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Paper versus Electronic Sources for Law Review Cite Checking: Should Paper Be the Gold Standard?*

Mary Rumsey** and April Schwartz***

Despite law students' reliance on electronic sources for legal research, a survey confirmed that many journals make their staff members check authors' citations against paper sources. Rumsey and Schwartz argue that the advent of image-based document collections should change this practice, making life easier for law students and law school librarians.

¶1 Citation checking has long formed an integral part of the law review publication process. Traditionally students have used print publications found in their library for this activity, but the increasing availability of legal sources in electronic formats, particularly image-based formats, has raised questions about this approach. To find out how these electronic versions fit into current law review practice, we conducted a survey of law review editors.

¶2 Despite the convenience of electronic versions, our survey found that law review editors continue to strongly prefer paper sources. This preference conflicts with libraries' need to cancel duplicate print subscriptions to reporters and law reviews, and to avoid large interlibrary loan costs. The advent of image-based electronic versions of cases and law review articles, however, has begun to affect some cite-checking practices.

¶3 In this article, we report the results of this survey of law review practice and suggest that image-based documents should lead to changes in law review policy.

Cite Checking—The Process and Its Importance

¶4 In contrast to scholarly publications in other disciplines, most law journals get edited by students.¹ As part of that editing, students hunt down a copy of each

* © Mary Rumsey and April Schwartz, 2005. This is a revised version of a winning entry in the open division of the 2004 AALL/LexisNexis Call for Papers Competition. The authors would like to thank all the busy law review editors who responded to their survey.

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1. Michael Bacchus, Comment, *Strung Out: Legal Citation, The Bluebook, and the Anxiety of Authority*, 151 U. PA. L. REV. 245, 273 (2002). A small number of U.S. law journals are faculty-edited and peer-reviewed. Our survey did not include them, but they face similar issues.

source cited by article authors. Next, they check whether the source supports the proposition for which the author cites it.² As Darby Dickerson has noted, “[t]he cite and source process is the only check on the article’s substantive accuracy”³ after submission. Cite checking and technical editing may be the students’ most important contribution to the publication process.⁴ When law review editors cannot check an author’s original sources because of language barriers,⁵ inaccessibility,⁶ or attorney-client privilege,⁷ they alert their readers to this problem, generally at the beginning of the article.⁸

¶5 Thus, cite checking is a key part and value of law review work. During this process, however, law review staff members face hard choices between electronic and paper sources. Libraries, under budgetary pressure to limit subscriptions and interlibrary loan costs, cannot always meet the demand for paper versions of cited sources.

The Long Arm of the *Bluebook*⁹

¶6 Because cite checking plays such an important role in law review work, the rules for cite checking necessarily hold an important place too.¹⁰ Despite the advent of alternatives,¹¹ law reviews adhere firmly to *The Bluebook: A Uniform*

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2. ROY S. GUTTERMAN, L. REV: THE LAW REVIEW EXPERIENCE IN AMERICAN LEGAL EDUCATION 7 (2003); Ronald J. Gilson & Robert H. Mnookin, *Sharing among the Human Capitalists: An Economic Inquiry into the Corporate Law Firm and How Partners Split Profits*, 37 STAN. L. REV. 313, 377 (1985) (noting that law review staff members “read literally every authority cited in order to ensure ‘complete’ accuracy, regardless of the importance of any particular point or the likelihood that an inaccuracy would be noticed”). In fact, the Model Code of Ethics for Law Reviews’ Comment to Rule 2.3, Editing of Manuscripts, states that “[t]he law review staff’s primary substantive function is to ensure the accuracy of the manuscript in terms of its clarity of language, correctness of grammar, and completeness and accuracy of research and analysis.” National Conference of Law Reviews Model Code of Ethics, reprinted in Michael L. Closen & Robert M. Jarvis, *The National Conference of Law Reviews Model Code of Ethics: Final Text and Comments*, 75 MARQ. L. REV. 509, 518 (1992).
 3. Darby Dickerson, *Citation Frustrations—and Solutions*, 30 STETSON L. REV. 477, 481 (2000).
 4. James W. Harper, *Why Student-Run Law Reviews?* 82 MINN. L. REV. 1261, 1275 (1998).
 5. See, e.g., Bernhard Grossfeld, *Multidisciplinary Practice Lawyers and Accountants: A Semiotic Competition*, 36 WAKE FOREST L. REV. 167, 167 n.1 (2001) (noting journal’s inability to check sources available only in German).
 6. See, e.g., W. Burette Carter, *Reconstructing Langdell*, 32 GA. L. REV. 1, 1 n.1 (1997) (noting journal’s inability to check sources available only to author).
 7. See, e.g., Clark D. Cunningham, *A Tale of Two Clients: Thinking about Law as Language*, 87 MICH. L. REV. 2459, 2464 n.20 (1989) (noting author’s inability to provide sources for verification because of attorney-client privilege).
 8. See *supra* notes 5–7.
 9. THE BLUEBOOK: A UNIFORM SYSTEM OF CITATION (Columbia Law Review Ass’n et al. eds., 17th ed. 2000) [hereinafter THE BLUEBOOK].
 10. Gil Grantmore, *The Death of Contra*, 52 STAN. L. REV. 889, 890 (2000) (noting that law reviews “rely heavily on tests of *Bluebook* skills in selecting new staff members”); Bacchus, *supra* note 1, at 245 & n.2 (same).
 11. E.g., UNIV. OF CHI. LAW REVIEW & UNIV. OF CHI. LEGAL FORUM, THE UNIVERSITY OF CHICAGO MANUAL OF LEGAL CITATION (1989) (commonly referred to as the *Maroon Book*); ASS’N OF LEGAL WRITING DIRECTORS & DARBY DICKERSON, ALWD CITATION MANUAL: A PROFESSIONAL SYSTEM OF

System of Citation.¹² Among our fifty respondents, only one law review used a citation guide other than the *Bluebook*. As other writers have said, the history of the *Bluebook*'s ascendancy within law schools, and within law reviews in particular, has been thoroughly documented.¹³

Paper versus Electronic Sources

¶7 To the extent that any citation guide dictates whether journal staffers check citations in paper rather than electronic sources, then the *Bluebook* reigns. Surprisingly, editors split on whether the *Bluebook* elevates paper sources over electronic ones. Twenty-four of the fifty editors surveyed said one reason they preferred paper sources was that the *Bluebook* required or preferred them. The other twenty-six did not list the *Bluebook* as a factor. More significantly, some of the editors who said their journals followed the *Bluebook* nonetheless permitted electronic sources in place of paper ones.

¶8 This uncertainty among editors probably stems from the vagueness of the *Bluebook*'s approach to electronic sources. The seventeenth edition gives rules for cases and statutes that speak in terms of *citations* to paper versions,¹⁴ which appears to give some leeway. In the introduction to Rule 18.2, "The Internet," however, the authors state:

This rule *requires the use* and citation of *traditional printed sources*, except when the information is not available in a printed source, or if the traditional source is obscure or hard to find and when the citation to an Internet source will substantially improve access to the same information contained in the traditional source. In the latter case, to the extent possible, the traditional source should be *used* and cited.¹⁵

¶9 Thus, the *Bluebook* does appear to require authors (and, by extension, cite checkers) to use paper sources where possible.¹⁶ In fact, at least one commentator objected to Rule 18 on the ground that paper and electronic versions are the same, and urged the editors to change this rule in the next edition.¹⁷ At

CITATION (2d ed. 2003). During the last few years, at least one prominent law review experimented with abandoning *The Bluebook* for the *AWLD Citation Manual*, but ended the test after one issue. Editorial Note, *Citation Manual*, 81 B.U. L. REV. 917, 917–18 (2001).

12. Jim C. Chen, *Something Old, Something New, Something Borrowed, Something Blue*, 58 U. CHI. L. REV. 1527, 1534–35 (1991).

13. See, e.g., Bacchus, *supra* note 1, at 250; Christine Hurt, *Network Effects and Legal Citation: How Antitrust Theory Predicts Who Will Build a Better Bluebook Mousetrap in the Age of Electronic Mice*, 87 IOWA L. REV. 1257, 1265 (2002). For a detailed history of the *Bluebook*, see Darby Dickerson, *An UnUniform System of Citation: Surviving with the New Bluebook*, 26 STETSON L. REV. 53, 57–64 (1996).

14. THE BLUEBOOK, *supra* note 9, R. 18.2.2(a) (cases) and R. 18.2.3(a) (constitutions and statutes).

15. *Id.* at R.18.2.1 (emphasis added).

16. Mary Miles Price, the law librarian and legal citation maven who coordinated the 17th edition, confirmed this view. E-mail from Mary Miles Price, Associate Director, Vanderbilt Law Library, to Mary Rumsey, Foreign, Comparative & International Law Librarian, University of Minnesota Law Library (Aug. 21, 2003) (on file with authors).

17. Hurt, *supra* note 13, at 1276.

least two commentators, however, have interpreted the rule to permit PDF versions.¹⁸

¶10 Another possible reason that editors permit electronic sources despite their professed adherence to the *Bluebook* is the loophole created by the phrase “to the extent possible.”¹⁹ By tempering its paper source rule, the *Bluebook* arguably lets editors decide when it is “possible” for their staff members to locate the paper source. Regardless of the *Bluebook*’s requirements, however, law review editors choose paper sources for several reasons.²⁰

Image-based Document Formats

¶11 The *Bluebook* rule on electronic sources groups PDF documents under “other [non-html] formats.”²¹ The only acknowledgment of PDF files’ relationship to paper originals comes in a rule on pinpoint citations for electronic documents, which states that “[a] pdf file displays the information in the same form as the original, as a ‘virtual’ document.”²² As the current edition of the *Bluebook* came out in 2000, before database vendors and other publishers began making law-related documents available in PDF,²³ it is understandable that the *Bluebook*’s editors did not fully assess the consequences of image-based formats.

The Landscape of Available Sources

¶12 With the advent of image-based documents, the geography of the legal information landscape has changed radically. In 2002, Thomson (owner of Westlaw) introduced PDF versions of some cases. This “old wine in new bottles” gives researchers the option of seeing cases exactly as they appear in West reporters, i.e., as they appear on paper.²⁴

¶13 While LexisNexis also provides a PDF printing option for cases, its images do not mirror the cases that appear in the National Reporter System.²⁵ Thus, LexisNexis’s PDF documents seem unlikely to replace paper reporters for cite checking. Some of Westlaw’s PDF documents, however, may face their own barrier

18. See Phill W. Johnson, *PDF Formats Aids [sic] in Cite-Checking*, LEGAL INFO. ALERT, Mar. 2003, at 9, 9 (assuming without discussion that PDF documents satisfy the *Bluebook*’s requirements); Marguerite Most, *Electronic Journals in the Academic Law Library—Law Reviews and Beyond*, LEGAL REFERENCE SERVICES Q., 2002, no. 4, at 189, 207–08 (same).

19. THE BLUEBOOK, *supra* note 9, R. 18.2.1.

20. See discussion *infra* ¶¶ 32–35.

21. THE BLUEBOOK, *supra* note 9, 18.2.1(c).

22. *Id.* at 18.2.1(g).

23. See discussion *infra* ¶¶ 12–14.

24. A PDF document is an exact duplicate of the original document. Wendy Scott, *Evaluating and Authenticating Legal Web Resources: A Practical Guide for Attorneys*, 52 SYRACUSE L. REV. 1185, 1195 (2002).

25. Johnson, *supra* note 18. The *Bluebook* generally requires cites to National Reporter System publications. THE BLUEBOOK, *supra* note 9, R. 10.3.1.

to acceptance. The PDF version of Supreme Court cases that appears on Westlaw is taken from the unofficial *Supreme Court Reporter* rather than the *United States Reports*. Once a case has appeared in the *United States Reports*, the *Bluebook* requires students to cite to that source.²⁶ This citation requirement, which is highly unlikely to change, will prevent widespread use of Westlaw's older Supreme Court PDF documents. William S. Hein & Co., however, makes the full run of *United States Reports* available in PDF.²⁷

¶14 In addition to court opinions, many other primary sources of law have become available in image-based formats, including federal statutes,²⁸ federal regulations,²⁹ and treaties.³⁰ Secondary sources include HeinOnline, the award-winning³¹ database of older law reviews from William S. Hein & Co., and collections of scholarly articles from other disciplines.³²

¶15 Electronic sources on the Internet continue to multiply. The federal government, for example, has increased the number of its publications available only in electronic format.³³ The explosion of Web documents is reflected in legal literature; citations to Web pages in law reviews have increased dramatically in recent years.³⁴

26. THE BLUEBOOK, *supra* note 9, R. 10.3.1 & 183 tbl. 1.
27. See HEINONLINE TITLE DIRECTORY 1 (Oct. 2004) (describing coverage of *United States Reports*, including slip opinions, as 1790–2004), available at <http://heinonline.org/HeinDocs/Titles%20Currently%20Available.pdf>.
28. LexisNexis Congressional, at <http://www.lexisnexis.com/academic/universe/Congress/features.asp> (last visited Aug. 24, 2004) (showing availability of *United States Statutes at Large*). Related PDF documents include the LexisNexis U.S. Serial Set Collection, at <http://www.lexisnexis.com/academic/serialset/default.asp> (last visited Aug. 24, 2004) (showing availability of Serial Set).
29. See HEINONLINE TITLE DIRECTORY, *supra* note 27, at 2 (describing coverage of *Federal Register* as 1936–88).
30. UNITED NATIONS, UNITED NATIONS TREATY COLLECTION, FREQUENTLY ASKED QUESTIONS, at <http://untreaty.un.org/english/faq.asp> (last visited Oct. 20, 2004). The U.N. treaty collection uses a format called TIF or TIFF. Like PDF files, TIFF files present an exact replica of the original page. LIBRARY OF CONGRESS, AMERICAN MEMORY, HOW TO VIEW, at <http://memory.loc.gov/ammem/amviewer.html#text> (last visited Oct. 20, 2004) (noting that TIFF files are “images of original pages”).
31. HeinOnline won the International Association of Law Libraries 2002 Web site Award, Commercial Category. Holger Knudsen, *President's Report*, 31 INT'L J. LEG. INFO. xi, xiii (2003). HeinOnline also won the American Association of Law Libraries [AALL] 2001 New Product Award. Press Release, American Association of Law Libraries, Hein-On-Line Receives 2001 Best New Product Award (July 10, 2001), available at http://www.aallnet.org/press/press010710_g.asp.
32. See, e.g., J-STOR: The Scholarly Journal Archives, at <http://www.jstor.org> (last visited Sept. 3, 2004).
33. News Release, U.S. Government Printing Office, The Government Printing Office Forges Ahead with Transformation to Digital Age 1, 1 (Mar. 4, 2004), available at <http://www.gpoaccess.gov/pr/media/2004/04news05.pdf> (copy on file with authors) (quoting Public Printer Bruce James: “More than 50 percent of our documents are born digital and will never be printed, except on demand and as needed.”).
34. Mary Rumsey, *Runaway Train: Problems of Permanence, Accessibility, and Stability in the Use of Web Sources in Law Review Citations*, 94 LAW LIBR. J. 27, 32–33, 2002 LAW LIBR. J. 2, ¶ 19 (showing percentage of law review articles with at least one Web source has increased from half of a percent in 1995 to twenty-three percent in 2000); see also Dana E. Neacsu, *Legal Scholarship and Digital Publishing: Has Anything Changed in the Way We Do Legal Research?* LEGAL REFERENCE SERVICES Q., 2002, no. 2/3, at 105, 112 (finding, in November 2000, that among articles published within the preceding six months, 535 law review articles in LexisNexis's law reviews database had cited at least four Web documents).

Moreover, law students, who write many of the law review articles, rely primarily on Westlaw and LexisNexis for their research.³⁵ A study of citations to law reviews by John P. Joergensen led him to conclude that “the apparent reliance of scholars on LexisNexis and Westlaw is increasing.”³⁶ As we note later, law review cite checkers find that authors of articles rely heavily on electronic sources.³⁷

¶16 Meanwhile, back at the library, severe budget and space pressures have led many libraries to cut print subscriptions, particularly to duplicate case reporter³⁸ and law review³⁹ sets. Academic law libraries have traditionally collected several sets of case reporters and often bought more than one copy of some law reviews.⁴⁰ Journal staffs’ needs for cite-checking copies have been a factor in collection development practices.⁴¹ Our survey found that many law reviews have been able to reserve copies of reporters and bound periodicals for their exclusive use during the citation-checking process. But as canceled subscriptions shift the status of collections from current to obsolete, fewer duplicate copies will be available.⁴² This scarcity will weaken journals’ ability to set aside copies for cite checking.

¶17 Most law journals whose policies require paper sources use interlibrary loan services to get them.⁴³ With a reported average cost per transaction of \$18.35 to borrowing libraries and \$9.48 to lending libraries,⁴⁴ this practice also strains library budgets.

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35. Matthew C. Cordon, *Beyond Mere Competency: Advanced Legal Research in a Practice-Oriented Curriculum*, 55 BAYLOR L. REV. 1, 29 (2003) (noting law students’ reliance on LexisNexis and Westlaw); Diana R. Donahoe, *Bridging the Digital Divide Between Law Professor and Law Student*, 5 VA. J.L. & TECH. 13, 77 (2000) (stating that once students received their Westlaw and LexisNexis passwords, “the computer was the only source of research.”).
36. John P. Joergensen, *Second Tier Law Reviews, LexisNexis and Westlaw: A Pattern of Increasing Use*, LEGAL REFERENCE SERVICES Q., 2002, no. 1, at 43, 52.
37. See *infra* note 52.
38. MARK McCABE, A PORTFOLIO APPROACH TO PRINT LEGAL SERIALS PRICING, at tbl. 2 (July 2002), at <http://www.prism.gatech.edu/~mm284> (last updated June 2003) (showing 12% decline in reporter subscriptions at academic law libraries between 1990 and 2000); Univ. of Minn. Law Library Technical Servs. Dep’t, Cancellations 2002 July–2003 March (2003) (showing cancellation of several sets of duplicate federal and regional reporters) (on file with authors); Univ. of Minn. Law Library Technical Servs. Dep’t, Cancellations 2001Oct–2002 June (2002) (showing cancellation of one set of duplicate regional reporters) (on file with authors).
39. See, e.g., Univ. of Minn. Law Library Technical Servs. Dep’t, Cancellations 2000 (2001) (showing cancellation of numerous duplicate or triplicate subscriptions to law reviews) (on file with authors).
40. Many law libraries have already reduced or eliminated duplicate reporter sets. James G. Milles, *Leaky Boundaries and the Decline of the Autonomous Law School Library*, 96 LAW LIBR. J. 387, 413, 2004 LAW LIBR. J. 25, ¶ 52. The University of Michigan is one law library that maintains duplicates of some law reviews. Kincaid C. Brown, *How Many Copies Are Enough? Using Citation Studies to Limit Journal Holdings*, 94 LAW LIBR. J. 301, 301, 2002 LAW LIBR. J. 20, ¶ 1.
41. Brown, *supra* note 40, at 303, ¶ 6.
42. As a rule, authors of law review articles cite to recent cases and other sources more than to older ones. Simon Canick, *Availability of Works Cited in Recent Law Review Articles on LEXIS, Westlaw, the Internet, and Other Databases*, LEGAL REFERENCE SERVICES Q., 2002, no. 2/3, at 55, 66.
43. See *infra* ¶¶ 40–41.
44. Mary E. Jackson, *Assessing ILL/DD Services Study: Initial Observations*, ARL BIMONTHLY REP., Oct./Dec. 2003, at 21, 22.

Frustrations

¶18 Informally, academic librarians have expressed increasing frustration with law students' insistence on using paper sources.⁴⁵ The Law Review Services Task Force, part of AALL's Academic Law Libraries Special Interest Section, has recommended that the task force or the section "work with the editors of the BlueBook [sic] . . . to address the student insistence of seeing paper copies of materials that were used by the author in electronic format."⁴⁶

¶19 As noted, many student and faculty authors conduct most of their research on LexisNexis, Westlaw, or the Web. This practice sets up a conflict with journals' cite-checking policies. Student cite checkers, caught in the middle, must search for paper versions of documents that may never have existed on paper or that their libraries would never collect. For example, legal researchers cite extensively to newspaper stories found on Westlaw and LexisNexis. A professor in Georgia may cite to an article from the *Seattle Times* that she found on Westlaw. Next, a journal in Illinois might accept the article for publication. The hapless cite checker who tries to find the *Seattle Times* at an Illinois law school library may become frustrated, as might the librarians whom the student asks for help. Even requesting a paper version from the author, the journal editor's usual last resort, will not solve the problem, since the author never had one.

¶20 Students also complain of being unable to find needed reporter and law review volumes, and of spending hours photocopying materials that they are not allowed to set aside for cite checking. Many students also express irritation at their journals' refusal to permit the use of PDF versions for cite checking.

¶21 Having witnessed and experienced these frustrations,⁴⁷ we believe journal editors and academic law librarians will benefit from learning how strongly law journals still prefer print, and their reasons for that preference.

Survey Methods

¶22 We developed our questions and tried them out on the editors of the four student-run journals published at the University of Minnesota Law School. With their feedback, we arrived at our final questions.

¶23 Next, we identified 140 law journals from the first fifty of the 177 schools listed in *U.S. News & World Report's* annual ranking of law schools. We addressed

45. Law Review Servs. Task Force, Academic Law Libraries Special Interest Section, Am. Ass'n of Law Libraries, Report (July 9, 2002) (copy on file with authors) (citing as "Identified Problems" with library/law journal relations, "[i]nsistence on receiving or reviewing paper copies even though the item is available in PDF format online or was used in an electronic version by the author").

46. Law Review Servs. Task Force, Academic Law Libraries Special Interest Section, Am. Ass'n of Law Libraries, Library Support for Law Journals (July 17, 2002), at <http://www.aallnet.org/sis/allsis/annualreports.html>.

47. We have heard these comments repeatedly while helping students gather sources for their cite-checking assignments.

our inquiry to the so-called “Tier One” schools for two reasons. First, we wanted to compare their policies to those at our own school, which is among the Tier One schools. Second, as a practical matter, we expected that Tier One schools’ law review offices would be more likely to have a secretary or office staff who could help us contact the editors-in-chief or the managing editors. Our results, therefore, may differ from those that surveying smaller law schools would yield. We directed our questions to the editor-in-chief or the managing editor, believing that either person would know the journal’s policy on electronic sources. To increase the number of responses, we re-sent the survey to journals that did not respond to our first e-mail message.

Response

¶24 Perhaps because we surveyed editors in April, when busy law students get even busier preparing for final exams, we received only forty-one e-mail responses (a 29% response rate). After reviewing these responses, we also tried to contact editors by telephone. In part, the goal of the telephone interviews was to check whether the editors who did not respond by e-mail would respond differently from the editors who had responded. (We speculated that perhaps those journals whose editors were more devoted to e-mail might approach electronic resources differently.) We surveyed nine additional journal editors by telephone. Fortunately, their responses conformed to those we received via e-mail. The combined response rate was 36%.

¶25 In both the e-mail and telephone responses, the editors’ comments proved much more interesting and revealing than the bare numerical compilations of their responses. Therefore, in this article we include many of these editors’ remarks.⁴⁸

Survey Results

A Variety of Procedures

¶26 While all the journals have the same goal for citation checking, each one uses different procedures to ensure the accuracy of citations in its articles. Interestingly, while the majority of journals report that they have an all-paper policy, their comments indicate that they often “informally” accept a range of alternative formats. Many editors say that their policy boils down to allowing the use of electronic sources on a case-by-case basis. One editor referred to this approach as a “more relaxed” policy; another editor said that “reality must temper the rule.” Some editors noted that the *Bluebook* requires paper sources “to the extent possible.”⁴⁹

48. All of the e-mail responses and the records of the telephone interviews are on file with the authors. Please contact us if you would like more information about them.

49. THE BLUEBOOK, *supra* note 9, R. 18.2.1.

Presumably, this case-by-case approach reflects the editors' interpretation of that phrase.

¶27 Other journal editors report that every source must be a paper document, without exception. If a source is unavailable at the school's own library, staff members must obtain it from another library. When staff members cannot find a source, the journal gets it from the author. If the author does not send it to the journal, the article indicates that the document is "on file with the author" or uses a different source to support the author's claim.

¶28 A journal at one school has recently modified its procedure to reflect the electronic availability of sources. Staffers must use paper sources whenever available at the law library or other libraries on campus. Thus, all reported cases and most law review articles are cite-checked against paper sources. The journal uses electronic sources when paper sources are unavailable on campus, and does not insist on pinpoint cites when the source is unpaginated (e.g., Westlaw and LexisNexis versions of newspaper articles). Finally, the journal uses interlibrary loan or other measures when neither paper nor electronic copies are available.

¶29 Further out on the electronic spectrum, another journal accepts any document in PDF format, any official government Web page, and all international or foreign materials on the Web. Finally, several Web journals accept almost any electronic document, in keeping with their paperless approach. They use the library paper copies only for the "old stuff" not included on HeinOnline or similar retrospective electronic sources.

A Strong Preference for Paper

¶30 As illustrated in figure 1, slightly more than half of the editors said their journals use only paper sources for cite-checking cases (except, of course, for "unreported" cases available exclusively online). An additional 28% currently accept PDF versions of cases. Only 20% permit cite checkers to use Westlaw or LexisNexis versions of reported cases.

¶31 For newspaper articles (see figure 2), 74% said that they require paper versions, or that they accept Westlaw and LexisNexis versions only if the paper version is unavailable. Only 26% routinely accept Westlaw, LexisNexis, or Web sources for newspapers.

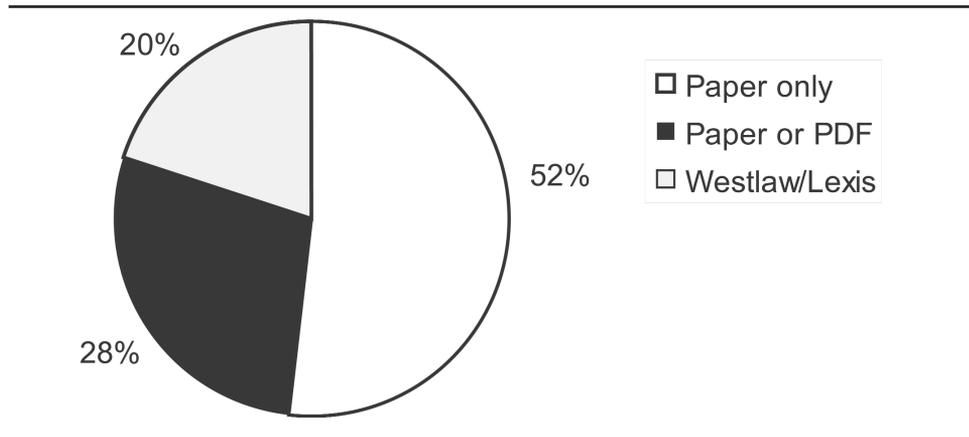
¶32 Respondents indicating a preference for paper justify their policy in a variety of ways (see figure 3).⁵⁰ Accuracy heads the list; 84% of respondents cited it as a reason to use paper.⁵¹ Several editors said that the LexisNexis and Westlaw electronic sources contain too many mistakes. One remarked that in at least one

50. Specific responses will not be identified by school or individual editor quoted, as we promised anonymity. Respondents could list as many reasons for their preference as they wanted.

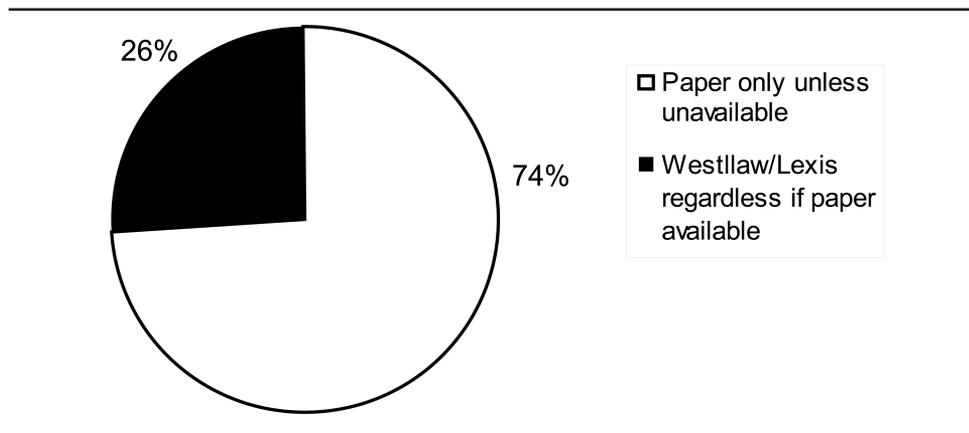
51. Darby Dickerson, advising law review editors on best practices, noted that "on-line sources may contain typographical errors and misnumbered internal pages and often do not reflect the actual typeface, such as italics." Dickerson, *supra* note 3, at 506.

Figure 1

*Formats for cite-checking cases:
Percentage of law reviews accepting each format*

**Figure 2**

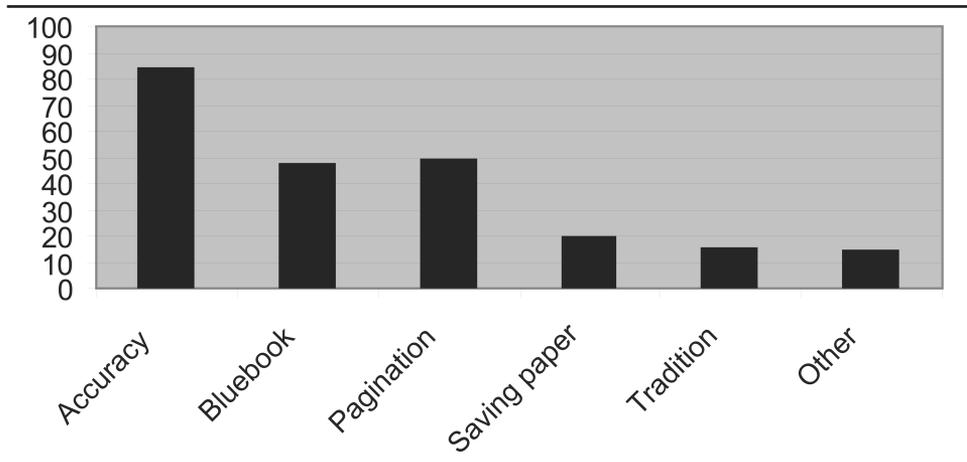
*Formats for cite-checking news articles:
Percentage of law reviews accepting each format*



case, LexisNexis had replaced a somewhat obscure word in the paper version with a more common—but incorrect—word in the electronic text. Another editor labeled accuracy “the paramount reason” to prefer paper sources, and continued, “we find huge discrepancies—all the time.”⁵² A few editors mentioned that paragraph breaks in electronic versions frequently fail to correspond to those in the paper sources. Others pointed out that Westlaw and LexisNexis versions do not

52. Because editors reported finding errors when they checked authors’ work against paper sources, authors must be relying heavily on electronic sources. If not, the editors would find far fewer errors of the kinds cited in this section.

Figure 3

Reasons for preferring paper

reflect italics, boldface fonts, and other typesetting characteristics in the original text.⁵³

¶33 Commentators have remarked on the loss of such peripheral information during digitization. John Seely Brown and Paul Duguid, who analyzed the persistence of paper documents in *The Social Life of Information*, note that digitizing text requires decisions about “where the information ends and the residue . . . begins.”⁵⁴ When West and LexisNexis began creating their own electronic versions of law review articles, cases, and other legal materials, they faced technological constraints and cost barriers to capturing features of the printed page such as fonts. Obviously, their decisions in the face of those constraints have affected cite checkers’ willingness to rely on LexisNexis and Westlaw documents for cite checking.

¶34 Half of respondents reject electronic documents because these sources (particularly news stories) often lack internal page citations available on paper. Cite checkers need these page numbers because the *Bluebook* requires pinpoint or “jump” citations that indicate the precise page or pages referred to by the author.⁵⁵ Moreover, as shown in figure 3, nearly half the respondents believe that the *Bluebook* mandates or prefers paper sources. Twenty percent of editors require paper sources, in part, to save paper.⁵⁶ About 15% admit that they require paper because that was the preference of previous editorial boards.

53. See *supra* note 51.

54. JOHN SEELY BROWN & PAUL DUGUID, *THE SOCIAL LIFE OF INFORMATION* 189 (2000).

55. THE BLUEBOOK, *supra* note 9, R. 3.3(a). The *Bluebook* does not, however, require internal page citations for newspaper articles. *Id.* R. 16.5(a).

56. This rationale assumes that cite checkers print out electronic sources and do not photocopy paper sources.

¶35 Finally, about 15% cite other reasons for preferring paper, such as a view that paper sources imply more thorough research. Additional reasons in the “Other” category included the assertions that “paper sources are a state bar requirement,” “finding paper sources is easier for readers,” and “doing paper research is part of a legal education.” One of the most interesting comments in this category came from the editor-in-chief of a prestigious law review who said that students read paper more carefully than electronic sources.⁵⁷

¶36 Although some law journal editors have welcomed PDF documents as a useful alternative to paper sources, others still have doubts. One editor commented that “a PDF is an image, so it *should* be okay, but we prefer hard copy.” Brown and Duguid identify one possible reason for the greater credibility of paper: “Though digital documents may look the same, they pick up fewer institutional and material traces along the way.”⁵⁸ Unlike a paper document, a digital document “bears little evidence of its source and author.”⁵⁹ Despite students’ allegiance to electronic research, they apparently place greater trust in well-thumbed bound reporters and law reviews. This distrust of electronic documents may diminish as students become more familiar with image-based formats, as opposed to more fluid HTML pages.⁶⁰

¶37 Research on student preference among formats for research, as opposed to citation checking, has yielded mixed results. The *OCLC White Paper on the Information Habits of College Students* showed that books and journals continue to receive heavy use on American campuses, and found that most students “do not exhibit a strong preference for electronic copies over paper copies.”⁶¹ On the other hand, Marguerite Most cites contrary studies showing that students and other researchers have embraced electronic journals.⁶²

Preference for Electronic Documents

¶38 Certainly, some journals and students have welcomed electronic sources. Those journals whose editors approve of using electronic sources in preference to paper also listed various reasons for their preference. Some editors like the “portability.” One cited the joy of having no late fees for overdue materials. The editor of an exclusively online journal opined that electronic sources reduce the time required for a cite check, with no impact on accuracy. The editor continued, “That

57. One study of college students’ use of electronic books picked up similar comments; students “thought e-books adversely affected the amount of information that they absorbed.” S. David Mash, *Libraries, Books and Academic Freedom*, ACADEME, May/June, at 51, 51 (2003).

58. BROWN & DUGUID, *supra* note 54, at 188.

59. *Digital Archives*, CHANGE, Sept./Oct. 2002, at 9, 9.

60. “Some documents, such as Web pages, are constantly changing.” BROWN & DUGUID, *supra* note 54, at 198.

61. ONLINE COMPUTER LIBRARY CTR., WHITE PAPER ON THE INFORMATION HABITS OF COLLEGE STUDENTS 6 (June 2002), available at <http://www5.oclc.org/downloads/community/informationhabits.PDF>.

62. Most, *supra* note 18, at 194–96. See also sources cited *supra* notes 35–36, showing law students’ reliance on LexisNexis and Westlaw.

benefit is something we tout when we recruit ILs to join our journal.” Finally, one editor told us, “The library forced us into it. In the past year, they required that we use electronic sources.”⁶³

¶39 Another respondent praised electronic sources because they make available a broader array of materials than any one library can house. However, the same student raised the issue of sources that disappear, preventing future readers from finding them.⁶⁴

Interlibrary Loan and Other Options

¶40 A large percentage of editors—about 87%—reported that their journals use interlibrary loan to obtain paper copies of sources. Some editors, however, expressed frustration with the slowness of the process. A few commented that they could not use interlibrary loan because the materials fail to arrive fast enough (e.g., “Our tight time frames for completing cite checks make ILL somewhat ill suited”).

¶41 Many journals also require their staff members to visit other libraries to make photocopies of information not available in the school’s own law library. For example, the editor of a law review located in the Washington, D.C., area, noting that proximity to the Library of Congress makes nearly any source available in paper or microform, stated: “Everything is done ‘by the books.’ The Library of Congress is available to us, so we can get pretty much anything in hard copy.” Cite checkers at the University of Minnesota Law School must visit neighboring law schools to make photocopies of articles from law review volumes temporarily unavailable in their own law library.

Multiple Reporter Sets

¶42 Fifty-eight percent of journal editors said their libraries have enough duplicate sets of reporters that the journal can set aside copies of reporters for cite checking. In other words, the journal staff members find the reporter volumes cited in an article and collect them all in a designated area—perhaps a law review office, a series of book trucks, or an area of shelving. Most editors whose libraries offer this option prefer it to photocopying.⁶⁵ They usually cite the time and cost savings as reasons for their preference; some also note that the practice saves paper.

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63. None of the other respondents implied that their libraries had any control over what kind of sources the journals use for cite checking. *But cf.* Posting of Merle J. Slyhoff, mslyhoff@law.upenn.edu, Re: Electronic Cite-Checking by Law Reviews, to lawlib@ucdavis.edu (Dec. 4, 2002) (stating that cite checkers for journals of the University of Pennsylvania Law School are now required to use PDF versions after Slyhoff, Document Delivery and Auxiliary Services Librarian, “convinced the journals that since it’s the same as a photocopy, it’s acceptable”) (copy on file with authors).
 64. Other authors have discussed the “dead links” problem in detail. *See, e.g.*, Rumsey, *supra* note 34; Neacsu, *supra* note 34; Coleen M. Barger, *On the Internet, Nobody Knows You’re a Judge: Appellate Courts’ Use of Internet Materials*, 4 J. APP. PRAC. & PROCESS 417, 438–39 (2002) (discussing disappearance of cited sources from judicial opinions).
 65. Eighty-six percent of those editors able to set aside copies of reporters prefer to do so; the remaining 14% prefer to photocopy each case.

¶43 Editors from schools with three or more journals generally say their libraries lack enough duplicate reporters to make this practice possible. In their survey responses, they bemoaned the inconvenience and expense of photocopying cases.

Future Practice

Editors' Predictions

¶44 In addition to getting a snapshot of journals' current practice, we asked editors what they expected to do in the future. Most editors were willing to guess, but the nature of law review management makes any such predictions tenuous. Because editorial boards change every year,⁶⁶ journal policies can evolve more quickly than those of most institutions. On the other hand, because of the student members' heavy course and journal workloads, they also tend to follow the policies already in place.⁶⁷

¶45 Thirty-eight percent of respondents said that they knew of a recent policy change on electronic resources. Each such change expanded the use of electronic documents. As examples, editors cited increasing use of Internet sources, PDFs, and electronic versions of United Nations documents and newspapers. One respondent editor from a journal that requires paper sources where possible commented: "I think we all know this policy needs to change. I think your survey will help us do that." Another editor took credit for relaxing the standards, saying, "The evolution began last year, and under my tenure we made it a standard rule." An illustration of the state of change at one journal is this response:

[Format policy] is in total flux, with authors trying to use more and more Internet sources. We allow cites to PDF documents, but .html cites are more problematic. We try and replace an .html cite with a hard copy or PDF source, but that is getting increasingly hard. We generally only allow cites to .html sources on government or quasi-government Web sites.

¶46 Many respondents expect changes. Some editors have learned that electronic sources are the "meaningful" sources to their authors and readers. One commented, "Sadly, paper has become less and less relevant over time as a canonical source." Another editor predicted:

I think in the future we will primarily use electronic sources. We will probably get rid of the requirement to print all of the sources, and will use a system of saving an electronic

66. Sonali R. Kolhatkar, *Law's Greatest Influence: The Law Review Process*, 30 STETSON L. REV. 571, 572 (2000) ("Law reviews and journals are notorious for their annual board transitions. Most law reviews allow a student to be an editor for only one year. After one year, new editors are elected and thus ideas and skill levels change.").

67. Mary Pat Byrn, 2002–2003 Editor-in-Chief of the *Minnesota Law Review*, pointed out that law review editorial boards often follow their predecessors' practices because they lack the time to consider alternatives. Based on her suggestion, we added to our survey the choice of explaining a preference for paper cite checking as "because that's what last year's staff did."

copy of the sources onto a drive accessible to all editors and staffers. We are working with the school to create such capabilities.

¶47 Perhaps surprisingly, however, we found a solid core of editors who believe that their journals will continue to require paper sources indefinitely. Of editors whose journals currently require paper sources, 73% reported that they do not expect that policy to change. Twenty-seven percent expect that their journal will eventually change its policy to accept electronic sources. These editors' guesses about when their journal might change ranged from one to five years. Several editors declined to guess. One said only that the journal would change "[w]hen it is appropriate (meaning the electronic versions have attained a level of reliability beyond the current standards)." Another noted that his journal revisits the subject each year. Finally, another respondent said that more guidance from the *Bluebook's* editors would help: "The online sources of the *Blue Book* [sic] are very incomplete. Once they flesh that out a bit more, it will instruct journals how and when to cite to electronic sources, creating more legitimacy and consistency to citing to those sources."

Whither The Bluebook?

¶48 At this writing, *Bluebook* editors from Yale Law School are working toward a revision of Rule 18 on electronic sources, to be incorporated into the eighteenth edition.⁶⁸ While the students who edit the *Bluebook* have made no final decision on paper versus electronic sources, they expect the eighteenth edition to retain the "paper only" rule.⁶⁹

Trends in Electronic Sources and Library Resources

¶49 Many law school libraries face "flat or declining" budgets.⁷⁰ Given the increased availability of material in electronic formats and the rising costs of paper subscriptions,⁷¹ libraries seem unlikely to reverse their pattern of canceling duplicate subscriptions. Similarly, no one expects law students or other law review authors to retreat to paper-based research.⁷² As one law librarian has said, "Students who grew up with the Internet will use available electronic resources and avoid print."⁷³ Thus, whatever policy law journals adopt should reflect these realities.

68. E-mail from Todd Larson, *Harvard Law Review* editor, to April Schwartz, Associate Director for Information Technology Services and Business Law Librarian, University of Minnesota Law School (Feb. 23, 2004) (on file with authors).

69. Telephone interview with Eric Fleisig-Greene, Editor-in-Chief, *Yale Law Review* (Feb. 24, 2004).

70. Judith A. Gaskell, *Commentary on "Libraries, Users, and the Problems of Authorship in the Digital Age,"* 52 DEPAUL L. REV. 1241, 1242 (2003); Carol A. Roehrenbeck, *Introduction to "The Law School Library Director of the Twenty-first Century: What Deans Think,"* 95 LAW LIBR. J. 419, 419, 2003 LAW LIBR. J. 29, ¶ 1 (identifying "a shift in collection format from hard copy to digital" and "tighter budgets" as current challenges to academic law libraries).

71. Mark J. McCabe, *Law Serials Pricing and Mergers: A Portfolio Approach 1* [working paper] (Nov. 2003) (stating that law periodical prices experienced a 75% increase from 1991 to 2000), at <http://www.prism.gatech.edu/~mm284/bepress.pdf>.

72. Barger, *supra* note 64, at 422–25 (describing the attractiveness of the Internet to legal researchers).

73. Canick, *supra* note 42, at 66.

Creating an Ideal Policy

¶50 Ideally, the next edition of the *Bluebook* will extend the same treatment to image files as it does to microfiche by permitting citations to PDF files as if they were paper.⁷⁴ Interestingly, journals from a “*Bluebook* school”—a school whose editors participate in periodic revisions of the *Bluebook*—are already treating PDF files like paper.⁷⁵ Other law librarians who have considered cite checking with PDF documents have assumed that these sources are the same as paper.⁷⁶ In 2002, Marguerite Most published a wide-ranging article on many aspects of electronic journals in law libraries. While discussing the availability of journal articles in PDF format, Most observed that having electronic documents that look exactly like the printed page is “important” to law review authors and cite checkers.⁷⁷ Similarly, Dana Neacsu’s 2002 critique of electronic sources in legal scholarship exempted “image-type documents” because they do not share most Web documents’ unreliability and mutability.⁷⁸ We concur with these authors and hope that the next edition of the *Bluebook* will recognize the value of image-based formats. PDF documents from large database vendors and government agencies are more likely to remain accessible than those from smaller organizations, such as educational institutions or nongovernmental organizations that place a few PDFs on their Web sites. Thus, using these smaller organizations’ PDF documents in cite checking is more troubling. Often, however, these PDF documents are not distributed in any other format. We have reluctantly concluded that there is no realistic alternative to their use in cite checking.

¶51 As for electronic documents in non-image-based formats, we do not believe that these documents should receive the same treatment as paper. Changing the *Bluebook* and law review practice to permit cite checking against any electronic document would certainly make life easier for journal staff members. Many law librarians, however, have expressed serious concern about the quality of electronic documents such as LexisNexis and Westlaw non-PDF cases, and have documented problems with them.⁷⁹ As described earlier, the students

74. THE BLUEBOOK, *supra* note 9, R. 18.4 (stating that authors need not specify that they found a document on microfiche “unless it would otherwise be difficult for a reader to identify and obtain the source”).

75. See Posting of Merle J. Slyhoff, *supra* note 63.

76. See *supra* note 18.

77. Most, *supra* note 18, at 207.

78. Neacsu, *supra* note 34, at 111.

79. Contributors to a moderated electronic discussion sponsored by the American Association of Law Libraries cited numerous examples of such problems. See Sez Who?: Information Authority and Integrity, AALL Professional Development Online Forum (Jan. 26–Feb. 8, 2004), at <http://www.aallnet.org/prodev/listserv.asp>. As an example of even more serious inaccuracies in electronic versions, Mary M. McCormick of the Florida State University College of Law Library described a mistake in an electronic version that led to two separate lines of cases, reflecting whether the court used the paper or the electronic version. Posting of Mary M. McCormick, mmccormi@law.fsu.edu, Differences Between Electronic and Paper West Reporters, to law-lib@ucdavis.edu (Sept. 5, 2003) (copy on file with authors).

who check cited sources also question the accuracy of these electronic versions.⁸⁰ Other HTML documents such as organizations' Web pages or Web newspaper stories exhibit instability and mutability.⁸¹ Permitting widespread reliance on these non-image-based documents damages the quality and credibility of the journals' work.

¶52 Many survey respondents asked to see our results, when available, because they want to know how their counterparts at other law schools handle the issue of electronic sources. We hope that law review editors and librarians will read and share our results. Perhaps they can use the results to encourage journals to accept PDF and TIFF formats for source checking.

¶53 Librarians can also help by teaching law journal staff members about the availability and reliability of PDF and other image-based files. In addition, they should address a minor training issue that arises with Westlaw PDF cases. When a Westlaw user, even one with a law school password, clicks on the PDF document option, Westlaw gives the user a message that getting the PDF document "will incur additional charges." Law school users, however, do not pay a special charge for PDF documents.

¶54 Librarians should also teach cite checkers to search for alternative paper sources. For example, many newspaper articles are based on wire stories and appear in only slightly modified form in most large newspapers.⁸² While most libraries do not collect newspapers from other cities, university libraries usually receive and retain the *New York Times* and the *Washington Post*. In addition, they ordinarily have the major local newspaper.⁸³ Thus, to avoid relying on online newspapers, students could find the same content in a source available in print or on microfiche at their local library, and work with the author to change the source cited.⁸⁴

¶55 Finally, law school libraries might even work with journals to set up network space for storing electronic documents, in both image-based and other formats. At least one law school has begun working toward this approach.⁸⁵ Cite checkers could identify, download, and store relevant documents to a folder on a shared network

80. See *supra* ¶¶ 32–33.

81. BROWN & DUGUID, *supra* note 54, at 198; Rumsey, *supra* note 34, at 36–37, ¶¶ 28–30.

82. READERSHIP INST. OF THE MEDIA MGMT. CTR AT NORTHWESTERN UNIV., NEWSPAPER INDUSTRY CONTENT ANALYSIS REPORT: DATA TABLES & DEFINITIONS 1 (June 2001), at http://readership.org/content/content_analysis/data/industry_content_report.pdf (giving percentages of stories based on wire service content ranging from 43.5% at higher-circulation papers to 56.9% at lower-circulation papers).

83. See, e.g., Clark Library, Univ. of Portland, Collection Development Policy Statement, http://lewis.up.edu/library/libraryinfo/policy_coll_dev.html (last updated Sept. 21, 2004); UCLA Library, Newspaper Collection & Retention Policy, <http://www.library.ucla.edu/policies/newspapers.html> (last updated July 12, 2004).

84. Some newspaper stories will appear only on a newspaper's Web site. BROWN & DUGUID, *supra* note 54, at 283 n.18. Given the impermanence and inaccessibility of Web newspaper archives, authors should check alternative print or commercial electronic sources before relying on ephemeral Web documents.

85. See *supra* ¶ 46.

drive. With shared access, all journal staff members could use the documents (even simultaneously) to check the validity of article citations.

¶56 Whether or not libraries take that step, any approach that encourages the use of image-based documents would benefit cite checkers and libraries. Because multiple users can access electronic documents simultaneously, use of a PDF document from a law review, reporter, or the *Statutes at Large* by one law review member will not prevent another student from using it. Journals could save money by using documents in electronic format rather than printing them. Even if journals require their cite checkers to print out PDF and TIFF documents, however, students will spend less time gathering documents than if they must photocopy them. Most importantly, the inherent accuracy of image-based documents will enable journals to maintain their standards of quality.

Conclusion

¶57 Technology remains a moving target, making prescriptions difficult. But we believe that image-based legal databases such as those offered by Hein, LexisNexis, and West give law journals and libraries a way to decrease the burden of cite checking. With a little help from the editors of the *Bluebook*, some attention from journal staff members, and an educational effort by librarians, life will be a little easier for all of us.