RELUCTANT EXPERTS

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I

INTRODUCTION

It is axiomatic in the United States that adversaries in a civil case bear full responsibility for bringing forth the evidence to be considered in the determination of facts they dispute. In developing their proofs, each adversary is entitled to the assistance of every other person. Rule 45 of the Federal Rules of Civil Procedure is an expression of that general entitlement.[1] It was revised in 1991 to simplify the procedure for securing that assistance and to reduce the possibility that adversaries or counsel might abuse their considerable powers of investigation.[2] It was not the purpose of that revision in any way to limit parties' access to proof genuinely needed to reveal discernible truth to the trier of fact.

As a mark of the importance attached to the entitlement of adversaries to possible relevant evidence, Rule 45 authorizes any lawyer in any action in any federal court to sign and issue a subpoena and cause it to be served on any person found in the United States, invoking the power of the federal court in which that person is found to coerce the desired disclosure.[3] The person upon whom a subpoena is served will be required, upon pain of punishment for contempt of court,[4] to supply testimony about matters within his or her knowledge that might be evidence or that might lead to the discovery of evidence useful to the party serving the subpoena. He or she may also be required to produce documents or other tangible evidence in his or her possession that may bear on issues in dispute, and even whole files that might contain a useful document.

It is an additional mark of the importance of the right of adversar-

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1. FED. R. CIV. P. 45.

2. *See* FED. R. CIV. P. 45(c)(3)(B)(ii) 1991 advisory committee's note; *see also* David D. Siegel, *Federal Subpoena Practice Under the New Rule 45 of the Federal Rules of Civil Procedure*, 139 F.R.D. 197, 234 (1992).

3. FED. R. CIV. P. 45(a)(3); *see also id*. 1991 advisory committee's note.

4. *Id*. ("Although the subpoena is in a sense the command of the attorney[,] ... defiance of a subpoena is nevertheless an act in defiance of a court order and exposes the defiant witness to contempt sanctions.").

ies to secure possibly relevant evidence that a citizen of the United States may be compelled to provide information even if he or she cannot be found in the United States but can only be found and notified at some place outside the jurisdiction of the United States.[5] Our government will routinely seek the cooperation of other governments to compel persons outside our jurisdiction to provide useful information, and has ratified a treaty to enable adversaries to seek such help from foreign governments ratifying that treaty.[6] To encourage such assistance, our courts are required to lend their assistance to foreign courts needing testimony, documents, or other things to resolve issues of fact arising in litigation pending in foreign jurisdictions.[7] This assistance is offered without requiring the reciprocity of foreign courts, reflecting our deep commitment to the value of truth, for example, full revelation of evidence bearing on disputed facts.

For perspective, it is also helpful to bear in mind that a person accused of crime is at least equally entitled to coerce testimony from reluctant witnesses.[8] It would be a denial of due process required by the Fourteenth Amendment for a state to impose substantial adverse consequences on a litigant without affording access to necessary proof.[9]

The reason for this commitment to secure necessary proof is not hard to discern. A judgment purporting to be a legal judgment that is based on incomplete evidence is visibly infected with possible, oftentimes even probable, error. Parties suffering adverse judgments on incomplete information have greater cause to protest and to resist. Citizens seeing these judgments have less reason to obey the law's commands. Public confidence in the law and its processes, therefore, requires that adversaries have access to any information they might need to present to a court. In the United States, the duty has added importance because much of our law regulating dangerous or illicit conduct is enforced by private parties represented by private counsel. The public therefore has a stake not only in the justice of its courts' judgments, but also in their effectiveness in imposing suitable consequences on misdeeds. For all these reasons, the duty to supply information in response to a subpoena is an essential instrument of any effective process for enforcing law.

Two duties arising under Rule 45 and related provisions of the Federal Rules of Civil Procedure bear examination in this article. One

5. 28 U.S.C. § 1783 (1994); *see also* Blackmer v. United States, 284 U.S. 421 (1932).

6. Hague Convention on the Taking of Evidence Abroad in Civil or Commercial Matters, June 1, 1970, 23 U.S.T. 2555.

7. 28 U.S.C. § 1782 (1994).

8. FED. R. CRIM. P. 17(b); *see, e.g.*, United States v. Sims, 637 F.2d 625 (9th Cir. 1980).

9. Little v. Streater, 452 U.S. 1, 16-17 (1982) (holding that the state of Connecticut was required to bear the cost of blood testing of indigent defendant accused of fathering the child of a public welfare client).

is the duty of a scientific or technical expert not retained by a party to testify to an opinion on a disputed scientific or technical issue. The second is the duty of a non-testifying and unretained scientist to disclose research data that might be useful to counsel in attacking testimony ostensibly based indirectly on such data. While these duties should be enforced with due regard for competing interests of scientists, they must at times conflict with and override honorable and legitimate interests of science and scientists. Rule 45 is an attempt to secure an appropriate balance between the competing interests. The interests of science could be better protected than they are, but only by reducing the role of partisan experts in the conduct of litigation. We will conclude by suggesting two steps that would achieve such reductions, both of which can be supported for reasons independent of the concerns of scientists.

II

HISTORICAL PROGRESS OF THE DUTY TO DISCLOSE INFORMATION

A. Origins of the Duty

The duty to give evidence has ancient origins. It can be found on the continent of Europe in the 15th century. In England, the Statute of Elizabeth in 1562 made attendance at trial, when summoned, a duty of all Englishmen. By 1742, Lord Hardwicke was to declare that the public has a right to every man's evidence.[10] The Judiciary Act of 1789 explicitly imposed that duty, and an early revision authorized subpoenas to run across district lines. The Fees Act of 1853 provided for routine but modest compensation for compelled witnesses.

John Henry Wigmore, in his accustomed oracular style, sonorously proclaimed the duty. He explained that each verdict upon each cause, and each witness to that verdict, is a pulse of air in the beating organs of the community. The vital process of justice, he demanded, must continue unceasingly; a single cessation typifies the prostration of society; a series would involve its dissolution.[11] Thus, he asserts, "the impetus for this duty comes not from the parties but from the community as a whole—from justice as an institution, and from law and order as indispensable elements of civilized life."[12] Recognizing that performance of the duty is at best noisome, Wigmore asserted that its burdens and hazards are the cost of living in an organized society. When the course of justice requires the investigation of the truth, no man has any knowledge that is rightly private.[13] And one who would

10. 8 JOHN H. WIGMORE, EVIDENCE § 2192, at 71 (1961).
11. *Id*. at 66-67.
12. *Id*. § 2203, at 137.
13. *Id*. § 2192, at 66.

withhold his evidence is not worthy of citizenship, should be expelled from society, and required to live as a hermit.[14]

Strong words. Yet justified. In his great work, Wigmore devoted hundreds of pages to the narrow exceptions and qualifications of that duty. Doubtless, exceptions and qualifications are necessary, but, as Wigmore sensed, it would be all too easy for the exceptions and qualifications to consume the duty, for there are few of us who cannot give a reason—and often a good reason—why we would prefer not to be involved in other peoples' disputes. At the very least, there is an odium to be borne. Often, there is a risk of grave embarrassment. Who wishes to be cross-examined, even about one's certain knowledge? It is the right, even the duty, of adversary counsel to make a source of information harmful to the contentions of a client appear unreliable or even dishonest. Not uncommonly, one might fear some form of retribution from those whose interests are threatened by testimony. In criminal cases, the giving of evidence can be worth a person's life. But every time an excuse, even a good one, is honored, the result is a decision on partial information, a decision that may very well be unjust and contrary to the legal rights of disputants. In addition, a guilty person may be acquitted, an innocent one convicted, a wrong not remedied, or a person made to bear consequences for which he or she is not legally responsible.

Exceptions to the duty universally recognized in American jurisdictions include the privilege for communications from a client to an attorney for the purpose of securing legal advice. Yet, even that exception is hedged with limitations and counter-exceptions.[15] Most states recognize a privilege for communications from a patient to a doctor for the purpose of securing medical treatment. Some recognize a privilege for communications to a priest from a penitent seeking absolution. Many have long recognized a privilege for communications between spouses, but that privilege is now eroding.[16] As we have lately been reminded, even presidents of the United States share the duty to give evidence.[17] Against this background, scientists and technical experts are very unlikely to receive serious judicial consideration of claims for broad qualifications or exceptions that might exempt

14. *Id*. at 72.

15. *See, e.g.*, FED. R. EVID. 503(d)(5) (1993) (proposed) (no privilege when one attorney represents two or more clients who are in conflict); *In re* Sealed Case, 676 F.2d 793, 809 (D.C. Cir. 1982) (no privilege when client voluntarily discloses information to a third party); Clark v. State, 261 S.W.2d 339, 347 (Tex. Crim. App. 1953) (no privilege if a crime is furthered).

16. *See* Trammel v. United States, 445 U.S. 40, 53 (1980) (rejecting broad spousal privilege).

17. *See* Jones v. Clinton, 869 F. Supp. 690, 699 (E.D. Ark. 1994), *aff'd*, 72 F.3d 1354 (8th Cir.), *aff'd*, 117 S. Ct. 1636 (1997); *see also* United States v. Nixon, 418 U.S. 683 (1974).

them. They, too, have a duty to tell what they know when it bears on disputed facts that a court must resolve.

On the other hand, as Wigmore acknowledged, and as our courts have always conceded, the burden of giving evidence should be minimized. No party or lawyer has the right to use the subpoena to oppress other persons with costs and consequences. The subpoena power is a large power to entrust to private counsel, and it is the duty of the court to protect individuals against its misuse. On this account, courts will often limit a particular subpoena or subject it to conditions to accommodate the dutiful citizen with protections against costs and burdens that are not necessary to the courts' mission. Scientists and others having technical information can reasonably expect to be protected from unreasonable costs or unnecessary disclosures. Revised Rule 45 provides a framework for the consideration of their interests case by case.[18] There are, however, reasons why the pleas of scientists and other experts for limitations and conditions on their duty to provide information may have a special lack of appeal to the courts to whom such pleas are addressed. Such pleas can only be considered in the light of a large and pressing problem faced only by American courts and only in recent decades. That problem is the profligate use of opinion evidence at trial.

B. Recent Increases in Opinion Evidence

Opinion evidence is testimony based on the supposed expertise of the witness as a person having scientific or other technical information not available to jurors or even to judges.[19] Unlike perception witnesses, opinion witnesses do not have personal knowledge resulting from their observation of events in dispute. An illuminating difference is that the law of perjury has scant application to testimony presented in the form of an opinion.

Opinion evidence was infrequently used in American litigation until the last quarter century. Impetus for its use was given by enactment of the Federal Rules of Evidence in 1972,[20] which eliminated seemingly arcane restrictions on such presentations. In other legal systems, partly perhaps because they seldom, if ever, rely on juries, experts are less frequently consulted. If consulted, they are selected by the court, their opinions are often expressed only in writing, or they are orally examined only by a judge.[21] Thus, in other countries, the interests of scientists seldom collide with the interests of a court seeking their ad-

18. FED. R. CIV. P. 45(c).

19. FED. R. EVID. 706.

20. Act of Jan. 2, 1975, Pub. L. No. 93-595, 88 Stat. 1926 (codified as amended at 28 U.S.C.) (adopted by order of the Supreme Court on Nov. 20, 1972).

21. *See* GILLIAN M. WHITE, THE USE OF EXPERTS BY INTERNATIONAL TRIBUNALS 15-28 (1965) (describing the different manners in which European courts use experts).

vice.

It is otherwise in contemporary America. Although the Supreme Court has recently imposed on federal district judges a responsibility for screening out irresponsible or irrelevant opinion testimony,[22] most trial judges are reluctant to limit counsel in their use of this form of proof. The length of civil trials in federal courts have increased noticeably in the last two decades,[23] and the presentation of opinion testimony seems a likely cause. A secondary effect of this development has been the erection of a large industry that manufactures expert opinion evidence in an enormous range of fields. No one has yet measured the billions spent each year by American litigants to buy this new industry's product, but it is a very large sum. A still greater sum may be spent in the time of professional lawyers preparing such witnesses to testify and in preparing themselves to cross-examine adversary experts. It is not clear how many persons are earning all or most of their income from the presentation of expert opinion evidence, but certainly there are many who earn a great deal. We have been told of fees as large as a half million dollars for the testimony of a single witness in a single case.

While expert witnesses cannot, consistently with lawyers' ethical duties, be employed on a contingent fee basis,[24] more than a few such experts know that there is little prospect that their client will be able to pay their fees unless they prevail on the merits at trial. Still more know that their income as experts depends on their rate of success in influencing outcomes. Whether such hired testimony actually improves the overall quality of decisions rendered remains open to dispute. One judge has described trials in his court as increasingly similar to barking seal contests in which rival trainers compete to induce their teams of trained experts to make the most winsome noises. Certainly there is little doubt that many jurors and most judges perceive such experts as hired guns or worse, and apply a substantial discount when considering the opinions presented. To be sure, there are many honorable persons performing the role of partisan expert, but the appearance of possible corruption or professional prostitution is ubiquitous. In fact, some organizations of professional scientists have been concerned lest their whole professions be cast in disrepute by the testimony of some members willing to conform their opinions to the interests of litigants who have employed them. Moreover, there are many scientists and technical experts whose opinions could be valued who are never available because they are unwilling to engage

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

23. *Compare* JUDICIAL CONFERENCE OF THE UNITED STATES, ANNUAL REPORT OF THE DIRECTOR 164 (1950) *with id.* at 217 (1992).

24. Person v. Ass'n of the Bar of New York, 554 F.2d 534 (2d Cir.), *cert. denied*, 434 U.S. 924 (1977).

in so questionable an activity unless compelled by law to do so.

There is no class of litigants, nor any class of partisan experts, who may not reasonably be suspected of contriving false or unfounded opinions for presentation at trial. An unwelcome secondary effect of the exponential growth in the use of expert testimony has been to increase the advantages of wealth: In general, those who can afford to pay more get opinion testimony that is more favorable to their contentions.[25] Who can afford the most expensive experts is in part a function of the stakes at issue. A tertiary consequence of reliance on partisan experts is the concentration of professional representation in the offices of a relatively few lawyers having knowledge of a particular field of alleged expertise and having funds available to invest in the procurement of suitable opinion testimony. The further ramifications of these developments is beyond the scope of this article. They are mentioned here only because they give added weight to the observation that much more is at stake in the application of the subpoena power to scientists and other technical experts than their own interests or the interests of the parties to a particular dispute. Our courts are confronted with a pervasive phenomenon that often approaches and sometimes crosses the line into the realm of scandal. In preventing the sale of experts' snake oil at trial, courts may be more than justified in requiring the help of those citizens having a special ability to provide help.

III

THE TESTIMONY OF UNRETAINED EXPERTS

The unretained expert is one who has not been employed by an adversary to testify. Retained experts or hired guns are subject to extensive discovery pursuant to Rule 26. While there may be problems regarding the scope of such discovery, they are not problems that are the subject of this symposium or of this article.

There are two quite different situations in which a party might seek testimony from an unretained expert. One situation involves an expert who has been consulted by an adversary but not retained to give testimony. Such a person might be a particularly attractive witness for the very reason that he or she has not been retained by the adversary. It is not uncommon for a party to search for the most effective witness. Those not selected to testify may, while they were under consideration for retention, have acquired quite a lot of relevant information about matters in dispute. They may also have formed

25. *See generally In re* "Agent Orange" Prod. Liab. Lit., 611 F. Supp. 1223 (E.D.N.Y. 1985), *aff'd*, 818 F.2d 187 (2d Cir. 1987), *cert. Denied sub nom.* Lombardi v. Dow Chem. Co. 487 U.S. 1234 (1988). *See also* JONATHAN HARR, A CIVIL ACTION (1995); RICHARD B. SOBOL, BENDING THE LAW: THE STORY OF THE DALKON SHIELD BANKRUPTCY (1991).

opinions unwelcome or adverse to the interests of the party who employed them to study the case. Information acquired by such experts, and opinions formed by them, are discoverable, but only under limited circumstances. The controlling provision is Rule 26(b)(4)(B),[26] which allows such discovery only as provided in Rule 35(b)[27] or upon a showing of exceptional circumstances in which it is impracticable for the party seeking discovery to obtain facts or opinions on the same subject by other means.[28] This provision is related to the exception to discovery set forth in Rule 26(b)(3) bearing on trial preparation materials.[29] The animating idea behind both provisions is to allow adversaries to investigate their cases without undue fear that what they learn will be immediately available to an adversary for use against them.[30] However, this principle affords only qualified protection even to those to whom it applies. The expert consulted but not retained to testify may be required to disclose what she knows or thinks if the information or opinion cannot be found elsewhere, as, for example, if there are no equally qualified experts available to the discovering party, or materials examined by the unretained expert are no longer available. There are, of course, issues arising in the administration of Rule 26(b)(4)(B), but these, too, are not the subject of this symposium or of this article.

The other situation—and the one of interest here—is the unretained expert who has not been consulted or employed for any purpose by any party, and who has no information specific to the particular matters at issue. Generally, such experts are available for a negotiable price sufficient to compensate time spent preparing and providing testimony, but not always. In some cases, there are individuals whose information or opinions have special value to a party but who are unwilling to give testimony. Under Rule 45(c)(3)(B), such a person may be compelled to disclose an opinion or information not describing specific events or occurrences in dispute and resulting from the expert's study made not at the request of a party. Such compulsion is available only if the party seeking the opinion or information shows a substantial need for the testimony or material that cannot be otherwise met without undue hardship, and if the expert is reasonably compensated.[31] These restrictions go far beyond any that are imposed on parties seeking information bearing on specific events at issue. They provide some protection for the value of the expert's intellectual property in his or her attained knowledge, but stop short

26. Fed. R. Civ. P. 26(b)(4)(B).
27. *Id.* 35(b).
28. *Id.* 26(b)(4)(B).
29. *Id.* 26(b)(3).
30. *See id.* 26(b)(3)(4) advisory committee's note.
31. *Id.* 45(c)(3)(B).

of allowing an expert to refuse to participate when a party shows a need for his or her help, and a willingness to pay a reasonable fee to compensate for the effort expended by the expert in acquiring the valued fund of information and professional judgment.

There is a large disincentive to parties seeking the help of such unretained experts that makes this provision almost unnecessary in routine cases. That disincentive is that a party will normally seek to call only those experts who are congenial to that party and to that party's litigation contentions. Even without the protection of Rule 45, there is therefore little risk that large numbers of scientists would be called upon to express opinions or supply information when they are not willing to do so. A party seeking to compel such testimony is very likely *in extremis*.

There are, however, various circumstances in which a party may show the requisite need to justify compelling a reluctant expert to testify. First, there is no other available and qualified expert. Second, an unretained expert's testimony may be needed to clarify factual issues that are muddled by hired experts.[32] Third, such testimony may be necessary for informed cross-examination of retained expert.[33] Finally, in all such cases, scientists may contend that compelled testimony burdens them more than those ordinary witnesses who testify about events they observe. Specifically, it is said that compelling a scientist's expert testimony puts him at a "competitive disadvantage" in the "scientific market place."[34] Furthermore, if their unpublished opinions can be compelled at trial, or even at the pretrial stage,[35] scientists fear that the threat of disclosure will limit their freedom and ability later to publish their opinions on related matters.[36] Perhaps the most legitimate concern, however, is that the unwilling expert will be caught in a destructive cross-fire that results when the party disadvantaged by the expert's opinion or information undertakes to destroy the witness's credibility.

Many "ordinary" witnesses, however, prefer not to be involved in other peoples' disputes. It is not at all clear that the concerns of reluctant experts are more weighty than the concerns of these wit-

32. *See* Karp v. Cooley, 349 F. Supp. 827 (S.D. Tex. 1972).

33. *See* Wright v. Jeep Corp., 547 F. Supp. 871 (E.D. Mich. 1982).

34. *See* Mark Labaton, Note, *Discovery and Testimony of Unretained Experts: Creating a Clear and Equitable Standard to Govern Compliance with Subpoenas*, 1987 DUKE L.J. 140, 143-44.

35. State law is often more rigorous that federal law in requiring public access to deposition testimony or other records underlying even settled litigation. *See, e.g.*, Public Records Act, FLA. STAT. ANN. §§ 119.01-.16 (West 1996). Court files are explicitly included. *Id* § 119.07(4); *see, e.g.*, State v. Coca Cola Bottling Co. of Miami, 582 So. 2d 1 (Fla. Dist. Ct. App. 1990),

36. *See* Richard L. Marcus, *Evidence: Discovery Along the Litigation/Science Interface*, 57 BROOK. L. REV. 381, 416-17 (1991) (describing the "publication" arguments but concluding that these arguments can be taken too far).

nesses. Such complaints of scientists have been largely ignored. Wigmore extended the duty to testify to experts and dismissed outright the notion that an expert might have some privilege that would relieve him from his testimonial duty. He offered many reasons why an expert's opinion testimony should not be privileged. First, the expert who was asked to testify was not "render[ing] a professional service," but was "asked merely, as other witnesses are, to testify as to what he knows or believes."[37] Second, the testimonial duty placed no greater economic hardship on the expert than on ordinary citizens. Although a professional might lose more in an absolute dollar amount if forced to testify, both the professional and ordinary witness suffered the same relative loss: a day's wage.[38] Finally, Wigmore noted that both the expert and ordinary witnesses were called to testify because of some happenstance. However, while experts would not refrain from entering their profession because of their duty to testify, ordinary witnesses were often deterred from disclosing their observations "because of the apprehension of being summoned as a witness."[39] Thus, public policy offered at least one reason to protect ordinary witnesses but not experts from their testimonial duty.

Courts have also long refused to recognize a distinction between experts and ordinary witnesses. For example, Chief Judge Tindal noted in *Lonergran v. Royal Exchange Assurance* that "[t]here is no reason for assuming that the time of medical men and attorneys is more valuable than that of others whose livelihood depends on their own exertions."[40] Judge Calvert Magruder in *Dixon v. People* further reasoned that the:

> witness who goes to court and testifies as to the facts of which he knows, is subjected to a loss of his time, as much as a witness, who goes there to testify as an expert upon a mere matter of opinion ... [,and] when [the expert] is required to answer a hypothetical question, which involves a special knowledge peculiar to his calling, he is merely required to do what every good citizen is required to do in behalf of public peace and public order.[41]

Justice Roger Traynor in *City & County of San Francisco v. Superior Court* held that the expert witness was "like any other witness with knowledge of ... acts; it is immaterial that he discovered them by reason of his special training."[42] More recently, Judge Henry Friendly in *Kaufman v. Edelstein* expressed the opinion that "[t]he truth of the proposition that the high degree of a person's knowledge excuses him from giving testimony about it is not self-evident, to say the least. As Wigmore says ... the giving of such testimony 'may be a sacrifice ...

37. WIGMORE, *supra* note 10, § 2203, at 137.
38. *Id*.
39. *Id*. at 138.
40. 7 Bing. 729, 731 (C.P. 1831) (quoted in WIGMORE, *supra* note 10, § 2203, at 138).
41. 48 N.E. 108, 110 (Ill. 1897).
42. 231 P.2d 26, 29 (Cal. 1951).

[but i]t is a duty not to be grudged or evaded.'"[43]

The cases that have confronted the issue of compelled expert testimony illustrate that the needs of courts and litigants often override the desire of experts to remain on the sidelines. In *Kaufman v. Edelstein*,[44] the government subpoenaed two experts on electronic data processing to testify in its antitrust litigation against IBM. Their testimony was needed to clarify the nature of the computer market and the conduct of IBM.[45] The district court held that the experts' testimony could be compelled and found that the testimony "promise[d] to be highly productive and of assistance to the court in the trial of this case."[46] Chief Judge Edelstein went on to note that the court's need for such information was legitimate because the subpoena was "an attempt by the United States to summon a member of the public to testify in a major government antitrust case, a case which, by definition, greatly affects the commonweal."[47] Affirming the district court, Judge Friendly asserted that depriving the court of the unretained expert's testimony was tantamount to depriving the court of the truth in the litigation. He concluded that a decision "[t]o clothe all such expert testimony with privilege solely on the basis that the expert 'owns' his knowledge free of any testimonial easement would ... seal off too much evidence important to the just determination of disputes."[48]

The same rationale guided the decision in *Wright v. Jeep Corp*.[49] This case involved the testimony and research of Professor Richard Snyder, an expert on the safety of Jeeps who had studied the roll-over rates of the Jeep CJ-5.[50] Jeep Corporation wanted to depose Professor Snyder in a personal injury action against it. The court agreed to enforce Jeep's subpoena but required Jeep to pay the expenses Professor Snyder incurred complying with the subpoena. The court justified its decision by explaining its need for the information in its search for the truth.[51] Professor Snyder's research and conclusions were the most likely basis of the testifying experts' opinions. Thus, depriving the defendant of the opportunity to examine Professor Snyder also denied it the opportunity to assess the validity of the testifying expert's claims.[52] The court noted that:

> [t]he value of [an expert's] conclusions turns on the quality of the data and

43. 539 F.2d 811, 819-20 (2d Cir. 1976) (quoting Wigmore, supra note 10, § 2192, at 72).
44. *Id.*
45. *Id.* at 812.
46. United States v. IBM Corp., 406 F. Supp. 178, 181 (S.D.N.Y. 1976).
47. *Kaufman*, 539 F.2d at 813 (quoting Judge Edelstein).
48. *Id.* at 821.
49. 547 F. Supp. 871 (E.D. Mich. 1982).
50. *Id.* at 873.
51. *Id.* at 874.
52. *Id.*

> the methods used by the researcher in his analysis of that data as well as the skill and perception of the researcher. So if the conclusions or end product of a research effort is to be fairly tested, the underlying data must be available to others equally skilled and perceptive.[53]

In this case, testing the conclusions of a hired expert required the court to compel the testimony of an unretained expert, Professor Snyder.

These decisions seem quite sound. They inconvenience experts and may embarrass them, but in no way that other citizens are not also inconvenienced or embarrassed. If there is special value in the experts' services, they may be reasonably compensated for that value. Perhaps a more troublesome example is offered by the effort of a medical malpractice plaintiff to summon a physician to testify against a colleague working in the same hospital who employs a different technique of treatment than does the unretained expert to be summoned. Under such circumstances, the showing of need required by Rule 45 may be impossible. It is almost certain that there will be other physicians at other hospitals who are more or less equally qualified to express an opinion on the suitability of a particular treatment. One suspects that the primary motive of the party seeking to compel the testimony is to exploit a professional rivalry and artificially increase the settlement value of his or her claim by loading the case with a special and extraordinary cost to the defendant. Rule 45 certainly permits, and may be taken in some cases to require, a court to quash such a subpoena.

IV

REQUIRING DISCLOSURE OF RESEARCH DATA

Under Rule 45, litigants are entitled to relevant documentary, as well as testimonial, evidence. The entitlement to documentary evidence is enforced through the use of a subpoena *duces tecum*. Such a subpoena functions to compel the production of all documents and things relevant to litigation. As Judge Lemuel Shaw once observed, "[t]here seems to be no difference in principle between compelling a witness to produce a document in his possession ... and compelling him to give testimony, when the facts lie in his own knowledge."[54] Wigmore stated that the duties were functional equivalents and that any exception to the duty to provide documentary evidence had to be limited.[55]

Scientists have argued that they should be exempt from the duty to disclose research data and studies that have not been published. The

53. *Id.*
54. Bull v. Loveland, 27 Mass. (10 Pick.) 9, 14 (1830).
55. WIGMORE, *supra* note 10, § 2193, at 74.

scientists argue that such compelled disclosure is particularly repugnant to the norms and values of the scientific community.[56] For example, it is sometimes contended that such disclosure may force them to breach the confidences of their research subjects. Further, some scientists argue that disclosing the data and results of a study before those results are subject to peer review is irresponsible science. Yet another concern is that "hired guns" often advance marginal scientific theories based on prematurely disclosed information. Finally, some scientists worry that the costs of such disclosure, both in lost opportunities to "sell" or publish the results and the expense of preparing documents, might chill scientific research efforts.

In this context, too, it is not clear that the scientists' concerns are generically different or more urgent than those of us who would prefer not to surrender documentary non-experts' evidence embarrassing to themselves. Moreover, compelled disclosure does not presumptively offend the norms of scientific research. A tradition of open exchange of information has characterized scientific research since the Industrial Revolution.[57] In fact, renowned scientists, such as C. P. Snow, have argued against shrouding science in secrecy because such secrecy makes science "no better than a set of recipes, [losing] within a generation ... all its ideals and half its efficacy."[58] At least one legal scholar has observed that courts should be skeptical of leaving science to the scientists and failing to subject the claims of scientists to the adversary process because fraud is not uncommon in science.[59] Moreover, the imagined horrors resulting from disclosure can often be prevented or controlled. For example, confidentiality is not violated if research is redacted to protect the identities of research subjects.

A court's need for data can also outweigh the scientist's interest in exempting the data from compelled disclosure. Scientists draw conclusions from their experiments and resultant data. In turn, the quality of any scientist's conclusions is solely dependent on the quality of his or her underlying experiments and data. Therefore, "if the conclusions or end product of a research effort is to be fairly tested [in litigation], the underlying data must be available to others equally skilled and perceptive."[60] If a testifying expert's conclusions are based on an unretained scientist's study, the only way for an adversary to test these conclusions is to examine their underlying accuracy by

56. *See, e.g.*, Joe S. Cecil, *Judicially Compelled Disclosure of Research Data*, 1 CTS. HEALTH SCI. & L. 434, 434 (1991) (arguing that such disclosure violates the norms of the medical research community).

57. Marcus, *supra* note 36, at 381.

58. C. P. SNOW, THE NEW MEN 130 (1954).

59. Marcus, *supra* note 36, at 388-89 (noting that even Congress has held hearings on the rampant self-interest and self-promotion that accompanies scientific research and the resultant improper research and fraud).

60. Deitchman v. E.R. Squibb & Sons, Inc., 740 F.2d 556, 562 (7th Cir. 1984).

questioning the validity of the unretained expert's data. Cross-examination is an important right of litigants, and "[t]o effectively cross-examine the testifying expert, the attorney may have to dispute the facts, data, or opinions on which the testifying expert bases his opinion."[61]

The courts that have compelled the disclosure of an unretained expert's research data cite the importance of truth-seeking as the reason for disclosure. For example, in the most controversial case involving compelled disclosure, *In the Matter of the American Tobacco Company*,[62] the court based its decision on the unusual need for the data. In this case, the unretained expert, Dr. Irving J. Selikoff, had studied the effects of smoking and asbestos exposure on cancer and published his conclusions. Many of the testifying experts had relied on Dr. Selikoff's published results in their testimony against large tobacco companies.[63] The tobacco companies requested Dr. Selikoff's data, hoping to cast doubt on their adversary's experts' opinions. They sought to re-examine his methods and his results. The court found that by publishing the results of his study, Dr. Selikoff had invited other scientists to rely on his conclusions. In turn, the public now had an interest in resolving disputes that involved the accuracy of those conclusions.[64] The court realized that if the public's interest was not protected, testifying experts could powerfully state their opinions, yet adverse parties could not scrutinize the validity of those conclusions.[65]

A few courts, however, have refused to issue subpoenas compelling the disclosure of research data. In those few instances where subpoenas have been quashed, the courts have found that a just evaluation of the testifying expert's opinion did not require such disclosure. For example, in *Dow Chemical Co. v. Allen*,[66] the United States Court of Appeals for the Seventh Circuit quashed a government subpoena for toxicity studies of an unretained expert. The court found that these studies were incomplete and that the testifying expert was not relying on the studies. As a result, the probative value of the disclosure was found to be slight.

V

TWO POSSIBLE SOLUTIONS

The present Rule 45 is perfectly adequate to protect the legitimate

61. Michael H. Graham, *Expert Witness Testimony and the Federal Rules of Evidence: Insuring Adequate Assurance of Trustworthiness*, 1986 U. ILL. L. REV. 43, 79.

62. 880 F.2d 1520 (2d Cir. 1989).

63. *Id.* at 1522.

64. *Id.* at 1529-30.

65. *Id.*

66. 672 F.2d 1262 (7th Cir. 1982).

and appropriate rights of scientists who are reluctant to share their opinions and information with lawyers, juries, and judges. On the other hand, it may be possible to improve the present system of resolving contested issues in a manner that would alleviate the distress of the reluctant scientist.

One response to the concerns of scientists is for courts to make use of Rule 706 of the Federal Rules of Evidence to appoint the unretained expert as a disinterested witness serving the court. American lawyers are prone to resist this practice because it diminishes their control over their case. They note that disinterested experts can also make mistakes, and may bring intellectual biases to the formation of an opinion in a particular case. American judges were all lawyers once, and are sympathetic with these concerns. It may, however, be that few judges generally regard the battle of experts as a search for truth. They are also often troubled by the difficulty of identifying a suitably qualified and disinterested expert.

If the latter problem could be resolved, it might be possible to reach a compromise with the concerns of counsel. A disinterested report acquired at an early stage of pretrial litigation could serve as the basis for mediated settlement or stipulations narrowing the scope of opinion evidence to be prepared for trial. It could in many cases substantially reduce the cost of trial preparation, and could thereby enable more lawyers to participate effectively in the presentation of cases having a scientific or technical dimension. If a trial is conducted, the author of the disinterested report might be called and subjected to the usual examination, but there would in most cases be less reason for counsel to suspect the witness of manipulating data to support a contrived opinion. Thus the frequency of collision between the interests of science and the interests of the courts could be materially diminished.

A second and more radical step would bring American civil justice closer to that found in the rest of the world. The radical step would be to re-characterize some matters of scientific opinion as issues of law, not issues of fact. Such a re-characterization would obligate courts to take judicial notice of scientific literature bearing on an issue of law that is called to its attention by counsel. There would be no right of cross-examination with respect to opinions and data so noticed. With respect to issues so re-characterized as issues of law, the court would inform the jury of its conclusions, leaving to the jury only those issues the court found itself unable to resolve on the basis of generally accepted scientific principles and methods. The court would be obliged to state the reasons for its conclusions, and its conclusions would be subject to de novo review in the courts of appeals. Determination of scientific issues in higher courts would have the effect of precedent, and would be binding on lower courts in all like cases. Less frequently the court would find it necessary to resort to the sort of battle of ex-

perts that has become so common in our courts.

Such a re-characterization would raise a novel issue under the Seventh Amendment assuring the right to jury trial in civil cases. We are prone to the view that such a reform does not violate the constitutional right. In the purely historical terms by which the right has so often been measured, there is no right to present opinion evidence because such evidence was virtually unknown in the 18th century. Moreover, resorting to opinion evidence in a jury trial is functionally a misuse of the jury. The jury is a marvelous institution for resolving swearing matches between witnesses who differ in their observations of events, or for bringing the moral judgment of a community to bear on a matter of dispute. But juries have no particular utility in dealing with scientific and technical issues. Presentation of opinion evidence prolongs trials, increases the burden on jurors, and makes it less likely that employed persons can or will serve as jurors. While it is true that judges are not necessarily better qualified than jurors to deal with testimony expressed in calculus or other foreign tongues, judges can deal with such evidence much more efficiently.

In addition, the present characterization of scientific opinion as an issue of fact means that scientific and technical issues are endlessly litigated in different cases before different triers of fact. This imposes needless cost on everyone involved, and results in uneven and therefore unjust results. Either a product is toxic or badly designed or not; such issues warrant very close scrutiny, but not by hundreds and even thousands of different triers of fact. The current system invites speculation on disparate outcomes and thereby impedes the process of settlement. In this respect, scientific issues are different in kind from the matters of judgment about individual conduct that Justice Holmes improvidently sought to re-characterize as legal standards.[67]

The path we suggest has been very recently marked by the Supreme Court in its holding that the meaning of words of art used to define the scope of a patent, although informed by evidence, is an issue of law to be decided by a judge, and not an issue of fact to be submitted to a jury.[68] The Court observed:

> [I]n these cases a jury's capabilities to evaluate demeanor, ... to sense the "mainsprings of human conduct," ... or to reflect community standards, ... are much less significant than a trained ability to evaluate the testimony in relation to the overall structure of the patent... . Finally, we see the importance of uniformity in the treatment of a given patent as an independent

67. *See* B & O R.R. Co. v. Goodman, 275 U.S. 66, 71 (1927) (Holmes J.) (arguing in favor of treating the standard of care as a question of law). *But see* Pokora v. Wabash Ry. Co., 292 U.S. 98, 101-02, 106 (1934) (Cardozo, J.) (rejecting the idea that the standard of care should be a question of law). For discussion, see generally George C. Christie, *An Essay on Discretion*, 1986 DUKE L. J. 747, 773-76.

68. Markman v. Westview Instruments, Inc., 116 S. Ct. 1384 (1996).

reason to allocate all issues of construction to the court.[69]

Acknowledging as we do that this is a radical suggestion, and one perhaps unlikely to gain serious consideration in the immediate future, we will not burden the reader with further elaboration of its advantages and shortcomings. It is presented here partly in the belief that the idea has sufficient promise to warrant further consideration by others, but especially because its consideration illuminates the nature of the issue that is the subject of this symposium, for the problem that we here address ought rightly be seen as an offspring of the right to trial by jury in civil cases, an offspring of questionable legitimacy.

69. *Id*. at 1396.