231 F.3d at 590-91. While it may be true that courts since *Reilly* have acknowledged the trial judge's inherent power to appoint a technical advisor, recent opinions argue that the power should be exercised more frequently in light of changed circumstances; most notably, the opinions argue that trial judge's *Daubert* gatekeeper responsibility confers more latitude to appoint outside experts. See, e.g., *Allison*, 184 F.3d at 1311.

269. See *Mexican-American Educators*, 195 F.3d at 492; *Hsu*, 185 F.R.D. at 196-97; *MediaCom*, 4 F. Supp. 2d at 29.

270. See *Mexican-American Educators*, 195 F.3d at 492 (citing Justice Breyer's concurrence in *Joiner*); *MediaCom*, 4 F. Supp. 2d at 29 (same); see also *Mexican-American Educators*, 231 F.3d at 590.

271. See *Mexican-American Educators*, 195 F.3d at 493 & n.31 (likening a technical advisor to a specialized law clerk); *Hsu*, 185 F.R.D. at 196-97 (using "scientific law clerk" and "technical advisor" interchangeably). In the *Reilly* cases, the district court employed the law clerk analogy, but the First Circuit did not. Compare *Reilly v. United States*, 682 F. Supp. 150, 152 (D.R.I. 1988) ("The expert becomes, in effect, a specialized law clerk."), with *Reilly v. United States*, 863 F.2d 149, 157-59 (1st Cir. 1988) (describing the role of the technical advisor without endorsing the law clerk analogy). The law clerk analogy probably traces back to Judge Wyzanski's appointment of an economist as law clerk in *United States v. United Shoe Machinery Corp.*, 110 F. Supp. 295 (D. Mass. 1953). See Carl Kaysen, *In Memoriam: Charles E. Wyzanski, Jr.*, 100 HARV. L. REV. 713, 713-15 (1987) (reflections of the economist law clerk), cited in *Gen. Elec. Co. v. Joiner*, 522 U.S. 136, 149 (1997) (Breyer, J., concurring).

One author has argued persuasively that the law clerk analogy is inapposite. Deason, *supra* note 6, at 136-41. Accord *Ass'n of Mexican-American Educators*, 231 F.3d at 609 (Tashima, J., dissenting); Choy, *supra* note 50, at 1444-45. Law clerks are an accepted institution because law savvy judges are unlikely to defer to the typical law clerk—a recent law school graduate. Deason, *supra* note 6, at 140. By contrast, judges resort to experts when their own experience is

Experts ("CASE") project embodies this viewpoint, and, if the format gains widespread acceptance, it can be expected to increase the number of technical advisor appointments.²⁷²

IV. THE COURT APPOINTED SCIENTIFIC EXPERTS ("CASE") PROJECT

In the fall of 1998, the American Association for the Advancement of Science ("AAAS") launched a five-year demonstration project, the Court Appointed Scientific Experts ("CASE") project, designed to facilitate cooperation between judges and scientists.²⁷³ CASE will help "district judges . . . obtain highly qualified, independent scientists and engineers to serve as court-appointed experts."²⁷⁴ When a judge wants to appoint an expert under any source of authority, the judge can call the CASE project.²⁷⁵ Technical advisors are experts appointed under the judge's inherent authority and, therefore, fall within the ambit of the project.²⁷⁶ Project staff already will have identified and recruited qualified experts willing to serve in just such a capacity.²⁷⁷ Thus, when the judge calls, CASE staff can recommend an expert tailored to the specific request of the judge.²⁷⁸ This simple interaction leads a judge to a qualified and unbiased expert. Project staff perform the more complicated and time-consuming work.

The behind the scenes work is subdivided between committees. The CASE Project Advisory Committee oversees the project.²⁷⁹ The Educational Subcommittee develops educational materials for

lacking. *Id.* at 141. Therefore, undue deference is a significantly greater risk when a judge consults an expert in a non-legal field. *Id.*

272. See discussion *infra* Part V.

273. Runkle, *supra* note 9; Mark Hansen, *Making a 'CASE' for Science*, ABA JOURNAL, Oct. 1999, at 22. Justice Breyer called for this cooperative effort in *Joiner* quoting with approval an *amici* proposal that the AAAS could recommend reputable experts to courts. *Joiner*, 522 U.S. at 149-50 (Breyer, J., concurring). The Leland Fikes Foundation and Open Society Institute fund CASE. See Runkle, *supra* note 9. For other brief, in-print summaries of the project, see Hansen, *supra*, at 22; Doug Bandow, *Rule of Law: Keeping Junk Science Out of the Courtroom*, WALL ST. J., July 26, 1999, at A23. For online information about the project, see *Court Appointed Scientific Experts: A Demonstration Project of the AAAS*, at <http://www.aaas.org/spp/case/case.htm>.

274. See Runkle, *supra* note 9

275. *Id.*

276. *Id.* (quoting Justice Breyer's concurring opinion in *Joiner* as support for the CASE project); see also Hansen, *supra* note 273, at 22 (reporting that a CASE expert "could be called upon to do everything from providing technical advice to the judge to testifying before a jury").

277. See Hansen, *supra* note 273, at 22.

278. *Id.*

279. See Runkle, *supra* note 9.

experts and judges.²⁸⁰ Material prepared for experts describes the adversarial process and the role of an appointed expert.²⁸¹ Material prepared for judges describes procedures and suggests helpful information for managing pretrial and trial proceedings.²⁸² The Professional Standards Subcommittee drafts questionnaires to gather pertinent information and guidelines governing conflicts of interest.²⁸³ The Evaluation Subcommittee coordinates CASE's compliance with the evaluation plans of the Federal Judicial Center.²⁸⁴ Finally, the Recruitment and Screening Panel searches for willing experts who are capable of communicating highly technical information to non-scientific audiences.²⁸⁵ All of this preparatory work significantly decreases the judicial investment of time and resources needed to appoint an expert.

More generally, CASE puts a stamp of approval on the use of court-appointed experts in the adversarial process. Before recommending an expert, the project evaluates the expert on several levels: general suitability for the role; compatibility with the judge; and impartiality in the specific case.²⁸⁶ The project specifically educates chosen experts regarding the adversarial process.²⁸⁷ Thus, the judge knows that the expert chosen via CASE is probably well suited for the job. Prestigious affiliations also validate the project. The sponsoring organization, the AAAS, is one of the largest international collections of scientists.²⁸⁸ Ninth Circuit Judge Pamela Ann Rymer chairs the Advisory Committee.²⁸⁹ Justice Breyer and the United States House of Representatives Science Committee have endorsed the project.²⁹⁰ When judges have misgivings about

280. *See id.*

281. *Id.*

282. *Id.*

283. *Id.*

284. *Id.*

285. *Id.*

286. *Id.*

287. *Id.*

288. Bandow, *supra* note 273, at A23. AAAS has 282 affiliated societies and 144,000 members. *Id.*

289. Runkle, *supra* note 9. District Judges Martin Feldman and Louis Pollak are also members of the Advisory Committee. *Id.*

290. *See* UNLOCKING, *supra* note 8 (stating "[e]fforts designed to identify highly qualified and impartial scientific experts to provide advice to the courts for scientific and technical decisions must be encouraged" and endorsing AAAS's demonstration project specifically); Breyer, *supra* note 165, at 7-8; Breyer, *supra* note 162 (endorsing AAAS's court-appointed expert project as a "promising method[] to help bring science and law closer together").

the propriety of an expert appointment,²⁹¹ these endorsements tend to dispel those doubts.

V. CURRENT LIMITS ON THE INHERENT POWER TO APPOINT TECHNICAL ADVISORS

This Note predicts that cooperative efforts like CASE will increase the frequency of technical advisor appointments because the project and its adherents take aim at two factors that previously checked judicial desire to make appointments: judicial deference to the adversary system and the administrative burdens associated with initiating an appointment and selecting an expert. Increased use of technical advisors may be good or bad; commentators fall on both sides of the issue.²⁹² But if the power is exercised more frequently, this Note argues a balance should be struck to preserve the role of the adversaries. Limits can give judges guidance in determining the proper balance.²⁹³ Normally, in the adversary system, parties are responsible for case development.²⁹⁴ *Daubert* suggests that the adversaries should not be displaced merely because a case involves a technical subject matter,²⁹⁵ and, if a judge does resort to a third party technical advisor, the parties should be involved to the extent possible.

In every circuit except the First Circuit, the trial judge's power to appoint a technical advisor is not practically limited. Appointments are reviewed only for abuse of discretion,²⁹⁶ a very lenient standard of appellate review.²⁹⁷ The standard is even less con-

291. Cf. Cecil & Willging, *supra* note 2, at 1018 (finding judges preferred not to appoint an expert under FRE 706 unless the adversary system failed).

292. Compare, e.g., Deason, *supra* note 6, at 153 (conceding that technical advisors may help a judge understand technical issues, but arguing that the advantage is offset when adversarial procedures are forsaken), with Jackson, *supra* note 6, at 464-65 (arguing that technical advisors are the most practical solution to many of the problems judges face in scientific cases). Increased certainty might increase judicial willingness to appoint technical advisors, but limits could also ensure appointments promote the goals of the adversary system.

293. Cf. Deason, *supra* note 6, at 142 (arguing that "more carefully defined appointment standards and procedures are needed" if FRE 706 is used more frequently); Todd D. Peterson, *Restoring Structural Checks on Judicial Power in the Era of Managerial Judging*, 29 U.C. DAVIS L. REV. 41, 84 (1995) (contending that new checks should be devised to curb judges' managerial power).

294. See discussion *supra* Part II.C.

295. See discussion *supra* Part II.E.1.

296. See *Reilly v. United States*, 863 F.2d 149, 157, 159-60 (1st Cir. 1988).

297. See MICHAEL E. TIGAR & JANE B. TIGAR, *FEDERAL APPEALS: JURISDICTION AND PRACTICE* § 5.06 (3d ed. 1999). Numerous trial decisions are committed to the trial judge's discretion. *Id.* Appellate courts will reverse the trial judge's decision on these matters only if the

fining when considered in light of the "nebulous and shadowy" inherent power.²⁹⁸ The only definite limit on the exercise of the power is Article III, that forbids abandoning the judicial function to non-Article III actors.²⁹⁹ To cure this vagueness, the *Reilly* court articulated procedural safeguards curbing the trial judge's discretion and declared that omitting one of the safeguards might constitute an abuse of discretion.³⁰⁰ Coupling abuse of discretion review with the *Reilly* procedural safeguards provides a clearer standard for appellate review.³⁰¹ Furthermore, the *Reilly* safeguards preserve the adversaries' role in the process thus providing a check on the power of the trial judge.³⁰² Slightly more rigorous appellate review and party involvement are non-intrusive checks on the trial judge's power that ensure judges are using technical advisors to supplement and not supplant the adversary system. *Reilly*, however, is the law only in the First Circuit.³⁰³

Procedures implemented in and outside the First Circuit reflect the positive potential of *Reilly*-type safeguards. In *MediaCom Corp. v. Rates Technology, Inc.*, a case arising in a First Circuit district, the district court employed procedures that reflected respect for the adversary system and party autonomy.³⁰⁴ The judge thought the case was well suited to the use of a technical advisor and indicated that he intended to use one.³⁰⁵ The judge's first choice was to involve the parties in the process.³⁰⁶ The district judge gave the parties thirty days to agree upon an advisor.³⁰⁷ If the parties could not agree on a single expert, the parties were given an extra fifteen days to agree upon three experts with knowledge generally reflect-

judge abused his or her discretion. *Id.* This standard almost always results in upholding the trial judge's decision. *Id.*

298. *Eash v. Riggins Trucking, Inc.*, 757 F.2d 557, 561 (3d Cir. 1985).

299. *Reilly*, 863 F.2d at 157-58; see also discussion Part. II.B.

300. *Reilly*, 863 F.2d at 160 (stating that the court would "not hesitate to reverse if procedural safeguards were wholly inadequate").

301. *Id.* at 159-60.

302. See *supra* notes 218-19 and accompanying text.

303. *Reilly*, 863 F.2d at 159-60; see also Jackson, *supra* note 6, at 448-49 (advocating a less conservative approach to technical advisor appointments and noting *Reilly* only controls in the First Circuit). While no other circuit has explicitly adopted all of the procedural safeguards suggested in *Reilly*, they have cited *Reilly* approvingly. See Ass'n of Mexican-American Educators v. California, 195 F.3d 465, 493 (9th Cir. 1999), *withdrawn*, 208 F.3d 786 (9th Cir. 2000); Renaud v. Martin Marietta Corp., 972 F.2d 304, 308 n.8 (10th Cir. 1992).

304. *MediaCom Corp. v. Rates Tech. Inc.*, 4 F. Supp. 2d 17, 29-30 (D. Mass. 1998).

305. See *id.* at 30 & n.11. The judge ordered the parties to equally share payment for the technical advisor. *Id.* at 29-30.

306. *Id.*

307. *Id.*

ing the range of views about the technical subject matter.³⁰⁸ If the parties could not agree at all, the court required a detailed report of their reasons.³⁰⁹ In the event the adversaries did not reach an agreement, the court was willing to "go it alone."³¹⁰

In a case outside the First Circuit, *Hall v. Baxter Healthcare Corp.*, the court also involved the parties in the process, but to a lesser degree.³¹¹ The district judge decided to invoke the court's inherent power to appoint independent advisors.³¹² The court then enlisted a doctor to assist in its search for experts in the fields of epidemiology, immunology/toxicology, rheumatology, and chemistry.³¹³ The court appointed four technical advisors to assist in deciding admissibility of certain expert testimony.³¹⁴ In a four-day hearing, the court, the parties, and the technical advisors questioned the parties' experts.³¹⁵ The court and technical advisors also viewed the parties' video taped summations.³¹⁶ Finally, the court submitted its questions and the parties' proposed questions to the

308. *Id.* at 30.

309. *Id.*

310. *Id.* at 30 n.11. The court predicted that failure to agree would be a result of "partisan-ship run amok." *Id.* at 30. The court also said it preferred a technical advisor to "the clash of adversary presentations." *Id.* at 30 n.11. With these statements, the court seems concerned with the adversary system failing commonly called "the battle of the experts." See *supra* note 105.

311. *Hall v. Baxter Healthcare Corp.*, 947 F. Supp. 1387, 1392-93 (D. Or. 1996) (Jones, J.); see also Jane F. Thorpe et al., *Court-Appointed Experts and Technical Advisors*, 26 LITIG. 31, 33-34 (2000) (recounting portions of an interview with Judge Jones).

312. *Hall*, 947 F. Supp. at 1392.

313. *Id.* at 1392-93.

314. *Id.* The judge invoked his inherent authority and appointed the technical advisors under FRE 104, rather than FRE 706. *Id.* at 1392 & n.8. FRE 104(a) provides that most of the evidence rules, presumably including FRE 706, are not binding when determining admissibility. FED. R. EVID. 104(a) & advisory committee's note. The rationale for citing FRE 104 is unclear. FRE 104 does not speak to expert appointments specifically, and, on its face, does not appear to be an independent grant of power to appoint experts. The judge noted that he appointed the technical advisors under FRE 104 instead of FRE 706, "[t]o keep the advisors independent of any ongoing proceedings." *Hall*, 947 F. Supp. at 1392 n.8; see also *Allison v. McGhan Med. Corp.*, 184 F.3d 1300, 1311 nn.10-11 (11th Cir. 1999) (approving of the *Hall* court's FRE 104 appointments). The judge's stated goal was to avoid the procedural requirements of FRE 706. *Hall*, 947 F. Supp. at 1392 n.8. But, a technical advisor whose appointment is based on the judge's inherent power is not subject to FRE 706. See *Reilly v. United States*, 863 F.2d 149, 155 (1st Cir. 1988) (holding that FRE 706 encompasses only court-appointed expert witnesses and not technical advisors). One explanation is that the judge thought the advisors might exceed the limited role of a technical advisor and cited FRE 104 as a justification for increased flexibility in admissibility hearings. See *infra* notes 327-29 and accompanying text. Alternately, the judge may have cited FRE 104 to illustrate that the advisors were merely commenting on proposed evidence and were not providing independent evidence as expert witnesses appointed under FRE 706 might. Cf. *Reilly*, 863 F.2d at 156 (reasoning that FRE 706 does not apply to technical advisors because they do not contribute new evidence to the trial).

315. *Hall*, 947 F. Supp. at 1393.

316. *Id.*

technical advisors, but told the advisors they did not have to answer the parties' questions.³¹⁷ The technical advisors filed reports to conclude their role.³¹⁸ The court gave copies of the reports to the parties and afforded the parties an opportunity to question the report and lodge objections.³¹⁹

As expected, the district court in *MediaCom* adhered more closely to *Reilly* than the district court in *Hall*. The *MediaCom* judge notified the parties that he intended to appoint a technical advisor and cited the parties to an appendix for a job description.³²⁰ Since the advisor had not yet been appointed, the other safeguards were inapplicable.³²¹ More generally, the judge minimized the disruption to the adversarial process by giving the parties the chance to agree on an expert.³²² As to *Hall*, it can be argued that the court followed the spirit, if not the letter, of *Reilly*.³²³ The parties knew the judge was using technical advisors, and the parties were kept abreast of court communications with the advisors.³²⁴ The *Hall* technical advisors filed written reports that the *Reilly* court stated were not necessary.³²⁵ The judge involved the parties in the process somewhat. The adversaries helped develop the issues presented to the technical advisors and could contest the findings of the technical advisors.³²⁶ On the other hand, the *Hall* court did not cite *Reilly*.³²⁷ Apparently, the judge did not create a written job description, nor did he require the technical advisors to swear compliance with the job description.³²⁸ The *Hall* court apparently gave the parties no role in the advisor selection process.³²⁹

This comparison of *Hall* and *MediaCom* indicates that, while *Reilly* may have influence, courts outside of the First Circuit are not persuaded to follow the strictures of *Reilly*.³³⁰ Thus, in most ju-

317. *Id.* at 1393-94.

318. *Id.* at 1394.

319. *Id.*

320. *MediaCom Corp. v. Rates Tech., Inc.* 4 F. Supp. 2d 17, 29-30 (D. Mass. 1998).

321. Specifically, non-existent communications between the court and advisor could not be recorded. See *Reilly v. United States*, 863 F.2d 149, 158 (1st Cir. 1988). Nor could the technical advisor swear that he had performed in the proper capacity. See *id.* at 159-60.

322. *MediaCom*, 4 F. Supp. 2d at 29-30.

323. *Hall*, 947 F. Supp. at 1392-94.

324. *Id.*

325. *Id.* at 1394. See also *Reilly*, 863 F.2d at 160 n.8.

326. *Hall*, 947 F. Supp. at 1394.

327. *Id.* at 1392-94.

328. *Id.*

329. *Id.*

330. Compare *id.* (eschewing *Reilly* implicitly), with *MediaCom Corp. v. Rates Tech., Inc.*, 4 F. Supp. 2d 17, 29-30 (D. Mass. 1998) (citing *Reilly* and complying with the applicable *Reilly* safeguards).

risdictions, general appellate review for abuse of discretion is the only check on a district judge's decision to appoint an advisor. If cooperative efforts like CASE increase the frequency of technical advisor appointments, opportunities for abuse of these appointments in the other circuits will also increase. While a certain degree of experimentation and flexibility are probably desirable,³³¹ limits are also necessary to guide judicial experimentation in a direction that is compatible with the adversary system.³³²

VI. MORE EFFECTIVE LIMITS ON THE INHERENT POWER TO APPOINT TECHNICAL ADVISORS

Since the efficacy of mere abuse of discretion review is doubtful,³³³ greater checks and limits are needed to guide the development of technical advisor jurisprudence. Such checks and limits should minimize the disruption to the adversarial process while preserving the flexible "sounding board" role of technical advisors.³³⁴ The remainder of this Note suggests three possible checks or limits on trial judges' inherent power to appoint technical advisors. First, appellate courts could require *Reilly*-type procedural safeguards to ensure fundamental fairness. Second, a rule like FRE 706 or FRCP 53(b) could be enacted to standardize technical advisor procedure. Third, trial judges may exercise prudential self-restraint and appoint technical advisors in a conservative manner giving due deference to the adversary system.

A. Procedural Safeguards as a Constitutional Requirement

The *Reilly* court agreed with the appellant's claim that fundamental fairness requires district courts to adhere to certain procedural safeguards when appointing a technical advisor.³³⁵ Because fundamental fairness is the hallmark of due process,³³⁶ the *Reilly*

331. See *Gen. Elec. Co. v. Joiner*, 522 U.S. 136, 150 (1997) (Breyer, J., concurring).

332. Cf. *Daubert v. Merrell Dow Pharms., Inc.*, 509 U.S. 579, 596 (1993).

333. See *TIGAR & TIGAR*, *supra* note 297, § 5.06.

334. Cf. *Daubert*, 509 U.S. at 596 (expressing confidence in the adversary system); *Reilly v. United States*, 863 F.2d 149, 156-60 (1st Cir. 1988) (defining the role of the technical advisor and procedural safeguards that are consistent with that role).

335. *Reilly*, 863 F.2d at 159 (acknowledging merit in appellant's argument that fundamental fairness required procedural safeguards). For a somewhat different perspective regarding desirable safeguards, see *supra* note 213.

336. See, e.g., *Lassiter v. Dep't of Soc. Servs.*, 452 U.S. 18, 24-25 (1980) (equating due process and fundamental fairness); cf. *Chambers v. NASCO, Inc.*, 501 U.S. 32, 50 (1991) (stating in an inherent power to sanction case that a "court must . . . exercise caution in invoking its inherent power, and it must comply with the mandates of due process").

court arguably believed that due process requires procedural safeguards.³³⁷ Thus, the United States Constitution³³⁸ may require an appellate court in any jurisdiction to consider whether a judge who appoints a technical advisor without employing procedural safeguards violates due process.³³⁹

B. Statutory Limit

Like court-appointed testifying experts, technical advisors could be addressed under a Federal Rule.³⁴⁰ A technical advisor rule should defer to the adversary system when possible, but also give courts latitude to go outside the system when it completely fails.³⁴¹ The rule should preserve the flexible role for the technical advisor envisioned in *Reilly*.³⁴² Another concern is that judges might appoint persons as technical advisors when they are actually functioning as expert witnesses to escape the stricter requirements of FRE 706. Therefore, the rule should respect the boundaries of FRE 706.

The following proposed rule is modeled on FRE 706 and might be enacted as Federal Rule of Evidence 707: Court Appointed Technical Advisors.

The court may on its own motion or on the motion of any party enter an order to show cause why a technical advisor should not be appointed, and may request the parties to submit nominations. The court may appoint any technical advisor agreed upon by the parties, and may appoint a technical advisor of its own selection. The court shall not appoint a technical advisor unless the advisor consents to act. A technical advisor so appointed shall be informed of the technical advisor's duties by the court in writing, a copy of which shall be filed with the clerk, or at a conference in which the parties shall have an opportunity to participate. In the exercise of the court's discretion, the court may consult a technical advisor ex parte. Unless the court provides otherwise, the technical advisor shall not be available to the parties. Technical advisors shall be compensated in the same manner as expert witnesses under FRE 706(b). If the expert provides evidence as contemplated under FRE 706(a), the provisions of FRE 706 must be satisfied.

337. *Reilly*, 863 F.2d at 159 (stating that there is merit in notion requiring fundamental fairness).

338. See U.S. CONST. amend. V ("No person . . . shall . . . be deprived of life, liberty, or property without due process of law."); U.S. CONST. amend. XIV, § 1 ("[N]or shall any State deprive any person of life, liberty, or property, without due process of law.")

339. *Reilly*, 863 F.2d at 159. This right would be subject to waiver. *Id.* at 160. A party who does not object at the time of appointment or when procedures are implemented may be held to have waived the due process right to procedural safeguards. *Id.*

340. See FED. R. EVID. 706 (court-appointed expert witnesses).

341. *Reilly*, 863 F.2d at 156-57, 159-60; see also discussion *supra* Parts II.A, II.C.

342. *Reilly*, 863 F.2d at 157-58 (defining the role of a technical advisor).

The first two sentences provide for initiation of the appointment process and selection of the technical advisor.³⁴³ The Rule is worded to encourage party involvement. Parties may request a technical advisor appointment, and the court may solicit nominations from the parties. Ultimate authority to appoint a technical advisor and to select a particular technical advisor rest in the trial judge's discretion. The third sentence prevents the court from compelling an expert to serve as a technical advisor.³⁴⁴ The fourth sentence requires that the parties be made aware of the expected role of the technical advisor.³⁴⁵ This requirement gives the parties a chance to voice concerns and objections, and facilitates party involvement and appellate review. The fifth sentence leaves *ex parte* communication with the technical advisor in the court's discretion.³⁴⁶ This reservation should protect the "sounding board" role of the technical advisor.³⁴⁷ The sixth sentence establishes that, by default, the parties will not be able to examine, depose, or ask questions of the technical advisor. Affirmative action by the court is required to make the technical advisor available to the parties. This requirement is also meant to protect the role of the technical advisor. Compensation of technical advisors is a difficult subject, and the seventh sentence provides that technical advisors may be compensated in the same manner as expert witnesses under FRE 706.³⁴⁸ The eighth and final sentence provides that when an appointee provides evidence, rather than merely commenting on evidence from other sources, FRE 706 applies.³⁴⁹

C. Prudential Self-Restraint

The last proposed safeguard is for trial judges to exercise self-restraint. Judges in the past have highly esteemed the adversary system and have been reluctant to forsake it.³⁵⁰ In the absence of limits on the inherent power to appoint technical advisors, trial

343. *Cf.* FED. R. EVID. 706(a).

344. *Cf. id.*

345. *Cf. id.*

346. *Reilly*, 863 F.2d at 160 n.8 (observing that the "the judge and the advisor [should] be able to communicate informally, in a frank and open fashion"). *But see* *Ass'n of Mexican-American Educators v. California*, 231 F.3d 572, 613-14 (9th Cir. 2000) (Tashima, J., dissenting).

347. *Reilly*, 863 F.2d at 157 (characterizing a technical advisor as sounding board for the court).

348. *See* *Cecil & Willging*, *supra* note 2, at 1053-54. For the text of FRE 706(b), *see supra* note 78.

349. FED. R. EVID. 706(a).

350. *Cecil & Willging*, *supra* note 2, at 1018.

judges should continue this practice. Adversarial values and American notions of a limited judiciary suggest that the parties should be responsible for case development.³⁵¹ The use of court adjuncts isolated from adversarial procedures shifts responsibility away from the parties.³⁵² While some cases demand a more inquisitorial approach, American courts do not favor the attendant concentration of power.³⁵³ Even though cooperative efforts like CASE endorse the use of outside experts and provide a simplified selection mechanism,³⁵⁴ district court judges should recognize the opportunity for unintended abuse and exercise self-restraint in the absence of other formal legal constraints.

VII. CONCLUSION

In the American adversary system, federal trial judges faced with complex scientific and technical issues usually rely on the adversaries to educate and inform them. When circumstances require, judges may depart from traditional adversarial procedures and employ outside assistance. Technical advisors appointed under the judge's inherent power are one option.

Limits on the judge's inherent power to appoint a technical advisor are few outside of the First Circuit. Abuses of this power have been rare, however, because judges have exercised the power rarely. This Note argues that judges rarely exercised this power in part due to respect for the adversary system and the administrative burden of finding a qualified technical advisor.

Cooperative efforts between scientists and judges may undercut both of these barriers to technical advisor appointments. For example, CASE minimizes the effort required of a judge seeking to make an appointment and provides a general endorsement of outside assistance. Propelled by Justice Breyer's concurrence in *General Electric Co. v. Joiner*, a cooperative effort like CASE is poised to bring science into the courtroom with increasing frequency. Such collaboration between scientists and lawyers may be ultimately beneficial, but the frequent exercise of a nebulous power poses problems.

351. See *Daubert v. Merrell Dow Pharms., Inc.*, 509 U.S. 579, 596 (1993) ("These conventional [adversarial] devices, rather than wholesale exclusion . . . are the appropriate safeguards . . ."); see also discussion *supra* Parts II.A, II.C.

352. See discussion *supra* Part II.C.

353. See *supra* note 42.

354. See discussion *supra* Part IV.

Without defined checks and limits on the inherent power to appoint technical advisors, adversarial procedures may be forsaken too easily. New limits are needed to promote the growth of technical advisor jurisprudence in a direction that is consistent with the overarching goals of the adversary system. The procedural safeguards set forth in *Reilly v. United States* meet this criterion. This Note proposes adoption of similar procedural safeguards in all jurisdictions, a new Federal Rule of Evidence, or prudential self-restraint by trial judges as limits that could help provide for orderly development of technical advisor law.

Robert L. Hess II

* I would like to thank my wife, Karen Anne, for her love and encouragement during the writing and editing of this note. Professor Laura Fitzgerald provided comments and suggestions that were very helpful. I also benefited from the hard work of my editors, Louisa Glenn, Rob McGuire, and Rob Mahini. Finally, my family members, Robert, Rosemary, and Jennifer Hess, have been a constant source of support.