

RATIONALIZATION AND LIMITATION: THE USE OF LEARNED TREATISES TO IMPEACH OPPOSING EXPERT WITNESSES

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[O]therwise, an ignoramus in a profession might, by an assertion of learning, declare the most absurd theories to be the teachings of the science of which he was a professed expert

–*Clark v. Commonwealth*, 63 S.W. 740, 744 (Ky. 1901)

INTRODUCTION

The numbers tell the story of the importance of the topic. To begin with, it has become commonplace for litigators to present expert testimony at trial. In one study of over 500 trials, the researchers found that experts appeared as witnesses in 86% of the hearings.¹ On average, there were 3.3 experts per trial.² Some commentators have asserted that in the United States, trial by jury is evolving into trial by expert.³ If the number of expert witnesses is impressive, the volume of expert literature is awesome. Even apart from the number of published texts and treatises devoted to expert topics, the regular periodicals dealing with such subjects now number in the thousands. The National Institutes of Health's Library of Medicine covers thousands of biomedical journals dating back to 1948.⁴ The Library includes *Index Medicus*, a database indexing domestic as well as international medical literature;⁵ 4,945 journals are currently indexed in *Medicus*.⁶ MEDLARS is the Library's computerized Medical Literature Analysis and Retrieval System.⁷ The volume of expert literature is not only

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1. Samuel R. Gross, *Expert Evidence*, 1991 WIS. L. REV. 1113, 1119 (1991).

2. *Id.*

3. William T. Pizzi, *Expert Testimony in the US*, 145 NEW L.J. 82, 82 (1995).

4. *Fact Sheet*, U.S. NAT'L LIB. MED. NAT'L INSTS. HEALTH, <http://www.nlm.nih.gov/pubs/factsheets/pubmed.html> (last updated Mar. 1, 2010).

5. Elliot L. Sagall, (*Part I*) *Lawyer's Guide to Medical Writings*, TRIAL, Aug./Sept. 1970, at 59, 60.

6. *Number of Titles Currently Indexed for Index Medicus and MEDLINE on PubMed*, U.S. NAT'L LIB. MED. NAT'L INSTS. HEALTH, http://www.nlm.nih.gov/bsd/num_titles.html (last updated July 22, 2011).

7. Jonathan T. Zackey, *MEDLINE and WESTLAW: Computerized Research Through the Exchange*, TRIAL, Mar. 1981, at 20, 20.

vast, but thanks to the Internet, it is also more accessible to litigators than ever before.

At trial, expert texts and periodicals can be put to various uses. If the testifying expert authored the text or article and the publication's contents are inconsistent with the expert's testimony, the contents can be used as a prior inconsistent statement to impeach the witness's credibility.⁸ Furthermore, in most jurisdictions, opposing attorneys have been permitted to use texts and articles for impeachment in certain circumstances even if the witness did not write the text or article.⁹ Today the majority of jurisdictions recognize a hearsay exception for learned treatises.¹⁰

Until the enactment of the Federal Rules of Evidence in 1975, though, the learned treatise hearsay exception was a distinct minority view.¹¹ The traditional view restricted the use of such publications to impeachment.¹² Only recently, a majority of states have adopted the hearsay exception. Dean Wigmore argued strongly in favor of recognizing the exception.¹³ He pointed out that since the authors of such texts and articles had no involvement in the litigation, their analyses were likely to be more trustworthy than the opinions offered by the partisan experts called by the litigants. Following Wigmore's urging, the drafters of the Federal Rules of Evidence decided to insert a learned treatise exception in Article VIII of the Rules. In pertinent part, Rule 803(18) reads:

The following are not excluded by the rule against hearsay, regardless of whether the declarant is available as a witness:

. . . .

(18) *Statements in Learned Treatises, Periodicals, or Pamphlets.* A statement contained in a treatise, periodical, or pamphlet if: (A) the statement is called to the attention of an expert on cross-examination or relied on by the expert on direct

8. FED. R. EVID. 613.

9. See generally William D. Farber, *Contradiction of Expert Witness Through Use of Authoritative Treatise*, in 31 AM. JUR. 2D *Proof of Facts* §§ 1–5 (1982) [hereinafter Farber] (discussing four main approaches taken by jurisdictions to using authoritative treatises for witness impeachment where the witness is not necessarily the author of the text).

10. E.g., FED. R. EVID. 803(18); DAVID H. KAYE, DAVID E. BERNSTEIN & JENNIFER L. MNOOKIN, *THE NEW WIGMORE: EXPERT EVIDENCE* § 5.4 (2d ed. 2010) [hereinafter KAYE].

11. KAYE, *supra* note 10, § 5.3; see 2 KENNETH S. BROUN ET AL., *MCCORMICK ON EVIDENCE* § 321 (Kenneth S. Broun ed., 6th ed. 2006) [hereinafter 2 MCCORMICK] (discussing this trend at common law).

12. See KAYE, *supra* note 10, § 5.3 (“Before adoption of the Federal Rules of Evidence, all federal courts and the vast majority of states limited use of learned treatises to cross-examination.”).

13. *Id.*; 6 JOHN HENRY WIGMORE, *EVIDENCE* §§ 1690–92 (Chadbourn rev. 1976).

examination; and (B) the publication is established as a reliable authority by the expert's admission or testimony, by another expert's testimony, or by judicial notice.¹⁴

Forty-three states have now adopted a code patterned largely after the Federal Rules.¹⁵ Most of those states opted to include the exception in their version of the hearsay provisions.¹⁶

As the 1901 date of *Clark v. Commonwealth* suggests,¹⁷ the impeachment use of such publications has a much longer lineage than the hearsay exception.¹⁸ The paradox is that while the rationale for the hearsay exception is relatively clear, the justification for the impeachment use remains opaque. More often than not, while sustaining the use of a text or article "for impeachment," the court does not elaborate on the impeachment use. That ambiguity may have been tolerable when the hearsay exception was a minority view. However, the elevation of the hearsay exception to majority status in most states forces the issue: What is the rationale for permitting the impeachment use? How can the impeachment use of texts be rationalized and distinguished from the admission of publications under the hearsay exception?

The question is of far more than theoretical interest; it also has practical importance. If the judge admits evidence solely on a credibility theory, under Federal Rule of Evidence 105 the trial judge should give the jury a limiting instruction at the opponent's request, identifying the permissible and impermissible uses of the evidence.¹⁹ However, most of the pattern instruction texts lack a standard instruction on the use of publications to

14. FED. R. EVID. 803(18). The accompanying Advisory Committee Note also explains the minority view that such learned treatises should be admissible as stand-alone substantive evidence: "[T]he hearsay objection must be regarded as unimpressive when directed against treatises since a high standard of accuracy is engendered by various factors: the treatise is written primarily and impartially for professionals, subject to scrutiny and exposure for inaccuracy, with the reputation of the writer at stake." *Id.* at 803(18) advisory committee's note.

15. 6 JACK B. WEINSTEIN & MARGARET A. BERGER, WEINSTEIN'S FEDERAL EVIDENCE T-1 to T-9 (Joseph M. McLaughlin ed., 2d ed. 2009) (the table lists 42 states, and the Illinois judiciary has since adopted a set of rules patterned after the Federal Rules of Evidence).

16. *Id.* at T-134 to T-137.

17. *Clark v. Commonwealth*, 63 S.W. 740 (Ky. 1901).

18. CHRISTOPHER B. MUELLER & LAIRD C. KIRKPATRICK, EVIDENCE § 8.60 (4th ed. 2009) [hereinafter MUELLER]; see *Reilly v. Pinkus*, 338 U.S. 269, 275-76 (1949) (finding that the lower courts erred in preventing respondent from cross-examining medical expert witnesses with information from outside medical texts).

19. FED. R. EVID. 105.

impeach an expert.²⁰ The trial judge must therefore draft his or her own instruction. A terse instruction that the jury may consider the publication “for impeachment” gives the jury little or no guidance. To assist the jury, what exactly should the trial judge say in a limiting instruction relating to the impeachment use of a publication? The answer to that question determines not only the wording of the judge’s instruction but also what the attorney may say about the evidence during closing argument. In addition, when testimony is admitted on a limited credibility theory, the testimony does not qualify as substantive evidence.²¹ At the trial level, the proponent of the testimony cannot use the evidence to defeat a motion for a directed verdict; and on appeal, the proponent may not use the testimony to uphold a favorable verdict.²²

This Article has a twofold purpose: rationalization and limitation. The first purpose is to rationalize the doctrine by identifying the fact situations in which a text or article possesses genuine logical relevance on a credibility theory to impeach an opposing expert. The second is limitation, that is, using the rationalization to critique the present scope of this doctrine. While the Article concludes that several uses of such publications possess legitimate relevance on a nonhearsay theory, it also demonstrates that some jurisdictions have unduly expanded the scope of the doctrine. The initial part of the Article describes the status quo. It reviews the various positions that jurisdictions have taken on the permissibility of using expert publications for impeachment purposes. The following part of the Article tests the positions. It scrutinizes each position to determine whether there is a genuine, underlying credibility theory of logical relevance to justify that position. The final part of the Article suggests a proper scope for the impeachment use of texts and articles.

20. For example, there is no such instruction in 1A KEVIN F. O’MALLEY, JAY E. GREINIG & WILLIAM C. LEE, *FEDERAL JURY PRACTICE AND INSTRUCTIONS* § 14:01 (6th ed. 2008).

21. RONALD L. CARLSON, EDWARD J. IMWINKELRIED, EDWARD J. KIONKA & KRISTINE STRACHAN, *EVIDENCE: TEACHING MATERIALS FOR AN AGE OF SCIENCE AND STATUTES* 397–98 (6th ed. 2007) [hereinafter CARLSON]; see KAYE, *supra* note 10, § 5.1 (discussing the role of reliability in substantive-evidence determinations); 2 MCCORMICK, *supra* note 11, § 321 (discussing the theory at common law); MUELLER, *supra* note 18, § 8.60 (explaining the common-law theory that treatsises “could only be used for nonhearsay purposes to support or impeach experts”).

22. See, e.g., W. E. Shipley, Annotation, *Use of Medical or Scientific Treatises in Cross-Examination of Expert Witnesses*, 60 A.L.R.2D 77, 79 (1958) [hereinafter Shipley] (“It is accepted as a general rule in most jurisdictions that learned treatises of the type herein discussed may not be used as independent evidence of the facts or opinions stated therein”); EDWARD J. IMWINKELRIED & TIM HALLAHAN, *CALIFORNIA EVIDENCE CODE ANNOTATED* § 721 law revision commission cmt. (2011) (“[T]he statements read are not to be considered evidence of the truth of the propositions stated”).

I. THE CURRENT STATE OF THE LAW

Jurisdictions vary widely over the question of when an attorney may employ a text or article written by someone other than the witness to impeach an expert witness.²³ Before California adopted its current statute governing such impeachment, that jurisdiction's Law Revision Commission described the state of the common law as displaying "considerable confusion."²⁴ The pattern not only varies from state to state; even within a single jurisdiction, different courts sometimes take different approaches. There are at least five conceivable views.

The most conservative view is that the attorney may use a publication if the expert admits that he or she not only considered the publication but ultimately relied on the publication in forming his or her opinion.²⁵ All jurisdictions permit the attorney to go this far.²⁶ In the words of California Evidence Code section 721(b)(1), it is permissible to use the publication for impeachment purposes when "[t]he witness . . . relied upon such publication in arriving at or forming his or her opinion."²⁷ Under this view, the necessary foundation for the use of the text must include two

23. Shipley, *supra* note 22; EDWARD J. IMWINKELRIED, *THE METHODS OF ATTACKING SCIENTIFIC EVIDENCE* § 4-4[a] (4th ed. 2004) [hereinafter IMWINKELRIED]. See also Farber, *supra* note 9, § 2 (summarizing four approaches to using authoritative treatises for witness impeachment where the witness implicitly is not the author of the text). In principle, the threshold question is whether an attorney may ever use a text for impeachment. In a common-law jurisdiction such as Massachusetts, the courts retain the power to announce a rule authorizing the use. However, the threshold question should also be answered in the affirmative in jurisdictions with evidence codes or sets of evidence rules. In some jurisdictions with codes or rules, the legislature or state supreme court has expressly provided that the adoption of the code does not displace the judiciary's power to formulate evidentiary rules by common-law process. Edward J. Imwinkelried, *A Brief Defense of the Supreme Court's Approach to the Interpretation of the Federal Rules of Evidence*, 27 IND. L. REV. 267, 280 (1993) (discussing the codes in Minnesota, Oregon, and West Virginia). Even absent such an explicit provision, under the Federal Rules and in states with codes patterned directly after the Federal Rules, the courts should allow the use of texts for impeachment purposes. In *United States v. Abel*, the Supreme Court addressed the question of whether bias impeachment is permissible in federal practice. 469 U.S. 45, 49 (1984). The Federal Rules do not expressly permit bias impeachment. *Id.* However, the Court noted that by virtue of Federal Rule of Evidence 402, all relevant evidence is presumptively admissible in federal court. *Id.* at 51. The Court reasoned that bias impeachment is allowable because every testifying witness's credibility becomes a fact of consequence in the case and bias is undeniably relevant to credibility. *Id.* at 52. By parity of reasoning, if the use of a text is logically relevant to impeach an expert's credibility, *Abel* sanctions that impeachment technique. The second part of this Article demonstrates that in certain circumstances, the contents of a learned text possess logical relevance on the question of an opposing expert's credibility.

24. IMWINKELRIED & HALLAHAN, *supra* note 22.

25. IMWINKELRIED, *supra* note 23, § 4-4[a].

26. Farber, *supra* note 9, § 3.

27. CAL. EVID. CODE § 721(b)(1) (West 2011).

concessions by the expert: The witness must acknowledge both that he or she consulted the publication and that, after considering it, he or she relied on its contents in formulating an opinion for testimony. If the expert consulted the publication but eventually decided against relying on its contents, this view would preclude the attorney from using the publication for impeachment.

A slightly broader view is that the attorney may employ the publication so long as the expert concedes that he or she consulted the publication. Section 721(b) of the California Evidence Code also goes this far. The statute authorizes the attorney to use a publication if “[t]he witness referred to [or] considered . . . such publication in arriving at or forming his or her opinion.”²⁸ According to this view, the witness cannot prevent the attorney’s use of the publication simply by stating that he or she ultimately decided against relying on its contents. It is sufficient if the witness concedes that during his or her research, the witness opened the publication and read material pertinent to the subject of the witness’s opinion.

A still more liberal view is that the attorney may resort to the publication if the expert recognizes the publication as an authority in his or her field. This view is sometimes referred to as the “recognition” test.²⁹ The majority of jurisdictions allow the attorney to go this far.³⁰ For instance, the California drafters were willing to take this step. Section 721(b)(3) allows the attorney to use a publication for impeachment purposes when “[t]he publication has been established as a reliable authority by . . . admission of the witness.”³¹ Suppose that the witness denies consulting, much less relying on, the publication. Even in those circumstances, the attorney could use the publication for impeachment purposes if the witness admits that the publication is a standard authority in his or her field. However, if the witness refuses to make that admission, this view forecloses the impeachment use of the publication.³²

Some courts go further by analogizing to Federal Rule of Evidence 803(18), which sets out the hearsay exception. Under this Rule, the proponent may qualify a publication for admission as substantive evidence by several means. One specified means is the “admission of the witness.”³³

28. *Id.*

29. CHARLES S. HIRSCH, R. CRAWFORD MORRIS & ALAN MORITZ, HANDBOOK OF LEGAL MEDICINE 274 (5th ed. 1979).

30. Farber, *supra* note 9, § 5.

31. CAL. EVID. CODE § 721(b)(3) (West 2011).

32. Shipley, *supra* note 22, at 103.

33. FED. R. EVID. 803(18).

Alternatively, the statute refers to “other . . . testimony.”³⁴ That wording creates the possibility of using expert #1’s testimony to qualify the publication under the exception and then employing the publication during the examination of expert #2. Michigan Rule of Evidence 707 not only converts Federal Rule 803(18) into an impeachment provision but makes it clear that that possibility is a reality in Michigan. Rule 707 reads:

To the extent called to the attention of an expert witness upon cross-examination, statements contained in published treatises, periodicals, or pamphlets on a subject of history, medicine, or other science or art, established as a reliable authority by the testimony or admission of the witness or by other expert testimony or by judicial notice, are admissible for impeachment purposes only.³⁵

Although Rule 707 borrows much of its language from Federal Rule 803(18), Rule 707 differs radically from Rule 803(18). The text of the Michigan rule states that the publication may be used “for impeachment purposes only.” Moreover, the text explicitly mentions “other expert testimony” as a basis for qualifying the publication as a learned treatise usable to impeach another expert. Missouri has embraced the same view. In the words of *Ball v. Burlington Northern Railroad Co.*, “an expert may be cross-examined from articles and treatises which he does not recognize, so long as some other expert has testified that the publications are authoritative.”³⁶

A few jurisdictions have gone even further. In these jurisdictions, the attorney may quote a contradictory passage to an opposing expert even without preliminary identification of the publication or any proof of its authoritative status.³⁷ The attorney simply holds the text, reads the passage verbatim aloud to the expert, and asks the expert whether he or she agrees with the content of the passage.³⁸

34. *Id.*

35. MICH. R. EVID. 707. *See also* OHIO R. EVID. 803(18) (replacing former Rule 706, which was “repealed effective July 1, 2006, in light of the adoption of Evid. R. 803(18)” (quoting OHIO R. EVID. 706)).

36. *Ball v. Burlington N. R.R. Co.*, 672 S.W.2d 358, 363 (Mo. Ct. App. 1984) (citing *Gridley v. Johnson*, 476 S.W.2d 475, 481 (Mo. 1972)).

37. ROBERT L. HABUSH, *ART OF ADVOCACY: CROSS EXAMINATION OF NON-MEDICAL EXPERTS* § 20.08 (2011).

38. *Id.*

II. RATIONALIZATION: TESTING THE VARIOUS VIEWS TO DETERMINE
WHETHER THE VIEW POSSESSES LEGITIMATE, NONHEARSAY RELEVANCE
ON AN IMPEACHMENT THEORY

In the typical opinion discussing the impeachment use of publications, the court does not bother to explain why the contents of the publication are logically relevant on an impeachment theory. As the introduction noted, that tendency may have been tolerable before the widespread recognition of the learned treatise hearsay exception. However, today the federal courts and a clear majority of states have adopted some version of the hearsay exception. The challenge is distinguishing the impeachment use of a publication from its treatment as substantive evidence under the hearsay exception.

The key to making this distinction is determining whether the contents of the publication are logically relevant for impeachment even if the assertions in the publication are false. Under Federal Rule of Evidence 801(c), a publication's contents constitute hearsay if the contents are offered as proof of the truth of the assertion.³⁹ To defeat a hearsay objection on this ground, the proponent must demonstrate that the statement is logically relevant for a nonhearsay purpose.⁴⁰ The purpose is a nonhearsay use if that use is relevant even if the statement's assertion is false. Consider, for example, the nonhearsay theory for admitting a witness's prior inconsistent statement under Federal Rule 613⁴¹ for impeachment:

[It is a recognized] nonhearsay purpose . . . to circumstantially prove the declarant's state of mind. . . . A witness's prior inconsistent statements are . . . relevant to show that [at the very least] there is uncertainty in the witness's mind . . . ; the fact *of* the inconsistent statement is relevant even if the facts asserted *in* the statement are false.⁴²

By way of example, suppose that before trial, a witness to an event stated that the event occurred at 4:00 p.m. on a certain day.⁴³ However, at trial the witness testified that the event occurred at 10:00 a.m.:

39. FED. R. EVID. 801(c).

40. 1 EDWARD J. IMWINKELRIED, PAUL C. GIANNELLI, FRANCIS A. GILLIGAN & FREDRIC I. LEDERER, *COURTROOM CRIMINAL EVIDENCE* § 1004 (5th ed. 2011) [hereinafter *COURTROOM CRIMINAL EVIDENCE*].

41. FED. R. EVID. 613.

42. *COURTROOM CRIMINAL EVIDENCE*, *supra* note 40, § 1004.

43. This example is based on CARLSON, *supra* note 21, at 500–01.

Both statements might be false; the truth of the matter might be that [the event occurred] at 1:00 p.m.. However, irrespective of the statement's truth, the fact that the witness made the prior statement is logically relevant. The fact *of* the inconsistent statement is relevant even if the fact asserted *in* the statement is false. The fact that the witness made a pretrial statement inconsistent with his trial testimony is circumstantial proof that the witness is at least uncertain. Thus, the evidence gives the trier of fact an insight into the witness' state of mind.⁴⁴

In that light, we shall now review the five competing views discussed in Part I. The decisive question is whether we can put the publication to a nonhearsay use⁴⁵ and discern logical relevance to the opposing expert's credibility even if the facts stated in the publication are false. If we cannot, the publication should not be used for the stated reason of impeachment; if the publication is to be admitted at all, its proponent must lay a foundation satisfying the learned treatise hearsay exception.

A. View #1: The Witness's Admission of Reliance on the Publication

When the witness purports to rely on the publication's contents as support for his or her opinion, the publication may legitimately be used for impeachment. To be a credible expert, the witness should be both careful and impartial. If the witness claims that he or she is relying on a passage in a text or article but the passage is at odds with the expert's reasoning, the inconsistency calls into question the care with which the expert read and analyzed the passage. The contents of the passage do not "bear out"⁴⁶ the expert's claim that the passage supports the expert's opinion. In the words of the California Law Revision Commission's Comment to Evidence Code section 721, "[i]f an expert witness has relied on a particular publication in forming his opinion, it is necessary to permit cross-examination in regard to that publication in order to show whether the expert correctly read, interpreted, and applied the portions he relied on."⁴⁷ Even assuming that the passage in question is in error, the inconsistency between the passage and the expert's analysis may raise such questions as whether the witness carefully read the passages the witness relied on and whether the witness

44. *Id.* at 501.

45. MUELLER, *supra* note 18, § 8.60.

46. Farber, *supra* note 9, § 1.

47. IMWINKELRIED & HALLAHAN, *supra* note 22.

logically applied those passages in the instant case. In short, this use of the publication possesses genuine, nonhearsay logical relevance for impeachment purposes. In the limiting instruction, the judge can direct the jurors that they may consider any inconsistency between the publication's contents and the expert's reasoning in deciding whether the expert carefully read and reviewed the materials on which he or she purports to rely.

B. View #2: The Witness's Admission of Consultation of the Publication

What if the expert concedes consulting the publication but adds that in the final analysis, he or she decided not to rely on it? Is there legitimate nonhearsay relevance in that situation? The Commission Comment to section 721 of the California Evidence Code hints at a theory: "An expert's reasons for not relying on particular publications that were referred to or considered by him while forming his opinion may reveal important information bearing upon the credibility of his testimony."⁴⁸ Several courts have similarly asserted that the witness's reasons for rejecting potential sources can be pertinent to credibility.⁴⁹ One court has gone to the length of stating that "the documents considered but rejected by the expert trial witness could be even more important for cross-examination than those actually relied upon by him."⁵⁰ If the witness purports to have consulted and rejected a publication that strikes the jury as more apposite to the case than the publications the witness elected to rely on, the jury may properly conclude that the witness carelessly rushed his or her analysis. The witness's rejection of an obviously relevant publication may even suggest bias on the witness's part. The witness may have succumbed to cognitive dissonance: After prematurely forming an opinion, the witness refused to fairly consider information at odds with that opinion. In short, the passage in the text impeaches either the witness's carefulness or the witness's

48. *Id.*

49. *United States v. Harper*, 450 F.2d 1032, 1037 (5th Cir. 1971) ("[I]t is entirely proper that the jury know which opinions he credited, which he rejected, and why."); *In re Air Crash Disaster at Stapleton Int'l Airport*, 720 F. Supp. 1442, 1444 (D. Colo. 1988) (citing *Quadrini v. Sikorsky Aircraft Div.*, 74 F.R.D. 594, 595 (D. Conn. 1977)) ("Materials an expert reviews and then disregards in forming the opinion to which he will testify are relevant to the impeachment of the witness during trial."); *Zier v. Shamrock Dairy of Phoenix, Inc.*, 420 P.2d 954, 956 (Ariz. Ct. App. 1966) ("The counsel for the defendant had the right to inquire into [Dr. Keppel's] reasons [for rejecting the considered reports] so the force of Dr. Keppel's conclusion could be tested."); *see also* C.B. Rogers, *Cross-examining the Expert Witness*, 21 DEF. L.J. 491, 506-07 (1972) (identifying cases in which a witness's rejection of materials has impacted his or her credibility).

50. *Intermedics, Inc. v. Ventritex, Inc.*, 139 F.R.D. 384, 390 n.6 (N.D. Cal. 1991) (quoting *Eliassen v. Hamilton*, 111 F.R.D. 396, 400 n.5 (N.D. Ill. 1986)).

impartiality. The passage does so even if the contents of the passage are false. In short, like the first view, the second view passes muster. In the instruction, the judge could tell the jurors that in deciding whether the expert analyzed the case carefully and objectively, they may consider whether the expert had good reasons for rejecting the publications on which he or she chose not to rely.

C. View #3: The Recognition Test

At first blush, it seems harder to identify nonhearsay relevance to credibility when the witness denies either relying on or even consulting a publication. However, on closer scrutiny, the recognition test is also a legitimate impeachment standard. The Commission Comment to section 721 of the California Evidence Code mentions that the attorney should be permitted to inquire about such texts because “the statements in the text might be based on inadequate . . . research.”⁵¹ Just as inadequate research may undercut the credibility of text, the witnesses’s failure to conduct adequate research can call into question his or her credibility as an expert. Of course, the question that naturally arises is the point at which the expert can be faulted for “inadequate” research.

The recognition test arguably rests on the implicit assumption that the expert is obliged to consult at least all the texts that he or she deems authoritative in the specialty field.⁵² So long as the extent of the expert’s research duty is defined in that manner, it is justifiable to criticize the expert for neglecting to find and review the publication. If the expert is willing to personally acknowledge that the publication has that stature in his or her field, the expert’s failure to consult the publication is logically relevant to show that the expert hurried his or her analysis in the case. Again, that inference is rational even if we posit that the contents of the publication are false. The expert should have consulted the text, evaluated its contents, and then thoughtfully rejected the publication. However, when the expert does not even bother to review a standard authority in the field, the jury can correctly treat that failure as a basis for lowering its assessment of the witness’s credibility as an expert. In wording the limiting instruction, the judge could inform the jurors that in deciding whether the expert exercised due care in forming his or her opinion, they may consider whether the expert conducted adequate research into the pertinent authorities.

51. IMWINKELRIED & HALLAHAN, *supra* note 22.

52. *See* Farber, *supra* note 9, § 5 (emphasizing the basic requirement that the expert accept the source’s “authoritative status”).

D. View #4: The Use of Publications Shown to Be Learned Treatises by Other Experts

The next view is the approach in Michigan, analogizing to Federal Rule 803(18). Under this approach, after using expert #1 to establish a publication's status as an authority, the attorney is allowed to use the text to impeach expert #2.⁵³ According to this view, the attorney may do so even if the witness will not concede that the publication is authoritative or that he or she consulted the publication.

It might seem easy to rationalize this view. After all, expert #1 says *A* while expert #2 says *non-A*. This appears to be a simple example of specific contradiction impeachment. The common law permitted this mode of impeachment,⁵⁴ and although Article VI of the Federal Rules of Evidence does not expressly mention it, the federal courts continue to allow such impeachment.⁵⁵ However, this impeachment technique is inapplicable here:

The impeaching effect of specific contradiction is indirect. The second witness does not charge that the first witness is a liar or even describe an inconsistent statement by the first witness. The second witness merely gives a contrary version of the facts on the merits of the case. However, inferentially, the specific contradiction is logically relevant to the first witness' credibility; if the second witness is correct, the first witness must be lying or mistaken. In short, specific contradiction evidence has dual logical relevance; on its face, it purports to relate to the historical merits, but it also indirectly attacks the credibility of the opposing witnesses.⁵⁶

53. 2 MCCORMICK, *supra* note 11, § 321.

54. See 1 KENNETH S. BROUN ET AL., MCCORMICK ON EVIDENCE § 45 (Kenneth S. Broun ed., 6th ed. 2006) [hereinafter 1 MCCORMICK] (discussing both specific contradiction impeachment in general and federal courts' continued adherence to the doctrine).

55. *United States v. Perez-Perez*, 72 F.3d 224, 227 (1st Cir. 1995) (citing *United States v. Innamorati*, 996 F.2d 456, 479–80 (1st Cir. 1993)); *United States v. Tarantino*, 846 F.2d 1384, 1409 (D.C. Cir. 1988) (citations omitted). There is no need for an express statutory authorization for this impeachment technique. Just as Article VI of the Federal Rules does not explicitly permit specific contradiction impeachment, the article makes no mention of bias impeachment. See *id.* Yet, the very existence of Article VI assumes that evidence is logically relevant to a fact of consequence in the case if the evidence is pertinent to a witness's credibility. In *United States v. Abel*, the Supreme Court held that federal litigants may continue to use the bias mode of impeachment. 469 U.S. 45, 50 (1984) (quoting E. CLEARY, 40 MCCORMICK ON EVIDENCE 85 (3d ed. 1984)). The Court pointed out that under Federal Rule 402, any relevant evidence is presumptively admissible. *Id.* at 51.

56. CARLSON, *supra* note 21, at 433.

Thus, this technique presupposes that the contradicting evidence can be admitted for the substantive purpose of proving the truth of the assertion; the indirect impeachment inference arises from the conflict between the substance of the testimony by the two witnesses. However, in the present context, we must find that the impeachment evidence is admitted for a nonhearsay, credibility purpose; otherwise, the learned treatise hearsay exception would govern.

There is a second reason why this view cannot be rationalized as a particular instance of specific contradiction impeachment. When the specifically contradicting evidence is relevant only to a witness's credibility, the courts ordinarily⁵⁷ forbid the use of extrinsic evidence.⁵⁸ However, the invocation of the fourth view necessarily contemplates the use of extrinsic evidence; since the target witness will not concede the publication's authoritative status, the attorney resorts to expert #2's testimony to establish the status. For both reasons, the specific contradiction theory is inapplicable.

Despite the unsoundness of the specific contradiction theory, the attorney can still plausibly argue that there is genuine probative worth on an impeachment theory. Under view #3, the expert's failure to consult a publication he or she acknowledges to be authoritative calls into question the diligence of the expert's research. In this variation of the problem, the expert testifies either that he or she is unfamiliar with the publication or that he or she does not acknowledge the publication to be a standard in his or her field. However, if other testimony establishes that the publication enjoys that stature, the attorney can identify some minimal impeachment value. When the expert concedes that he or she is unfamiliar with a text otherwise shown to be a standard authority, the concession suggests that the expert is not truly knowledgeable in the field since "skilled experts should be aware of such literature."⁵⁹ Hence, the concession raises questions about the extent of the witness's expertise. Alternatively, when the expert admits familiarity but refuses to acknowledge the publication's authoritative status, the expert's stubborn refusal to concede the publication's status may tend to

57. *But see* 1 MCCORMICK, *supra* note 54, § 49 (pointing out that bias impeachment is deemed to be so probative that certain extrinsic evidence of bias is admissible); *Davis v. Alaska*, 415 U.S. 308, 319–20 (1974) (holding that the Alaska Supreme Court erred in prohibiting defense counsel from submitting extrinsic evidence of an adverse witness's juvenile offender record for purposes of impeachment bias). However, the ensuing paragraph explains that if there is an inference of bias, there is an alternative, nonhearsay theory that the attorney may invoke.

58. 1 MCCORMICK, *supra* note 54.

59. KAYE, *supra* note 10, § 5.4.2a.

show a bias. The inference of bias can be particularly strong when the expert who testified to the publication's stature in the field has credentials superior to those of the expert being impeached.⁶⁰

E. View #5: The Use of a Seemingly Inconsistent Passage in Any Publication

As we progress through the five views, it becomes increasingly difficult to identify legitimate, nonhearsay impeachment value. When we turn to the last view, legitimate impeachment value is virtually non-existent. Again, under this view, the attorney may quote to the witness any apparently inconsistent passage. The attorney need not identify the publication or demonstrate the publication's status as a reliable authority in the field. Without more, the passage proves only that someone has taken a contrary position. At one time, many, if not most, courts subscribed to the popular view that at least the hard sciences such as physics, chemistry, and biology yield true, absolute certainty.⁶¹ On that assumption, it is significant that another expert has taken a contrary position in black and white. However, in *Daubert v. Merrell Dow Pharmaceuticals, Inc.* in 1993, the Supreme Court abandoned that view.⁶² In the majority opinion, Justice Blackmun wrote that "arguably, there are no certainties in science."⁶³ In reaching that conclusion, he drew on several amicus briefs filed by scientists or scientific organizations.⁶⁴ The justice endorsed the modern view of the scientific enterprise recognizing the limits of the inductive logic employed in investigational science.⁶⁵ Another experimental test of the hypothesis is always conceivable; and so long as another test is possible, there is a possibility of subsequent falsification. Thus, in principle, no matter how many prior experiments have produced outcomes apparently validating a hypothesis, it cannot be regarded as conclusively proven; the

60. See DAVID COHEN, ADMIT THE ACT AND WIN THE CRIMINAL CASE 236-37 (1979) (providing several hypothetical examples of this scenario).

61. See Edward J. Imwinkelried, *Evidence Law Visits Jurassic Park: The Far-Reaching Implication of the Daubert Court's Recognition of the Uncertainty of the Scientific Enterprise*, 81 IOWA L. REV. 55, 59-60 (1995) [hereinafter *Uncertainty*] (noting that the former conception of science held that "individual scientific propositions are capable of attaining true certainty").

62. *Id.* at 64-65; *Daubert v. Merrell Dow Pharms., Inc.*, 509 U.S. 579, 590 (1993).

63. *Daubert*, 509 U.S. at 590.

64. *Id.*

65. See *Uncertainty*, *supra* note 61, at 60-65 (discussing broadly this change in scientific thought before addressing Justice Blackmun's opinion).

acceptance of the hypothesis must be provisional and tentative.⁶⁶ In this light, it is unimportant that *someone* has taken a position contrary to that of the expert on the stand. There will almost always be a contrarian or two, and the existence of the apparently inconsistent passage in a publication proves only that there is *a* contrarian on this issue. In this variation of the record, the probative worth on the evidence for impeachment is infinitesimally small.

III. LIMITATION: HOW FAR SHOULD EVIDENCE LAW PERMIT THE ATTORNEY TO GO IN USING PUBLICATIONS TO IMPEACH AN OPPOSING WITNESS'S CREDIBILITY?

Part II demonstrated that as a matter of logical relevance analysis, it is defensible for a jurisdiction to follow any of the first four views on the use of publications to impeach an opposing expert's credibility. In those four variations of the rule, it is possible to identify nonhearsay relevance to the expert's carefulness or impartiality. However, although a showing of logical relevance is a necessary condition for admitting evidence,⁶⁷ it is not always a sufficient condition. In many instances, evidence law bars the introduction of relevant evidence. The privilege rules,⁶⁸ the character doctrine,⁶⁹ the opinion restrictions,⁷⁰ and the hearsay rule⁷¹ all have the operative effect of excluding evidence that is undeniably relevant. For that matter, as Federal Rule of Evidence 403 indicates, in deciding whether to admit evidence, the courts should weigh the probative value of the evidence against countervailing considerations such as undue time consumption and the risk that the jury will misuse the evidence.⁷²

In the case of the first three views on the use of publications for impeachment purposes, the balance tips in favor of permitting such impeachment. In each case, the publication has considerable probative

66. Bert Black, *The Supreme Court's View of Science: Has Daubert Exorcised the Certainty Demon?*, 15 CARDOZO L. REV. 2129, 2131 (1994) (quoting *Daubert*, 509 U.S. at 590); Margaret G. Farrell, *Daubert v. Merrell Dow Pharmaceuticals, Inc.: Epistemology [sic] and Legal Process*, 15 CARDOZO L. REV. 2183, 2193 (1994); Brian Stuart Koukoutchos, *Solomon Meets Galileo (And Isn't Quite Sure What to Do with Him)*, 15 CARDOZO L. REV. 2237, 2253 (1994) (citing Mervyn Susser, *Rules of Inference in Epidemiology*, 6 REG. TOXICOLOGY & PHARMACOLOGY 116, 127–28 (1986)).

67. FED. R. EVID. 401.

68. *Id.* at 501–02.

69. *Id.* at 404.

70. *Id.* at 701–05.

71. *Id.* at 802.

72. *Id.* at 403.

value on the issue of the witness's credibility. The evidence tends to show that the witness did not carefully review the materials he or she relied upon, the witness rejected contrary authorities without good reason, or the witness conducted inadequate research into the pertinent authorities. Those inferences raise serious doubts about the witness's carefulness or objectivity, both of which are critical elements of the witness's credibility as an expert. Moreover, such a use of the publication consumes little time. These views restrict the attorney to intrinsic impeachment,⁷³ that is, the cross-examination of the witness to be impeached. In order to invoke these techniques, the attorney must elicit the witness's admission that he or she consulted or relied on the publication or that the witness views the publication as a standard authority in the specialty field. If the witness denies the cross-examiner that admission, the impeachment must end; the attorney can neither use the publication during the balance of the cross-examination nor call a later witness to establish the publication's stature in the field. All of the questioning occurs during the examination of the target witness to be impeached.

The fourth view is distinguishable. As under the prior views, the publication still has some genuine impeachment value. However, there are significant countervailing considerations here. To begin with, the attorney must resort to a second witness to prove that the publication has achieved the status of a recognized authority in the discipline. The refusal of the target witness to acknowledge the publication's status forces the attorney to resort to extrinsic impeachment.⁷⁴ Moreover, the fourth view places the jury in an awkward position by forcing it to resolve a credibility issue before considering the relevance of the text's contents to the opposing expert's credibility. The jury must decide to believe the second witness's testimony that the publication has achieved the requisite status and disbelieve the first witness's testimony that the publication lacks that status.

Finally, in this setting, resorting to extrinsic evidence heightens the danger that the jury will disregard any limiting instruction and treat the publication as substantive evidence. Again, when the attorney uses the publication for impeachment purposes, the hearsay rule forbids treating the passage as substantive proof of the truth of the assertions in the passage; *ex hypothesi*, the passage is being used for a nonhearsay purpose. However, to invoke the fourth view, the attorney must call a second witness who testifies that the specialists in the field view the publication as authoritative—clearly

73. 1 MCCORMICK, *supra* note 54, § 49.

74. *Id.*

implying that all or most of the statements in the publication are true. Moreover, by both cross-examining the target witness and questioning the second witness about the publication, the attorney has placed the publication “before the trier of fact on multiple occasions under circumstances virtually inviting the [publication’s] treatment as substantive evidence.”⁷⁵

In this light, in order to solidify the boundaries between the learned treatise hearsay exception and the impeachment use of publications, the courts should reject the fourth view and confine litigators to the first three views. The courts ought to permit the impeachment use of a publication when the target witness concedes that he or she consulted it, purports to rely on it, or acknowledges it as an authority in the field. However, the courts should draw the line there and reject the fourth view. As we have seen, one can discern some legitimate impeachment value even when the attorney must introduce a second witness’s testimony to establish the publication’s stature in the discipline. However, in this situation, the process of laying the complete foundation for the use of the publication necessarily involves the presentation of extrinsic evidence. The presentation of such evidence will not only consume additional trial time but will also magnify the danger that at a subconscious level, the jury will be unable to comply with the judge’s instruction limiting the evidence to impeachment and credibility.

CONCLUSION

Expert testimony looms so large at trial that it is vital that the courts send the right messages to the expert community. Specifically, it is important to signal to the expert community that the courts expect expert witnesses to conduct reasonably thorough research, carefully review the research material they choose to rely on, and weigh contrary authorities in an open-minded fashion. When an expert conducts minimal research, reviews research material in a cursory fashion, or rejects contrary authority without good reason, the expert’s conduct raises significant questions about the witness’s carefulness and objectivity. In assessing the witness’s credibility, the jury is entitled to learn of such conduct. Lack of care is one of the principal causes of flawed expert analysis. Many proficiency studies have found that the expert’s simple lack of care is the most common cause

75. *Id.* § 37 (making a similar argument in the case of extrinsic evidence of prior inconsistent statements admitted for the sole purpose of impeachment); *see also* KAYE, *supra* note 10, § 5.4.2a. (discussing the role of reliability in the judicial substantive-evidence debate).

of error.⁷⁶ Further, for decades there have been complaints that many experts are biased and consciously or subconsciously skew their analyses.⁷⁷

In addition, these views help to level the playing field in litigation involving experts. The use of experts can be quite expensive.⁷⁸ If a case pits a wealthy litigant against one with limited financial resources, it might be difficult for the latter to afford live expert testimony to rebut the testimony by the other litigant's hired expert.⁷⁹ The first three views enable the poorer litigant to attack the opposing expert's credibility even when the poorer litigant cannot call a live expert as a rebuttal witness.

However, the jury's foremost task is resolving the disputes on the historical merits of the case. If jurors devote inordinate attention to credibility disputes, they can lose sight of their central task. Thus, as in the case of any impeachment technique, the courts must prescribe sensible limitations to litigators' use of learned publications for credibility purposes. It makes eminently good sense to permit the use of publications for impeachment under the first three views described in this Article. In each case, the evidence has significant probative value on a credibility theory, the process of presenting the evidence consumes little court time, and its presentation poses little or no risk of misuse of the evidence. In contrast, we have reached the point of diminishing returns when the attorney must resort to extrinsic evidence—another expert's testimony—to lay the foundation to use the publication for impeachment. At that point, if the jurisdiction recognizes the learned treatise hearsay exception, the judge should demand that the attorney either lay a foundation satisfying that exception or forego use of the publication. For the first time in American legal history, most jurisdictions now recognize the hearsay exception. If the courts expand the scope of the impeachment theory to permit the use of extrinsic evidence to establish the publication's authoritative status, the expansion will unduly strain the distinction between the impeachment theory and the hearsay exception.

76. See generally Edward J. Imwinkelried, *The Debate in the DNA Cases over the Foundation for the Admission of Scientific Evidence: The Importance of Human Error as a Cause of Forensic Misanalysis*, 69 WASH. U. L.Q. 19, 25–27 (1991) (reporting results of various proficiency tests finding widespread “misanalysis” and incompetent routine testing in laboratories).

77. E.g., MARGARET A. HAGEN, *WHORES OF THE COURT: THE FRAUD OF PSYCHIATRIC TESTIMONY AND THE RAPE OF AMERICAN JUSTICE* (1997) (describing incidents in which the author believes that expert witnesses gave biased, flawed testimony); 1 MCCORMICK, *supra* note 54, § 17.

78. Edward J. Imwinkelried, *Impoverishing the Trier of Fact: Excluding the Proponent's Expert Testimony Due to the Opponent's Inability to Afford Rebuttal Evidence*, 40 CONN. L. REV. 317, 319 (2007).

79. *Id.* at 319–20.