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How Librarians Can Help Improve Law Journal Publishing*

Benjamin J. Keele** and Michelle Pearse***

Librarians are well positioned to improve law journal publishing and help it evolve in the ever-changing digital environment. They can provide student editors with advice on a variety of issues such as copyright, data preservation, and version control. Librarians can also help journals adopt technical standards and improve the discoverability and usability of journal content. While few libraries will be able to adopt all these suggestions, a checklist of ideas is provided to help librarians select those that are most suitable to their libraries and journals.

Introduction

¶1 Numbering near one thousand titles and growing, more law journals than ever are now being published by U.S. law schools.¹ Most of these journals are edited by students, and the fact that more journals are being established indicates there is demand from students for opportunities to work on a journal or from professors for publication venues. Editors and authors share a common goal to produce legal scholarship that is read, cited, and influential.

¶2 Law librarians assist in the production and dissemination of law journals at several points in the process. Librarians help produce legal scholarship by helping authors use resources in their research. After articles have been written and accepted by journals, librarians assist editors and staff as they verify references and

* © Benjamin J. Keele and Michelle Pearse, 2012. This article is licensed under the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original authors and source are credited. The authors would like to thank Sarah Rhodes and Erika Wayne for their helpful comments on earlier drafts of the article, and Rich Leiter, Tom Boone, Roger Skalback, Ken Hirsh, and Valerie Craige for helpful comments during a Law Librarian Conversations podcast related to the article. Many of the ideas in this article were first presented in a poster session at the 2011 Annual Meeting of the American Association of Law Libraries. The poster is available at <http://scholarship.law.wm.edu/libpubs/25/>, and additional resources on library support for law journal publishing are available at <http://libguides.law.harvard.edu/lawjournalpublishing>, archived at <http://www.webcitation.org/67WzAbNL3>. As an example of preserving our online sources, we have archived snapshots of most online citations using WebCite (<http://www.webcitation.org>) and added a URL for that snapshot to the citation; because of this, “last visited” dates have been omitted from those citations. We have not archived online sources that are in reliable repositories or when the WebCite tool failed to accurately capture the source.

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1. See John Doyle, *The Law Reviews: Do Their Paths of Glory Lead but to the Grave?*, 10 J. APP. PRAC. & PROCESS 179, 180 (2009).

bring the articles into conformity with citation standards.² In recent years, libraries have also become increasingly engaged in providing platforms through which journals may publish their content through online repositories and publishing systems, such as DigitalCommons,³ Open Journal Systems (OJS),⁴ WordPress,⁵ Drupal,⁶ and DSpace.⁷

¶3 This is hardly a complete list of how librarians contribute to journal production, and there are other services librarians are especially qualified to provide to law journals. Our article considers ways in which libraries can broaden their roles in supporting law review publication and increasing the visibility and discoverability of these journals, in both the long and the short term. While libraries have been widely engaged in providing various services to journals (e.g., instruction, support for citation checking, and repository and other publishing platforms), we seek to reflect on activities that do not seem so common and to think broadly about how libraries and librarians might become more actively engaged in publishing law reviews and evolve in their roles as partners in the publication of law reviews. A checklist, included here as an appendix, reminds librarians of issues that could be raised with law review editors, IT departments, and anyone else engaged in the law journal production process.

¶4 Just as university libraries have found themselves increasingly partnering (or in some cases merging) with their university presses,⁸ law school libraries should be positioning themselves to support their journals' evolution in the new digital publishing landscape by advising and supporting innovative initiatives in publishing, becoming more engaged in supporting the editorial production of the journal, and helping with marketing and retailing. Librarians are well situated to lend their expertise to student editors, who do not possess much training in information distribution and retrieval and do not tend to think about the long-term institutional goals of their journals.

¶5 Our article builds on discussion at meetings in reaction to the Durham Statement which advocated for the transition of law reviews to a purely digital

2. For a discussion of how librarians can assist law journals with training, interlibrary loan, and cite-checking, see Pamela D. Burdett, Dorothy C. Clark & Sally G. Waters, *What Librarians Can Do for Your Law Review*, 30 STETSON L. REV. 593 (2000).

3. DIGITALCOMMONS, <http://digitalcommons.bepress.com> (last visited May 29, 2012).

4. *Open Journal Systems*, PUBLIC KNOWLEDGE PROJECT, <http://pkp.sfu.ca/?q=ojs>, archived at <http://www.webcitation.org/67WzSv8jk>.

5. WORDPRESS.COM, <https://wordpress.com>, archived at <http://www.webcitation.org/67WzT2R78>.

6. DRUPAL, <https://drupal.org>, archived at <http://www.webcitation.org/67WzbsakH>.

7. DSPACE, <http://www.dspace.org>, archived at <http://www.webcitation.org/67WzbkGcg>.

8. As of 2010, at least sixteen university presses reported to academic libraries. Richard W. Clement, *Library and University Press Integration: A New Vision for University Publishing*, 51 J. LIBR. ADMIN. 507, 520 (2011). Recent reports and scholarship stress the increasing role of the library in publishing services. See LAURA BROWN ET AL., *UNIVERSITY PUBLISHING IN A DIGITAL AGE* (July 2007), available at <http://www.st.ithaka.org/research-publications/university-publishing-digital-age>; SPARC, *LIBRARY PUBLISHING SERVICES: STRATEGIES FOR SUCCESS; FINAL RESEARCH REPORT* (Mar. 2012), <http://wp.sparc.arl.org/lps/>, archived at <http://www.webcitation.org/67Wzrg4sK>; Maria Carpenter et al., *Envisioning the Library's Role in Scholarly Communication in the Year 2025*, 11 PORTAL: LIBR. & ACAD. 659 (2011) (contemplating potential future roles for libraries in scholarly communication through various scenarios, including the library as publisher).

mode of publication.⁹ While these meetings and papers emanating from them have laid the groundwork for a technical infrastructure and requirements for making the Durham Statement work, our more modest goal is to outline tools and resources to enable law librarians to have conversations with their journal editors and explore various activities for helping them publish better. We hope to flesh out concrete ways in which law libraries can increase their role in supporting student publications and expand on their traditional services and functions.

Copyright Agreements and Policies

¶6 For law journal editors and authors, profit is not the primary motivation. While some journals and authors may receive royalties from database vendors or textbook publishers, most participants are unpaid, or at least not paid beyond their normal salaries. Because copyright is primarily an economic privilege, it would seem that editors and authors would be largely unconcerned with copyright matters, and in many ways this assumption is being increasingly borne out in law journal policies.¹⁰ Since the late 1980s, law journal publication agreements have, in general, become less demanding of exclusive rights from authors. Rather than asking for a complete transfer of copyright, many journals now request a temporary exclusive license or even a nonexclusive license.¹¹ Many journals also liberally grant permission for reproduction of articles, generally provided that the copying is for educational use, copies are distributed at or below cost, proper copyright notices and attributions are given, and notification is sent to the journal.¹² Further indicating that these liberal policies are common is the National Conference of Law Reviews' *Model Code of Ethics*. The *Model Code* provides that while journals have the right to ask for copyright in published articles, they should permit authors who wish to retain copyright to do so, and in any case should let authors republish and

9. See, e.g., *Implementing the Durham Statement: Best Practices for Open Access Law Journals*, DUKE LAW SCH., <http://www.law.duke.edu/libtech/openaccess/conference2010>, archived at <http://www.webcitation.org/67X094RpX>. For more about the Durham Statement, see Richard A. Danner, Kelly Leong & Wayne V. Miller, *The Durham Statement Two Years Later: Open Access in the Law School Journal Environment*, 103 LAW LIBR. J. 39, 2011 LAW LIBR. J. 2; Wayne V. Miller, *A Foundational Proposal for Making the Durham Statement Real* (Duke Law Working Paper 29, 2010), http://scholarship.law.duke.edu/cgi/viewcontent.cgi?article=2948&context=faculty_scholarship. See also Tom Boone, *Librarians Key to Open-Access Electronic Law Reviews*, LIBRARY LAWS ARE MEANT TO BE BROKEN (Sept. 3, 2009, 3:57 P.M.), <http://tomboone.com/library-laws/2009/09/librarians-key-open-access-electronic-law-reviews>, archived at <http://www.webcitation.org/67X0Ijw10>.

10. See Jessica Litman, *The Economics of Open Access Law Publishing*, 10 LEWIS & CLARK L. REV. 779, 783 (2006) ("Indeed, copyright is sufficiently irrelevant that legal scholars, the institutions that employ them, and the journals that publish their research tolerate considerable uncertainty about who owns the copyright to the works in question, without engaging in serious efforts to resolve it").

11. See Benjamin J. Keele, *Copyright Provisions in Law Journal Publication Agreements*, 102 LAW LIBR. J. 269, 274, 2010 LAW LIBR. J. 15, ¶ 18.

12. Examples of these provisions can be found in the *Duke Law Journal*, the *Indiana Law Journal*, the *Minnesota Law Review*, the *Pepperdine Law Review*, the *U.C. Davis Law Review*, and the *William & Mary Law Review*.

adapt their articles.¹³ The *Model Code* also calls on authors to grant journals' requests to republish, especially in electronic databases.¹⁴ In 1998, an Association of American Law Schools (AALS) special committee developed a fairly liberal model publication agreement for journals and authors.¹⁵

¶7 However, some sort of written copyright transfer or license is crucial to journals. These agreements provide the journal with clear authority to distribute articles through a variety of media. Journals want to distribute their content through as many reputable channels as possible, including the journal's web site, LexisNexis, Westlaw, HeinOnline, and other disciplinary databases. Editors also need to ensure that their journals retain sufficient rights to distribute articles through new vendors that may appear in the future. Copyright lasts a very long time, so it is important for journals to have the flexibility to use distribution venues that were unforeseen when articles were first published.¹⁶

¶8 Authors, on the other hand, wish to post their articles, whether in draft or final form, on their personal web sites and sites like the Social Science Research Network (SSRN) or bepress. Many editors, recognizing that most law journals are products of educational institutions, also want to permit educational and noncommercial reproduction of their articles. Most journals do not rely on subscription revenues as a significant source of funding, and so should not require more than nonexclusive licenses that give both journal and author great flexibility for reproducing and distributing their work.

¶9 Depending on the level of the library's supervision over journals, librarians can help guide editors to adopt publication agreements and copyright policies that provide as much flexibility as possible for both the journal and the author to achieve their scholarly goals. To enable maximum circulation and impact of legal scholarship, librarians should encourage journals to use publication agreements that give the author and the journal nonexclusive rights to reproduce and distribute articles, provided that proper attribution is given. While U.S. copyright law does not protect a right of attribution for written works,¹⁷ publication agreements should generally provide that authors credit the journal as the point of first formal publication and that the journal credit the author in any excerpts or later publications. For a few journals, royalties may be a significant source of funding, but even for journals concerned about maintaining subscriptions, an exclusive license for a short period, between six months and two years, should suffice. A transfer of copyright is now outside the norm of law journal practice and should require special justification.

¶10 Journals often also have copyright policies for the purpose of exercising their copyright over the journal compilation and the licenses to individual articles. As mentioned above, many journals explicitly grant permission for classroom

13. 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, 519 (1992) (Rule 2.5).

14. *Id.* at 525 (Rule 4.5).

15. AALS Special Committee, Model Author/Journal Agreement (1998), available at <http://www.aals.org/deansmemos/98-24.html>, archived at <http://www.webcitation.org/67X0Z3Jsc>.

16. See Michael N. Widener, *Safeguarding "The Precious": Counsel on Law Journal Publication Agreements in Digital Times*, 28 JOHN MARSHALL J. COMP. & INFO. L. 217, 241 (2010).

17. 3 MELVILLE B. NIMMER & DAVID NIMMER, NIMMER ON COPYRIGHT § 8D.03 (2011).

reproduction as long as proper attribution is given and copies are not sold at a profit.

¶11 A new mode of distribution for articles is the institutional repository, an online database of scholarly works by an academic institution's faculty. A number of major research universities have recently adopted open access policies that encourage or require faculty to post their scholarly works online.¹⁸ Journals can facilitate author compliance with these policies by providing in their agreements and copyright policies that academic employers can archive their employees' work without further permission. Such a policy will reduce transaction costs for both journals and libraries and further their educational goals. Any embargo on open access posting of articles can be specified. Librarians can explain to editors the benefits of permitting posting in institutional repositories and help craft policy language that serves both journal and library interests.¹⁹

¶12 Librarians should also encourage transparency of copyright agreements and policies. Very few journals make their agreements and policies available on their web sites.²⁰ This lack of disclosure makes it more difficult for authors concerned with retaining their rights to determine whether a journal has an agreeable policy, and it complicates the work of librarians and authors who want to know if they can distribute or use articles in certain ways. Librarians can encourage their institution's journals to make their copyright documents publicly available and submit their policies to databases that provide a centralized collection of scholarly journals' copyright policies.²¹

Version Marking

¶13 A consequence of the proliferation of electronic distribution channels for articles is that print journals are no longer the first or primary means by which researchers obtain journal content. For example, an article can be posted as a draft on SSRN, bepress, and any other web site to which the author wishes to post. As the author revises the article, she may add new drafts to these sites. Once the article is accepted by a journal, it is cite-checked, edited, and formatted for publication in the journal. This published version may then become available on the journal's web

18. See *Registry of Open Access Repositories Mandatory Archiving Policies*, ROARMAP, <http://roarmap.eprints.org>, archived at <http://www.webcitation.org/67X0cEmRB>.

19. Some have suggested adoption of a Creative Commons license for the purposes of creating an infrastructure for the Durham Statement. See, e.g., Miller, *supra* note 9, at [2]. An earlier project to promote open access law journals issued a statement of principles that included noninterference with an author's desire to publish under a Creative Commons Attribution-Noncommercial Use license. *Open Access Law: Principles*, SCIENCECOMMONS, <http://sciencecommons.org/projects/publishing/oalaw/principles>, archived at <http://www.webcitation.org/67X11A9RM>.

20. Keele, *supra* note 11, at 273, ¶ 15.

21. The most prominent service for most academic disciplines is SHERPA/RoMEO, <http://www.sherpa.ac.uk/romeo>, archived at <http://www.webcitation.org/67X14OKDZ>. Michael Froomkin has also created CopyrightExperiences, a wiki that contains information from law journals. COPYRIGHT EXPERIENCES, http://commons.uml.edu/index.php?title=Main_Page, archived at <http://www.webcitation.org/67X15Ktil>. Coordinated efforts among law libraries and journals could help make information consistently available in a variety of places where people look for journal policies.

site, vendor databases, and any of the sites to which the author posts it. Even after formal publication, the author could revise, update, or correct the article and put that version online.

¶14 This scenario presents at least two challenges. First, by posting drafts, the published version, and even later revisions, authors increase the risk that researchers will find and possibly cite works that represent their preliminary thoughts. Some authors help mitigate this risk by putting notices on their papers indicating that they are drafts and should not be cited. But these admonitions cannot prevent a researcher from citing a draft, especially if the final version has not yet been published or is not readily accessible. The ability to post drafts online for comment accelerates scholarly dialogue and makes legal scholarship more accessible to researchers outside the academy, but it also increases the risk that inaccurate or unpolished drafts will compete with their more complete and vetted successors. Second, researchers may have difficulty knowing the provenance of the article they are reading and may unknowingly use articles that have not been revised, proof-read, or cite-checked. Multiple versions of a single intellectual work also make proper attribution to it more complicated than it would be if only one version were available.

¶15 One may wonder how different a draft article on SSRN is from the article published in the print journal. We do not know of any studies comparing drafts to formally published articles in legal scholarship, but several studies have examined the differences in other fields. One study of articles published by Blackwell found that a significant number of changes were made, most often to correct erroneous references.²² A second study of a small number of biology and social science articles found that numerous changes were made between drafts posted online and the final, published article. These edits generally made the papers more readable, but did not affect the validity of the conclusions. The study's authors also found that some of the drafts posted by authors became inaccessible.²³ Lastly, one study inspected drafts and articles from social science and humanities journals. The author concluded that most edits were minor and stylistic, but expressed concern that some errors in quotations and citations had not been corrected, even in the final, published version.²⁴

¶16 While these studies did not look at law journal articles, their findings still have some value for law librarians and journal editors. The point most applicable to law journals is the problem caused when quotations and references are not verified by the editors of the journals; these errors, once published, are unlikely ever to be corrected in the future. Thus, cite-checking by law journal staff is an important service to legal scholarship that helps minimize errors in citation. By this we do not mean ensuring strict compliance with citation style (although some citation standard is valuable), but rather checking cited sources to ensure that they are acces-

22. Edward Wates & Robert Campbell, *Author's Version vs. Publisher's Version: An Analysis of the Copy-Editing Function*, 20 *LEARNED PUBL'G* 121, 126 (2007).

23. David Goodman et al., *Open Access and Accuracy: Author-Archived Manuscripts vs. Published Articles*, 20 *LEARNED PUBL'G* 203, 209–10 (2007).

24. Sanford G. Thatcher, *Copyediting's Role in an Open-Access World*, *AGAINST THE GRAIN*, Apr. 2011, at 30, 32.

sible to researchers and support the propositions for which they are cited. Many scholarly databases now automatically link articles with others that cite or are cited by them.²⁵ Law librarians are most familiar with Westlaw's KeyCite and LexisNexis's Shepard's citators, but HeinOnline's ScholarCheck, SSRN's CiteReader, and Google Scholar also automatically analyze citations and link to appropriate articles. Citation errors or formatting irregularities can prevent these programs from making the proper links. Perhaps the programs will eventually be sophisticated enough to decipher any citation, but until then, accurate citation is important to later researchers who wish to find further resources. Since citations are unlikely to be corrected after formal publication, the cite-checking process is probably the last chance to get them right.

¶17 The ephemeral nature of some online drafts is also a concern. Upon formal publication, most articles are reproduced in paper copies distributed to libraries and in digital copies hosted by proprietary databases or institutional web sites. This comparatively widespread distribution to institutions means that an article will be retrievable, even decades after publication. Draft articles are not generally collected or retained to this extent, which reduces the likelihood that they will be available years into the future. Authors may choose to delete their drafts at some point, or the sites hosting them may purge drafts or simply cease operating. Without clear labeling of versions, researchers may rely on draft articles that are prone to vanishing into the ether.

¶18 Other scholarly disciplines have worked to develop a standard nomenclature for article versions. PubMed, a major database of biomedical literature, has instituted standards for clearly labeling revised articles.²⁶ The National Information Standards Organization (NISO) developed recommended standards for distinguishing between different versions of scholarly articles.²⁷ The NISO-recommended practice provides for seven possible article versions: an author's original draft, a submitted manuscript under review, an accepted manuscript, a proof, a version of record, a corrected version of record, and an enhanced version of record.²⁸ This standard is based on the process of an academic journal that uses peer review to select articles. It also anticipates publishers later making corrections to articles or adding enhancements, such as supplementary data.

¶19 The NISO-recommended practice is instructive for law journals, but it does not correspond perfectly to law journal publishing practices. First, most law journals do not ask outside reviewers to help decide which articles to publish. Authors can submit to only one peer-reviewed journal at a time, while most law journals

25. For discussion of automatic reference linking by a computer scientist, see DONNA BERGMARK, *AUTOMATIC EXTRACTION OF REFERENCE LINKING INFORMATION FROM ONLINE DOCUMENTS* (Cornell Univ. Comp. Sci. Tech. Rep. 2000-1821, 2000), available at <http://hdl.handle.net/1813/5809>.

26. Sarah Torre, *Versioning in PubMed*, NLM TECH. BULL. no. 384, e6 (Jan./Feb. 2012), http://www.nlm.nih.gov/pubs/techbull/jf12/jf12_pm_versioning.html, archived at <http://www.webcitation.org/67X2vTUNL>.

27. NISO/ALPSP JAV TECH. WORKING GROUP, *JOURNAL ARTICLE VERSIONS (JAV)* (Apr. 2008), available at <http://www.niso.org/publications/rp/RP-8-2008.pdf>, archived at <http://www.webcitation.org/67X2xSkSd>.

28. Todd Carpenter, *Are These Two Versions the Same? Functional Equivalence and Article Version*, *AGAINST THE GRAIN*, Apr. 2011, at 16, 16.

accept papers that have been simultaneously submitted to other journals. Authors may also continue revising their papers after submission. Thus, the distinctions between an author's original draft and submitted manuscripts are not very clear.

¶20 Law journals generally delegate responsibility for preservation of published articles to vendors such as LexisNexis, Westlaw, and Hein (which also handles most orders for print back issues), and law libraries that keep print and digital copies. Once an article is published, most law journals are not directly responsible for preservation and enhancement, so the corrected and enhanced versions of record designations are unlikely to be used. Authors, however, may very well update or correct their papers after formal publication.

¶21 Law librarians can help address article version ambiguity in at least three ways. First, librarians can assist journals with establishing clear policies on article versions. Some journals' publication agreements distinguish between a draft (any version before formal publication) and a published version (the article as formally published, with no indication that later revision is anticipated). The agreements authorize authors to post drafts on SSRN or personal web sites. At least one publisher asks authors to replace all posted drafts with the formally published version.²⁹ These divergent practices seem to reflect differing views on how journals should best protect their subscription revenue and brand reputation.

¶22 An improved policy could permit online publication of both drafts and versions of record, but require that all be clearly marked so researchers know what stage of the publication process the paper they are reading represents. The seven categories of the NISO-recommended practice are probably more extensive than law journals need, but the draft/published dichotomy is too simplistic. A possible compromise could include four categories: an author's draft that has not been vetted or edited by a journal (successive drafts in this stage could be denoted by ascending numbers, e.g., version 3 or draft 2.5); an edited manuscript that has been proofread and, most importantly, cite-checked by journal staff, letting researchers know the sources have been independently verified; a version of record that has been approved by both the author and the journal, leading to what is traditionally thought of as formal publication; and, finally, a revised article that has been corrected or updated by either the author or the journal. If changes are made to an article after the version of record has been published, the party responsible for the update (author or journal) should be clearly indicated so researchers know the revised paper's provenance.

¶23 This, of course, is merely a suggestion, but a standard practice that reflects reasoned agreements in the legal publishing community would be valuable. Librarians, with their expertise in organizing and accessing multiple versions of the same

29. *The University of Chicago Press Guidelines for Journal Authors' Rights*, UNIV. OF CHICAGO PRESS, http://www.press.uchicago.edu/journals/jrnl_rights.html, archived at <http://www.webcitation.org/67X34Nm3M> ("To avoid citation confusion, we discourage online posting of preprints and working papers. If you choose to submit a prepublication version of your accepted paper to a non-commercial, discipline-specific preprint or working paper archive, however, we require that appropriate credit be given to the journal as described above and ask you to remove the working paper from the archive after your article is published or replace it with the published version."). See also Keele, *supra* note 11, at 275, ¶ 21.

intellectual item (such as multiple editions of a treatise or the many versions of a bill that are created as it progresses through the legislative process), are well suited to helping journals adopt version-labeling policies that reduce confusion and ambiguity regarding article versions.

¶24 Second, librarians can educate authors about the value of clearly indicating the publication status of their papers. If librarians are responsible for posting papers to SSRN, bepress, or institutional repositories, they can indicate the version in the article's metadata.

¶25 Third, librarians can facilitate collection of faculty draft papers. Just as hard-copy faculty papers are often collected in school archives, so digital drafts posted online can be retained to more fully document an author's scholarly record. Each library's collection of digital drafts would be unique and an expression of each faculty's distinct scholarly achievements. Library collection of drafts would increase demand for a consistent version-marking system and raise author awareness of its value.

¶26 Clear indication of article versions falls into the realm of administrative practices that many journal editors may not think of, or find too dull to address. An intuitive and substantively consistent system of indicating article versions will ease access and evaluation of journal articles. This kind of bibliographic infrastructure is precisely the sort of thing librarians should help build.

Preventing Link Rot with Persistent Identifiers

¶27 Another challenge presented by digital resources is link rot, or uniform resource locators (URLs) that no longer direct researchers to the correct online resource. In the dynamic online environment that exists today, as resources are altered, moved, or deleted, link rot is inevitable. Several studies have indicated that citations in law journal articles to online resources often contain short-lived URLs.³⁰ These broken links are, at best, an annoyance for researchers who must find the resource through another access point. At worst, broken links undermine an article's soundness by removing support for its assertions. Journals can reduce the likelihood of broken links to online copies of their articles by assigning and maintaining persistent identifiers. Unlike URLs, which point to a physical spot on a computer, persistent identifiers point to the resource itself, regardless of whether the resource moves to another location. A physical analog is the International Standard Book Number (ISBN)—no matter what shelf a book is assigned to, the ISBN identifies the same book.

¶28 Several persistent identifier systems exist, including Handles, Persistent Uniform Resource Locators (PURLs), Archival Resource Keys, and Digital Object

30. Simon Canick, *Availability of Works Cited in Recent Law Review Articles on LEXIS, Westlaw, the Internet, and Other Databases*, 21 LEGAL REFERENCE SERVICES Q., nos. 2/3, 2002, at 55; Helene E. Davis, *Keeping Validity in Cite: Web Resources Cited in Select Washington Law Reviews, 2001–03*, 98 LAW LIBR. J. 639, 2006 LAW LIBR. J. 38; E. Dana Neacsu, *Legal Scholarship and Digital Publishing: Has Anything Changed in the Way We Do Legal Research?*, 21 LEGAL REFERENCE SERVICES Q., nos. 2/3, 2002, at 105; 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, 2002 LAW LIBR. J. 2.

Identifiers (DOIs).³¹ DOIs have achieved a large measure of acceptance among scholarly publishers, including a few that publish journals in law and other fields. As of May 2012, almost fifty-four million DOIs had been registered with CrossRef, the DOI registration agency for scholarly publishers.³² PURLs have been adopted by the Government Printing Office to provide more reliable access to government publications.³³ While they differ in their operational details, the basic principle behind these persistent identifiers is that an organization acts as an intermediary between the researcher and the sought resource. A central index connects the identifier with the current location of the resource, so even if a resource moves due to a web site redesign or change in resource ownership, a researcher using the identifier will be able to find the resource.³⁴

¶29 No legal citation guide requires using persistent identifiers (although both the *Bluebook* and the *ALWD Citation Manual* recommend using unique identifiers in commercial databases³⁵), and law journals generally have not used DOIs in footnotes, even when DOIs exist for cited articles.³⁶ Journals are thus forgoing mechanisms that could help them ensure their articles remain easily retrievable online, even as the journal web site undergoes redesigns and updates. Librarians can encourage journal editors both to prefer using persistent identifiers in citations and to assign and maintain identifiers to their own articles. Persistent identifier systems rely on long-term maintenance and updating. The short terms of journal editors make them unlikely champions of such ongoing endeavors. Librarians' more established resources and professional ethos make them much better equipped to handle assignment and updating of persistent identifiers. Miller suggests establishing a foundation that will preserve journal content and provide stable links.³⁷ This ambitious proposal supports the idea that projects that require long-term maintenance, like persistent identifiers, require organizations designed to function much longer than a student editorial board.

¶30 Perhaps librarians could offer this as a publication service to the journals. Journals could join CrossRef and register DOIs, with librarians advising or taking primary administrative responsibility for DOI management. Such a service would require additional resources to cover CrossRef membership fees and technical expertise, so a method for distributing costs through an existing or new consortium might make this more practical for law journals. The California Digital

31. For more on this, see Susan Lyons, *Persistent Identification of Electronic Documents and the Future of Footnotes*, 97 LAW LIBR. J. 681, 2005 LAW LIBR. J. 42.

32. *CrossRef Indicators*, CROSSREF, http://crossref.org/01company/crossref_indicators.html, archived at <http://www.webcitation.org/67X4D7WBz>.

33. *Linking to Federal Resources Using Persistent Uniform Resource Locators (PURLs)*, FDLP DESKTOP (2010), <http://www.fdlp.gov/collections/building-collections/614-purls>, archived at <http://www.webcitation.org/67X4ENhvM>.

34. For more information on DOIs, see Patricia Feeney, *DOIs for Journals: Linking and Beyond*, INFO. STANDARDS Q., Summer 2010, at 27.

35. THE BLUEBOOK: A UNIFORM SYSTEM OF CITATION R. 18.3.1 (19th ed. 2010); ASS'N OF LEGAL WRITING DIRS. & DARBY DICKERSON, ALWD CITATION MANUAL R. 39.1 (4th ed. 2010).

36. Benjamin J. Keele, *What If Law Journal Citations Included Digital Object Identifiers? A Snapshot of Major Law Journals* (Jan. 2010), <http://works.bepress.com/aallcallforpapers/65>.

37. Miller, *supra* note 9.

Library's EZID provides persistent identifiers for documents and data sets for researchers and could be a model for law libraries.³⁸ Bepress's DigitalCommons platform is a common tool for publishing law journals online. Law libraries constitute a major customer base for DigitalCommons, and librarians could encourage bepress and other publishing vendors to include support for persistent identifiers. While law journals in DigitalCommons do not use DOIs at present, the article URLs are at least consistently designed and therefore less likely to change than URLs for academic or commercially hosted web sites.

Plagiarism Detection

¶31 Journals' interest in furthering scholarly research and education leads them to require that all articles be original (i.e., created by the author and not previously formally published) at the time of publication. Virtually all journal publication agreements ask authors to warrant that the article is original and does not infringe on anyone else's copyright. The National Conference of Law Reviews' *Model Code of Ethics* notes that authors have a duty to "produce manuscripts through the use of the law review author's own talents, skills, knowledge, creativity, mental processes, research, and time."³⁹ It appears no studies have been conducted to determine how common plagiarism is in law journal articles. Whether it is common or rare, though, any plagiarism is a serious matter.

¶32 The precise definition of plagiarism is subject to some debate, but Terri LeClercq offers this definition in the context of academic institutions: "Plagiarism means taking the literary property of another without attribution, passing it off as one's own, and reaping from its use the unearned benefit from an academic institution."⁴⁰ A determination of whether something amounts to plagiarism can be difficult in close cases, but one can easily imagine copying that is clearly plagiarism, such as replicating the entire body of another article without attribution. Plagiarism in law journals undermines journals' common mission to advance legal thought through publishing original contributions and breaks readers' trust in journals and authors that represent their articles as original.⁴¹

¶33 Especially difficult for law journal editors are instances of duplicate publication, also called recycling and self-plagiarism. Some authors reuse (verbatim or with minor edits) parts of their own published work in new articles without acknowledging the earlier publication. In these instances, the author's work is not being misappropriated without her knowledge. The concerns, rather, are that the scholarly debate is not advanced and that readers are misled regarding the prove-

38. UC3EZID: *Long Term Identifiers Made Easy*, CALIF. DIGITAL LIBRARY, <http://www.cdlib.org/uc3/ezid/>, archived at <http://www.webcitation.org/67XYa9qz4>.

39. Closen & Jarvis, *supra* note 13, at 522.

40. Terri LeClercq, *Failure to Teach: Due Process and Law School Plagiarism*, 49 J. LEGAL EDUC. 236, 244 (1999). A well-researched discussion of plagiarism in higher education is Audrey Wolfson Latourette, *Plagiarism: Legal and Ethical Implications for the University*, 37 J.C. & U.L. 1 (2010).

41. Deborah R. Gerhardt, *Plagiarism in Cyberspace: Learning the Rules of Recycling Content with a View Towards Nurturing Academic Trust in an Electronic World*, 12 RICH. J.L. & TECH. 10, ¶ 33 (2006), <http://law.richmond.edu/jolt/v12i3/article10.pdf>.

nance of the article's arguments.⁴² Law journal articles are important factors in law school tenure and promotion decisions, and authors who recycle papers may gain an unfair professional advantage. Editors should be careful to maintain the integrity of the publication process and scholarly record.

¶34 Extensive databases of articles have made greater plagiarism detection efforts possible. Public announcements that accepted articles will be checked for plagiarism before publication may deter submissions with lifted material. The most common detection tool is TurnItIn,⁴³ a program by iThenticate.⁴⁴ For journals that participate in CrossRef and assign DOIs to their articles, a service called CrossCheck, also using iThenticate's resources, is available.⁴⁵ LexisNexis also offers SafeAssign, a service that checks submitted articles against several LexisNexis databases.⁴⁶ Unfortunately, none of these databases appears to have comprehensive coverage of law journal articles. TurnItIn is intended primarily for checking undergraduate course papers, and iThenticate's product for academic journals does not include student-edited law journals. LexisNexis's SafeAssign product includes the ProQuest ABI/INFORM database (a business literature database), articles from the top five hundred law reviews (with coverage back to 2000), papers submitted through Blackboard, and articles available on the public web, which may include some other law journals that make their issues available online.⁴⁷

¶35 Despite the lack of a comprehensive plagiarism-checking solution for law journals, editors may detect copying to some extent when they cite-check accepted articles (although finding potential misconduct after an article is accepted leads to awkward conversations with the author) and when they conduct preemption checks to ensure that the article's thesis is an original contribution to the literature. Librarians can offer information on plagiarism-checking services and methods during journal training. Even well-crafted searches in Westlaw, LexisNexis, HeinOnline, and Google Scholar can be valuable parts of a journal's due diligence.

¶36 Journals also need policies for the unfortunate times when a paper is found to be a product of plagiarism or duplicate publication. Clear guidelines should be established so authors and staff have advance notice as to what copying will be regarded as plagiarism. Unattributed copying of another's work is generally unac-

42. See RICHARD A. POSNER, *THE LITTLE BOOK OF PLAGIARISM* 43 (2007) ("Self-copying becomes fraudulent and therefore plagiaristic only when the author represents his latest work to be newly composed when in fact it is a copy of an earlier work of his that readers may have read."); Patrick M. Scanlon, *Song from Myself: An Anatomy of Self-Plagiarism*, 2 *PLAGIARY: CROSS-DISCIPLINARY STUDS. PLAGIARISM, FABRICATION, & FALSIFICATION* 57, 63 (2007), available at <http://hdl.handle.net/2027/spo.5240451.0002.007> ("The ethical crux of self-plagiarism seems to be the extent to which the words before us are original not only with the present author, unless otherwise noted, but with the present publication as well.").

43. TURNITIN, http://turnitin.com/en_us/home (last visited May 29, 2012).

44. ITHENTICATE, <http://www.ithenticate.com> (last visited May 25, 2012).

45. *CrossCheck*, CROSSREF, <http://crossref.org/crosscheck>, archived at <http://www.webcitation.org/67XYsO7Ww>.

46. *SafeAssign Plagiarism-Checking Service*, LEXISNEXIS (2009), http://www.lexisnexis.com/documents/LawSchoolTutorials/20091102103551_small.pdf, archived at <http://www.webcitation.org/67XYu0POt>.

47. *Id.*; e-mail from Shelley Landfair, LexisNexis Account Executive, to author Keele (Mar. 22, 2012) (on file with author).

ceptable, while recycling one's own past work is perhaps more tolerable. Indeed, some limited copying of previously published language may be warranted when the published and new papers come from a common line of research. Even then, though, journals should insist on full disclosure of previously published work. This solution allows the reader to be fully informed about the article's origins and benefits readers by pointing them to relevant sources.⁴⁸ If the recycling is too extensive, editors may need to reject a submission or ask the author to withdraw or revise an accepted paper due to lack of originality. A nightmare scenario for editors, finding that a plagiarized or copyright-infringing paper has been published, might necessitate a retraction.⁴⁹

¶37 Librarians can help editors develop antiplagiarism policies and plagiarism-detection procedures. Science, technology, and medical journals have taken many of these steps, and their experience may be instructive.⁵⁰ Journals can also join the Committee on Publication Ethics, a group of scholarly editors and publishers that develops guidance on protecting the integrity of scholarly publishing.⁵¹

Empirical Data Support

¶38 Law journals are increasingly publishing articles that are empirical in nature and based on data created by the authors or others.⁵² Articles based on empirical data in student-edited journals are not generally submitted to the same standards of review and challenges as articles in peer-reviewed journals.⁵³ Many academic law journal editors do not have backgrounds that permit them to adequately assess the methodology used in such works or to deal with the related issues that arise with data. Librarians are uniquely positioned to support editorial, curation, and metadata services that would help improve the quality and accessibility of

48. See Carol M. Bast & Linda B. Samuels, *Plagiarism and Legal Scholarship in the Age of Information Sharing: The Need for Intellectual Honesty*, 57 CATH. U. L. REV. 777, 810–11 (2008); Scanlon, *supra* note 42, at 63.

49. Various projects have evolved to address the problems of retraction. See, e.g., RETRACTION WATCH, <http://retractionwatch.wordpress.com>, archived at <http://www.webcitation.org/67XYwvFMM>. Retractions might be difficult in law review settings where editorial boards and student participants are constantly changing.

50. See Declan Butler, *Journals Step up Plagiarism Policing*, 466 NATURE 167 (2010); Kirsty Meddings, *Credit Where Credit's Due: Screening in Scholarly Publishing*, 23 LEARNED PUBL'G 5 (2010).

51. COMMITTEE ON PUBLICATION ETHICS, <http://publicationethics.org>, archived at <http://www.webcitation.org/67XZ5sb59>.

52. Shari Seidman Diamond & Pam Mueller, *Empirical Legal Scholarship in Law Reviews*, 6 ANN. REV. L. & SOC. SCI. 581, 587 (2010) (finding that nearly half of law review articles published in sixty law reviews between 1998 and 2008 included some sort of empirical content, although original empirical research was present in only about six percent of articles).

53. *Id.* at 592 (“[L]aw reviews can generally offer a swift decision on whether the article will be accepted and a short time line to publication, compared with the seemingly interminable waits that many peer-reviewed journals impose on authors, often with the added burden of revise-and-resubmit response that does not promise ultimate publication.”). See also Lee Epstein & Gary King, *Building an Infrastructure for Empirical Research in Law*, 53 J. LEGAL EDUC. 311, 316–18 (2003) (lamenting the problems inherent in student-edited law reviews without blind peer review and suggesting a review model for these journals).

such work and potentially improve its reputation among legal scholars and in the world of scholarship in general.

¶39 A select number of journals do provide some form of faculty review of submitted articles,⁵⁴ but we are not aware of many law school law reviews promoting submissions procedures or policies that provide or facilitate formal review by a statistician or someone with a background in empirical work.⁵⁵ While few libraries have a source of empirical support among the library staff, they could coordinate with members of the law school (or the larger university community if available) to provide such services.⁵⁶ Perhaps a consortium service could be coordinated between librarians actively engaged in empirical legal studies, similar to the Peer Reviewed Scholarship Marketplace (PRSM) project created by law school journals for faculty review.⁵⁷

¶40 Another natural role for librarians is in the deposit of data sets associated with journal articles to ensure the possibility of replication.⁵⁸ For example, the Institute for Quantitative Social Science (IQSS) at Harvard University provides a service called Dataverse through which journals (or individual scholars) may deposit data.⁵⁹ Some law reviews have already experimented with depositing data linked to their articles.⁶⁰ While there has been discussion in law library circles

54. See *Peer Review at Student-Edited Journals: Best Practices?*, PRAWFSBLAWG (Aug. 11, 2011, 2:25 P.M.), <http://prawfsblawg.blogs.com/prawfsblawg/2011/08/peer-review-at-student-edited-journals-best-practices.html>, archived at <http://www.webcitation.org/67XZBxFav>; PRSM: PEER REVIEWED SCHOLARSHIP MARKETPLACE, <http://www.legalpeerreview.org>, archived at <http://www.webcitation.org/67XZFGNVS>.

55. A search of the submission policies of many of the law school law reviews yielded only a few examples of journals that expressly state procedures for review of articles that are empirical in nature. The *UCLA Law Review* offers empirical review: “The Law Review has access to the Law School’s Empirical Research Group. The ERG is available to review an author’s empirical work should the author express interest in this service.” *Submissions*, UCLA LAW REVIEW, http://uclalawreview.org/?page_id=40, archived at <http://www.webcitation.org/67XZHxvxp>. The *NYU Law Review* outlines best practices for its authors and encourages deposit of data sets in its data repository. *Law Review: Article Submissions*, NYU LAW, <http://www.law.nyu.edu/journals/lawreview/submissions/index.htm>, archived at <http://www.webcitation.org/67XZKJ0d7>. See also Michelle Pearse, *An Update on the Peer Reviewed Scholarship Marketplace*, ET SEQ. (Aug. 18, 2011), <http://etseq.law.harvard.edu/2011/08/an-update-on-the-peer-reviewed-scholarship-marketplace>, archived at <http://www.webcitation.org/67XZNga5n> (noting that when asked about whether they have reviewers specifically qualified to review empirical work, a PRSM administrator answered: “Only one of our potential reviewers indicated that his expertise is ‘quantitative/empirical methods.’”).

56. See Kevin Smith, *Lightning in a Bottle: Libraries, Technology, and the Changing System of Scholarly Communications*, presentation at Charleston Conference, Charleston, S.C., Nov. 4, 2009, http://www.katina.info/conference/video_smith.php (video at 28:42) (suggesting librarians with subject expertise could manage the peer review process for publication).

57. See PRSM, *supra* note 54.

58. Many libraries (particularly in the sciences) have begun supporting data curation and researchers’ development of data management plans as required for NSF funding. See e.g. *Data Management and Publishing*, MIT LIBRARIES, <http://libraries.mit.edu/guides/subjects/data-management/index.html>, archived at <http://www.webcitation.org/68GxxfIGH>; *Resources for Data Management Planning*, ASS’N OF RES. LIBRARIES, <http://libraries.mit.edu/guides/subjects/data-management/index.html>, archived at <http://www.webcitation.org/68Gwnb1rA>.

59. *About the Project*, THE DATAVERSE NETWORK PROJECT, <http://thedata.org/book/about-project>, archived at <http://www.webcitation.org/681rMM1Z1>.

60. At the time of this writing, the *NYU Law Review* and the *Virginia Law Review* have deposited data associated with some of their articles (“journal replication archives”) in Dataverse. *NYU*

about preserving data from individual faculty members, there should be equal interest in encouraging journals to collaborate with authors in making the data associated with their publications available. In addition to advising on minimal technical requirements for data preservation,⁶¹ librarians are uniquely situated to develop rich metadata for the data sets that would increase discoverability and connections with other relevant information. Making data available and accessible and preserving it would strengthen the quality of empirical legal scholarship.

¶41 Sharing data for replication and further analysis is more common in other areas of the social sciences.⁶² Making such activity the norm in academic legal scholarship would help improve authors' and journals' standing with empiricists in other fields.⁶³ From a research perspective, librarians could help editors assess whether or not methodologies are accurately used and explained. They could also confirm understanding about human subject participation concerns (although this onus could be on the author). Librarians could be more actively involved in experimentation with the visualization of data,⁶⁴ mashing up the data with other content, advising on rights and licensing issues,⁶⁵ and facilitating consistent citation within

Law Review Dataverse, IQSS DATAVERSE NETWORK, <http://dvn.iq.harvard.edu/dvn/dv/nyulawreview>, archived at <http://www.webcitation.org/67XZYEuC>; *Virginia Law Review Dataverse*, IQSS DATAVERSE NETWORK, <http://dvn.iq.harvard.edu/dvn/dv/vlr>, archived at <http://www.webcitation.org/67XZgKL2f>. Georgetown Law Library recently released its own instance for use by individuals and its journals. Sarah Rhodes, *Georgetown Law Library Launches Dataverse Archive*, DUE PROCESS: GEORGETOWN LAW LIBRARY BLOG (Jan. 12, 2012), <http://www.ll.georgetown.edu/blog/index.cfm/2012/1/12/Georgetown-Law-Library-Launches-Dataverse-Archive>, archived at <http://www.webcitation.org/68LGkgmGR>.

61. See *Guide to Social Science Data Preparation and Archiving*, INTER-UNIV. CONSORTIUM FOR POLITICAL & SOC. RESEARCH (ICPSR), <http://www.icpsr.umich.edu/icpsrweb/content/ICPSR/access/deposit/guide>, archived at <http://www.webcitation.org/67XZmJmkK>.

62. Several economics journals have adopted data availability policies. PHILIP GLANDON, REPORT ON THE AMERICAN ECONOMIC REVIEW DATA AVAILABILITY COMPLIANCE PROJECT (Nov. 2010), available at http://www.aeaweb.org/aer/2011_Data_Compliance_Report.pdf. Projects and scholarship about replication in other social sciences also exist. See, e.g., Tom Bartlett, *Is Psychology About to Come Undone?*, PERCOLATOR (Apr. 17, 2012, 5:09 P.M.), <http://chronicle.com/blogs/percolator/is-psychology-about-to-come-undone/29045>, archived at <http://www.webcitation.org/67XZt1Dii> (discussing a project that plans to replicate every study published in three psychology journals during 2008).

63. Lee Epstein & Gary King, *The Rules of Inference*, 69 U. CHI. L. REV. 1, 130 (2002).

64. Repositories such as Dataverse offer visualization tools within their repository environment, but there are many other tools and free programming options for creating very sophisticated visualizations. Tools include MANY EYES, <http://www-958.ibm.com/software/data/cognos/manyeyes>, archived at <http://www.webcitation.org/67XfMLLo3>, which requires uploading of data, and VISUAL.LY, <http://visual.ly>, archived at <http://www.webcitation.org/67XfNaZTf>. The Computational Legal Studies blog, <http://computationallegalstudies.com>, archived at <http://www.webcitation.org/67XfRWa9m> offers wonderful examples of the potential for visualizations.

65. Librarians can educate journals about standards and best practices that have been developed—sharing data in ways that are open and facilitate reuse, further research, and replication. See OPEN DATA COMMONS, <http://opendatacommons.org>, archived at <http://www.webcitation.org/67XfUPFS5>; OPEN DATA HANDBOOK, <http://opendatahandbook.org>, archived at <http://www.webcitation.org/681rtF3iH>.

legal scholarship.⁶⁶ Mandates for data deposit by organizations funding research in the sciences and other areas could increasingly impact the social sciences.⁶⁷

Helping Law Journals Create Metadata

¶42 While libraries have been helping to provide publishing platforms through the use of institutional repositories and other services, there is room for librarians (particularly those with cataloging, metadata, and subject expertise) to be even more actively engaged in helping mark up content so that it is more easily discoverable.⁶⁸ This is particularly true in the context of the semantic web.⁶⁹ Libraries are already equipped to advise journals on technical formats, basic metadata elements, and schema for their underlying journal content.⁷⁰ There are, however, new projects and concerns such as schema.org⁷¹ and linked (open) data⁷² that potentially

66. See Micah Altman & Gary King, Commentary, *A Proposed Standard for the Scholarly Citation of Quantitative Data*, D-LIB MAG., Mar./Apr. 2007, <http://www.dlib.org/dlib/march07/altman/03altman.html>, archived at <http://www.webcitation.org/67XfZXxoL>; Toby Green, *We Need Publishing Standards for Data Sets and Data Tables*, 22 LEARNED PUBL'G 325 (2009). Perhaps there is a role for librarians to collaborate with the editors of the *Bluebook* to address uniform citation formats for data.

67. For example, the National Science Foundation requires grantees to submit data plans “except where this is impossible or inappropriate. These plans should cover how and where these materials will be stored at reasonable cost, and how access will be provided to other researchers, generally at their cost.” *Data Archiving Policy*, NAT'L SCIENCE FOUND., <http://www.nsf.gov/sbe/ses/common/archive.jsp>, archived at <http://web.archive.org/web/20110714060548/http://www.nsf.gov/sbe/ses/common/archive.jsp>.

68. See Valeri Craige, *Legal Scholarship in the Digital Domain: A Technical Roadmap for Implementing the Durham Statement*, TECH. SERV. L. LIBR., Dec. 2010, at 1, available at <http://www.aallnet.org/sis/tssis/tsll/36-02/36-02.pdf>; Richard A. Leiter, *The Leiter Perspective: Tech Services in a Digital World*, AALL SPECTRUM, Nov. 2011, <http://www.aallnet.org/main-menu/Publications/spectrum/Vol-16/No-3/tech-services-in-digital-world.html>, archived at <http://www.webcitation.org/67Xgh3U8I> (article available in online version only).

69. Also referred to as Web 3.0, the semantic web focuses on linked data between sources and incorporates the technologies “OWL [Web Ontology Language] (to build vocabularies, or “ontologies”) and SKOS [Simple Knowledge Organization System] (for designing knowledge organization systems) . . . to enrich data with additional meaning, which allows more people (and more machines) to do more with the data.” *Semantic Web*, W3C, <http://www.w3.org/standards/semanticweb>, archived at <http://www.webcitation.org/67XgjNPQr>. See Michelle Pearse, *Is It Time for Law Libraries to Collaborate on Description for Their Own Institutions' Legal Scholarship?*, VOX POPULII (Sept. 30, 2011), <http://blog.law.cornell.edu/voxpath/2011/09/30/is-it-time-for-law-libraries-to-collaborate-on-description-for-their-own-institutions%E2%80%99-legal-scholarship>; see also generally APPROACHES TO LEGAL ONTOLOGIES (Giovanni Sartor et al., eds., 2010); BILL COPE ET AL., TOWARDS A SEMANTIC WEB: CONNECTING KNOWLEDGE IN ACADEMIC RESEARCH (2011); DAVID STUART, FACILITATING ACCESS TO THE WEB OF DATA: A GUIDE FOR LIBRARIANS (2011).

70. See Robert Richards, *The Use of Non-MARC Metadata in AALL Libraries: A Baseline Study*, 103 LAW LIBR. J. 631, 2011 LAW LIBR. J. 38 (discussing the use of metadata for digital projects in law libraries).

71. SCHEMA.ORG, <http://www.schema.org>, archived at <http://www.webcitation.org/67XgoUfJU>. Participants have been generating a list of potential schema.org vocabulary extensions and improvements. See *Web Schemas/SchemaDotOrg Proposals*, W3C, <http://www.w3.org/wiki/WebSchemas/SchemaDotOrgProposals>, archived at <http://www.webcitation.org/67XgtQQJP>.

72. The Library of Congress recently issued A BIBLIOGRAPHIC FRAMEWORK FOR THE DIGITAL AGE, <http://www.loc.gov/marc/transition/pdf/bibframework-10312011.pdf>, archived at <http://www.webcitation.org/681sHpwkI>, which embodies principles of linked data. For the past couple of years, it has

affect how journals would want to structure their web sites for maximum visibility and discoverability. While it remains to be seen how these standards will be adopted by web sites (and eventually incorporated into repositories), law libraries could be more actively engaged in helping journals determine whether their web-based content should be compliant with these new standards just as they have applied other standards in traditional institutional repositories.⁷³ Libraries could also be more engaged in making journals aware of accessibility issues for visually impaired users on the web.⁷⁴ They might also want to make certain that journals are aware of projects related to identifying scholarship associated with particular scholars and whether their journals are included in such services. These services include Google Scholar Citations, Microsoft Academic Search, and Open Researcher and Contributor ID (ORCID).⁷⁵

¶43 Librarians, however, could also contribute more significantly to the development of underlying taxonomies and ontologies that could then be consistently applied to enrich the metadata and make them more valuable. Since librarians often review articles with students and generally know how researchers look for information, they are in a unique position to contribute substantively to the terms and language that ensure accessibility and discoverability for relevant user groups. Some libraries use existing taxonomies provided by systems such as bepress's Digital Commons and add additional keywords provided by authors or informed by some internal taxonomy used by the library. Academic law libraries could develop taxonomies and ontologies that could be shared among law schools and scholars,⁷⁶

also released its subject headings as linked data. *Library of Congress Subject Headings*, LIBRARY OF CONG., <http://id.loc.gov/authorities/subjects.html>, archived at <http://www.webcitation.org/67Xh20oKz>.

73. "In the repository domain there are several standards that are widely implemented and ensure interoperability, the most well known being Open Archives Initiative Protocol for Metadata Harvesting (OAI-PMH) which is used as a common interface for harvesting metadata from repositories." *OAI-PMH Harvesting*, JISC INFONET, <http://www.jiscinfonet.ac.uk/infokits/repositories/technical-framework/oai-pmh>, archived at <http://www.webcitation.org/68LHbjmXk>.

74. See John Gardner et al., *Making Journals Accessible to the Visually Impaired: The Future Is Near*, 22 LEARNED PUBL'G 314 (2009). The DAISY Consortium is an "international association that develops, maintains and promotes international DAISY (Digital Accessible Information System) Standards." *About Us*, DAISY CONSORTIUM, http://www.daisy.org/about_us, archived at <http://www.webcitation.org/68J9cxn6W>.

75. Both Google Scholar Citations (<http://scholar.google.com/citations>) and Microsoft Academic Search (<http://academic.research.microsoft.com>) have begun offering scholar profiles with preliminary citations and data based on their search engines/sources. See *Google Scholar Citations Open to All*, GOOGLE SCHOLAR BLOG (Nov. 16, 2011, 8:30 P.M.), <http://googlescholar.blogspot.com/2011/11/google-scholar-citations-open-to-all.html>, archived at <http://www.webcitation.org/67XhEnAIX>. ORCID is a collaborative project among academic publishers, repositories, and others to solve the problem of author ambiguity by developing a central registry of unique identifiers for individual researchers and linking them to other author identification schemes. *Welcome to ORCID*, ORCID, <http://about.orcid.org>, archived at <http://www.webcitation.org/67XhJkNmH>.

76. Some repository systems, like bepress's Digital Commons, already offer set subject headings. Some may argue that additional efforts are unwarranted, as one could simply adopt preexisting, commonly used subjects such as the Library of Congress subject headings. But journals and repository users do not consistently adopt these options. They are also often limited in their ability to capture deep knowledge of a subject area and create connections between ideas. Other disciplines have developed similar projects to make data discoverable. See, e.g., *The NeuroCommons Project*, SCIENCECOMMONS, <http://neurocommons.org>, archived at <http://www.webcitation.org/67XhStkcn>.

built more in response to how scholars look for information.⁷⁷ For example, something as simple as geographic information included in the metadata could enable consistent access to the growing amount of foreign and comparative law work being done in U.S. law journals. A shared taxonomy/ontology emanating from the legal academy could also be “mapped” to taxonomies/ontologies developed for more practical or public uses such as projects in the open law movement⁷⁸ or internal governmental use.⁷⁹ It would facilitate cross-searching metadata and connecting content between varied systems of legal knowledge. A variety of users could potentially search across the same content (e.g., law reviews and primary law) from their own situational perspective (e.g., pro se or academic).⁸⁰ Authors could also be encouraged to create their own metadata (and apply a supplied ontology/taxonomy) in the authoring process through tools like Microsoft Word add-ins.⁸¹ There is an enthusiastic legal informatics community that could potentially support and mentor such efforts.

¶44 Partnering with the open law movement and coordinating activities with other journals would help create a larger system that could be truly open and interoperable, providing a potentially valuable resource to all users. Most law journals already practice consistent footnote formatting. Libraries could help law journals develop consistent technical formatting of footnotes to facilitate linking to open law sources and to each other through tools such as ParsIt or other parsers.⁸²

77. The importance of understanding the research habits of our scholars is discussed in Stephanie Davidson, *Way Beyond Legal Research: Understanding the Research Habits of Legal Scholars*, 102 LAW LIBR. J. 561, 2010 LAW LIBR. J. 32.

78. Projects focusing on open access to primary law include Law.gov (<http://law.resource.org>), the Legal Information Institute (<http://www.law.cornell.edu>), Justia (<http://www.justia.com>), and the Public Library of Law (<http://www.plol.org>). While open access to law and legal information projects might focus more on access to information (and creation of semantic language and metadata) from the perspective of the public or practitioners, academic law libraries could partner with these projects to map ontologies created for practical or public use to a potential ontology that reflects more academic approaches to law.

Examples of ontologies related to law more generally can be found in Robert Richards, *Legal Information Systems & Legal Informatics Resources: Knowledge Representation: Legal (Selected)*, <http://www.personal.psu.edu/rcr5122/Ontologies.html>, archived at <http://www.webcitation.org/67XhYEUMx>, and Robert Richards, *Legal Information Systems & Legal Informatics Resources: Knowledge Representation: General Resources with Application to Law (Selected)*, <http://www.personal.psu.edu/rcr5122/OntologiesGeneral.html>, archived at <http://www.webcitation.org/67XhaBTGy>. Experiments like Jureeka (an add-on for the Firefox browser) permit searchers to find citations in such projects, but marking up content appropriately could facilitate more direct connections between the primary law and scholarship and annotations related to free sources of law.

79. See Manjula Shenoy K et al., *Interoperability Using Ontology Mapping*, 5 J. COMPUTER SCI. & ENGINEERING, Jan. 2011, <https://sites.google.com/site/jcseuk/volume-5-issue-1-january-2011>.

80. James Milles has argued for law schools to devote more resources to developing materials for practitioners. James G. Milles, *Redefining Open Access for the Legal Information Market*, 98 LAW LIBR. J. 619, 2006 LAW LIBR. J. 37. At the very least, libraries could develop metadata for content that is more accessible to public use and interoperable with systems committed to open access, primary legal information.

81. *Ontology Add-In for Word*, MICROSOFT RESEARCH, <http://research.microsoft.com/en-us/projects/ontology>, archived at <http://www.webcitation.org/67XhdNrHn>.

82. Citation parsers break document citations into fielded data. Qing Zhang et al., *Parsing Citations in Biomedical Articles Using Conditional Random Fields*, 41 COMPUTERS BIOLOGY & MED. 190 (2011). *FreeCite*, BROWN UNIV., <http://freecite.library.brown.edu>, archived at <http://www.webcitation.org/67XhhKLLH>, and *PARSCIT*, <http://wing.comp.nus.edu.sg/parsCit>, archived at <http://www.web>

Such work could also facilitate valuable metrics among journals beyond citation tools that are restricted to use in proprietary services (such as Web of Science, SciVerse, KeyCite, Shepard's, and HeinOnline's ScholarCheck), or contain unstable metadata and source data like Google Scholar and Microsoft Academic Search.⁸³

¶45 In addition to helping journals develop content formatted to enable citation extraction, libraries could help them develop ways to track statistics about downloads of their content from their own interfaces, if they are not already using a product that provides that functionality. A project called PIRUS2 has developed a service to allow repositories and publishers to create standards for repository statistics.⁸⁴ These are similar to the COUNTER standard developed for e-journal and database vendors⁸⁵ and could result in some "ubermetric" across repositories of scholarly content. Libraries can also help journals learn about tools to measure use of their web content, particularly if such advice is not available from a central IT department hosting the page(s).⁸⁶

¶46 Librarians can educate online journals (or those that do not use commercial composition services) about the perils of stray metadata lurking in documents. While there has been a great deal of discussion of this topic in the legal practice arena,⁸⁷ there has not been as much discussion in the areas of journal publishing and repositories. In addition to consulting on the creation of descriptive metadata, librarians could raise awareness of metadata that are sometimes unintentionally included. Journals should understand that underlying metadata may be generated in the production process, particularly for online-only journals that post PDFs to their web sites without professional production or formatting. Journals that use a

citation.org/67XhjLufs, are examples of applications for parsing citations. Parsers may be used for footnote/citation extraction. SSRN recently launched its CiteReader project, which extracts references automatically, after which they are manually proofread. Gregg Gordon, *SSRN's CiteReader Project Update*, SSRN: TOMORROW'S BLOG TODAY, Apr. 26, 2011, <http://ssrnblog.com/2011/04/26/ssrn-citereader-project-update>, archived at <http://www.webcitation.org/68H7GQ5RN>.

83. As journals move to a web-publishing environment and standards improve for marking up content for the web, mining and citation analysis might become more precise. See Kayvan Kousha & Mike Thelwall, *Google Scholar Citations and Google Web/URL Citations: A Multi-Discipline Exploratory Analysis*, 58 J. AM. SOC'Y INFO. SCI. & TECH. 1055 (2007) (comparing citations in traditional citation sources (Web of Science) to Google Scholar and to citations found via web searches). See also Fred R. Shapiro & Michelle Pearse, *The Most-Cited Law Review Articles of All Time*, 102 MICH. L. REV. 1483, 1508–20 (2012) (discussing new forms of citation metrics).

84. THE PIRUS2 PROJECT, <http://www.cranfieldlibrary.cranfield.ac.uk/pirus2/tiki-index.php>, archived at <http://www.webcitation.org/67Xhq0EUP>.

85. COUNTER: COUNTING ONLINE USAGE OF NETWORKED ELECTRONIC RESOURCES, <http://www.projectcounter.org> (last visited May 29, 2012).

86. Librarians can also make students mindful of the downside of using services like Google Analytics, which exposes visitors' data to Google for its own use.

87. See, e.g., Emily N. Litzinger, *The Ethical Dilemma of Scrubbing Metadata: The Pathway to a Better Approach*, 36 N. KY. L. REV. 611 (2009); Note, Adam K. Israel, *To Scrub or Not to Scrub: The Ethical Implications of Metadata and Electronic Data Creation, Exchange, and Discovery*, 60 ALA. L. REV. 469 (2009); *Metadata Ethics Opinions Around the U.S.*, http://www.americanbar.org/groups/departments_offices/legal_technology_resources/resources/charts_fyis/metadatchart2.html, archived at <http://www.webcitation.org/68JCPvFcG>; Jim Calloway, *Metadata—What Is It and What Are My Ethical Duties?*, LLRX.COM, Jan. 5, 2009, <http://www.llrx.com/features/metadatchart2.html>, archived at <http://www.webcitation.org/67Xi2KzCe>.

composition/production service such as Christensen most probably have metadata scrubbed out during the formatting process.⁸⁸ But journals that publish on their own should know that metadata might remain in Word documents and ultimately PDFs if not removed and that this information could ultimately be indexed and accessible through search engines.

Preservation of At-Risk Cited Sources

¶47 In addition to helping journals address the risk level of their own content, libraries should educate journals about the volatility of the web sites referenced in the footnotes in their articles.⁸⁹ There are various ways libraries could help journals deal with this problem, depending on the resources available and scope of the library's activities.⁹⁰ Libraries could suggest that journals investigate using a service like WebCite, which journals (and authors) may use to ensure that a copy of a cited web site remains accessible to users.⁹¹ Journals could also be encouraged to cite stable URLs for documents⁹² contained in resources such as the Chesapeake Project⁹³ or the Internet Archive.⁹⁴ For items in the public domain (or to which the copyright is owned), there is a tool called Zotero Commons with which users can contribute documents to the Internet Archive.⁹⁵ For certain types of resources that fall within the scope of a library's collection development policy, the library might

88. According to Gayle Smith of Joe Christensen, Inc, "If [we] perform[] the formatting of journal text in our composition software, we extract from the journal file only the data we need in order to put ink on paper. Our internal working file will not contain any of the metadata from the journal-submitted file." E-mail from Gayle Smith to author Pearse (June 12, 2012, 5:30 P.M.) (on file with author). The same may be true for other commercial journal publishers.

89. See sources cited *supra* note 30.

90. Libraries are also in a position to educate journals about the copyright complexities of preserving information on another web site.

91. WebCite allows individual authors and journals to "freeze" web pages they use as references. It takes a snapshot of a cited webpage and stores a copy of the html including images (or any other files, for example pdf) on the webcitation server.

The caching (archiving) process can be initiated prospectively (before publication) by the author or the editor, copyeditor or publisher at the time he/she authors, edits, or publishes the citing document.

WebCite Consortium FAQ, WEBCITE, <http://www.webcitation.org/faq> (last visited May 28, 2012). WebCite also has the capacity to crawl and permit retrospective, postpublication archiving if an author or journal submits an XML file of the published article. According to WebCite's list of members, only two law journals are members. *WebCite Consortium Members*, WEBCITE, <http://www.webcitation.org/members> (last visited May 28, 2012). It is unclear how well this service works with dynamic web pages and how stable the service is. Based on the experience of archiving web pages on WebCite for this article, its replication accuracy is dependent on how the original web page is coded. If a web site prohibits web crawlers, then WebCite will not archive the page.

92. Services like Memento allow people to look for archived web pages in several sources. See MEMENTO: ADDING TIME TO THE WEB, <http://www.mementoweb.org>, archived at <http://www.webcitation.org/67XiAN2SI>.

93. *The Chesapeake Digital Preservation Group*, LEGAL INFO. ARCHIVE, <http://cdm16064.contentdm.oclc.org/cdm/> (last visited May 29, 2012).

94. INTERNET ARCHIVE, <http://archive.org> (last visited May 29, 2012).

95. *Zotero Commons*, ZOTERO, <http://www.zotero.org/support/commons> (last visited June 2, 2012).

want to consider archiving the sources and adding them to its collection if it is already providing web archiving services. Finally, librarians could work with editors of the *Bluebook* to develop further guidance on Rule 18.2(h) (and Rule 18 generally) for best practices.⁹⁶

Facilitating Journal Inclusion in Traditional Bibliographic and Indexing Systems

¶48 Law libraries could become more proactive in facilitating inclusion of their journals in traditional indexes, full-text databases, and other traditional bibliographic tools used by libraries and researchers. Some journals do not have central offices to help them manage administrative matters, and changes in the staffing each year make protracted activities difficult to track. Libraries could help ensure consistency and completion of such tasks. At present, there is often a delay in getting journals into such services, and policies about inclusion of online-only journals (or web-only companion content for print journals) are sometimes inconsistent or unclear.⁹⁷

¶49 Law journals should be guided in registering copyright and registering for an International Standard Serial Number (ISSN).⁹⁸ For open access journals, the journal should be encouraged to contribute its metadata and contents to the Directory of Open Access Journals (DOAJ).⁹⁹ Registering existence of the content through a service beyond a general aggregator like HeinOnline can drive traffic to the journal's web site. With their extensive knowledge of research sources, librarians are also well positioned to help identify both traditional legal and interdisciplinary full-text and indexing/abstracting databases that might be interested in the journal's content.

¶50 Inclusion in these systems facilitates inclusion in knowledge bases for vendor-provided tools such as web scale discovery systems and open URL link resolvers.¹⁰⁰ Libraries could support use, reference, and promotion of journal con-

96. Rule 18.2(h) encourages journals to print out copies of web sources, specifically noting that it is not necessary to indicate the location of an archival copy in the citation. THE BLUEBOOK: A UNIFORM SYSTEM OF CITATION, *supra* note 35, at R. 18.2(h). Some libraries keep these print files for the journals at their institution. Libraries could work with editors of the new edition of the *Bluebook* to enumerate trusted repositories with stable DOIs for archived copies in lieu of printing copies. While the Internet Archive's URL is included in the *Bluebook* rule's example, encouragement of the use of these permanent URLs and links from trusted repositories could be included in the rule. See also Cheryl Nyberg, *Cite-Checking and Library Research*, GALLAGHER LAW LIBRARY (Feb. 14, 2007), <http://lib.law.washington.edu/ref/citecheck.html>, archived at <http://www.webcitation.org/67XiEdXxz> (raising the issue of permanent URLs and commenting on a previous version of rule 18).

97. See Xiaotian Chen, *Web-Exclusive Articles in Traditionally Print Periodicals*, 33 SERIALS REV. 224 (2007); Edward T. Hart, *Indexing Open Access Law Journals . . . or Maybe Not*, 38 INT'L J. LEGAL INFO. 19 (2010).

98. Existence of an ISSN is important for inclusion in many bibliographic tools because it serves as the journal's primary identifier.

99. *About DOAJ*, DIRECTORY OF OPEN ACCESS JOURNALS, <http://www.doaj.org/doaj?func=loadTempl&templ=faq>, archived at <http://www.webcitation.org/67XiMMiU1>.

100. See Sarah Glasser, *Broken Links and Failed Access: How KBART, IOTA, and PIE-J Can Help*, 56 LIBR. RES. & TECH. SERVS. 14 (2012). "An OpenURL link resolver accepts links from library citation databases (sources) and returns to the user a menu of choices (targets) that include many

tent in other information areas. For example, they could work with vendors such as Amazon, Bowker, and other bibliographic services to see if their journal's book reviews could be listed with information about the book. Libraries could also facilitate swift cataloging in OCLC/WorldCat and help journals partner with OCLC and table of contents services to include their content.¹⁰¹

Distributing Content Through Social Media

¶51 Many law journals have already experimented with social media, such as blogs, Facebook, and Twitter. Participation in such channels is increasingly important as some argue that social media metrics may impact citation metrics.¹⁰² In addition to supporting law journals' attempts to create their own social media presence, librarians are well situated to know which Web 2.0 channels are ideal venues for marketing journals or individual articles. They can also encourage coverage of online companions and blogs in the traditional literature.¹⁰³ Libraries might become partners in helping journals use these social media tools most effectively.

Optimizing for Mobile-Friendly Web Sites and Mobile Applications

¶52 As Internet users become increasingly mobile, journals are well advised to publish their content in ways that make it consumable on mobile devices. Librarians can teach them how to use services such as Google Analytics to see what kinds of mobile devices are being used to visit their sites. As libraries grapple with the question of whether to develop a mobile web site or a "mobile app" for their own content and deal with issues surrounding offering licensed content on mobile

links to full-text, the library catalog, and other related services . . ." Cindi Trainor & Jason Price, *Rethinking Library Linking: Breathing New Life into OpenURL*, LIBR. TECH. REP., Oct. 2010, at 6.

101. For information on OCLC's services, see Press Release, OCLC, More Databases and Collections from Around the World Added to WorldCat Local (July 12, 2011), <http://www.oclc.org/news/releases/2011/201141.htm>, archived at <http://www.webcitation.org/67XiQ9WEI>. Table of contents services that are potential partners for law journals include Ingentaconnect and the *Current Index to Legal Periodicals*.

102. See Shapiro & Pearse, *supra* note 83, at 1517–18. A recent editorial from the medical research literature suggests that highly tweeted scholarship leads to increased citation. Gunther Eysenbach, *Can Tweets Predict Citations? Metrics of Social Impact Based on Twitter and Correlation with Traditional Metrics of Scientific Impact*, 13 J. MED. INTERNET RES. e123 (2011), <http://www.jmir.org/2011/4/e123/>, archived at <http://www.webcitation.org/67XiUA9wa>. But see Claire Bower, *Twim-pact Factors: Can Tweets Really Predict Citations?*, BMJ WEB DEVELOPMENT BLOG (Jan. 6, 2012), <http://blogs.bmj.com/bmj-journals-development-blog/2012/01/06/twimpact-factors-can-tweets-really-predict-citations>, archived at <http://www.webcitation.org/67XiVjAUH> (noting critiques of Eysenbach's article). In the sciences, a new project powered by Mendeley called "altmetrics" has evolved for "the creation and study of new metrics based on the Social Web for analyzing and informing scholarship." About, ALTMETRICS, <http://altmetrics.org/about>, archived at <http://www.webcitation.org/681tyOmIT>.

103. For the past few years, the AALL Committee for Indexing of Periodical Literature has been pursuing inclusion of such content in the LegalTrac database. See AM. ASS'N OF LAW LIBRARIES, INDEXING OF PERIODICAL LITERATURE COMM., ANNUAL REPORT 2010–2011, available at <http://www.aallnet.org/main-menu/Leadership-Governance/committee/cmte-annual-reports/2010-2011/c-ipl.pdf>, archived at <http://www.webcitation.org/67XjJrPeF>.

devices, librarians can help journals make similar assessments about their own content and figure out how best to optimize their web sites and content.

¶53 As experts in new modes of publishing and purchasing content, librarians should be able to provide advice to journals regarding what modes are most beneficial. If librarians are able to provide focus group services to traditional publishers, they should be able to offer similar feedback to their own journals. Recently, an open source project called Yāna was developed which allows any journal to make a mobile-friendly version of its content.¹⁰⁴ Some journals are also making their content available as downloads on Amazon's and Apple's distribution platforms.¹⁰⁵ While law school information technology and communications departments may also provide expertise in these areas, libraries can offer insight on how researchers use these options in their research or scholarship.

Supporting Audiovisual Beyond Repository Hosting

¶54 Journals will increasingly be offering nontextual content, particularly audiovisual content. As law continues to be influenced by other disciplines and new students and scholars expect information to be available in a variety of formats, authors, journals, and researchers will be looking for media-oriented formats.¹⁰⁶ Many journals are already very active in hosting conferences for which they produce audio and video. Libraries are well qualified to grapple with the special issues involved in presenting and preserving video,¹⁰⁷ but they could be more actively involved in marking it up for the web to make it more discoverable and connected with other content. Such services could include transcription and captioning services to help facilitate access.¹⁰⁸ Many journals have already begun offering their

104. *About the Project*, YĀNA, <http://osc.hul.harvard.edu/yana>, archived at <http://www.webcitation.org/67XjLcMe6>.

105. Alan Childress, *Stanford Law Review Goes Ebook . . . in Kindle, Nook, and iPad Editions*, LEGAL PROFESSION BLOG (Feb. 5, 2011), http://lawprofessors.typepad.com/legal_profession/2011/02/stanford-law-review-goes-ebookin-kindle-nook-and-ipad-editions.html, archived at <http://www.webcitation.org/67XjQnJjk>. The *Harvard Law Review*, the *Yale Law Journal*, and the *University of Chicago Law Review* also have e-book editions, linked to from the journals' web sites. HARVARD LAW REVIEW, <http://www.harvardlawreview.org/index.php>, archived at <http://www.webcitation.org/687xnLlJu>; YALE LAW JOURNAL, <http://yalelawjournal.org>, archived at <http://www.webcitation.org/687xk4lJn>; UNIV. OF CHICAGO LAW REVIEW, <http://lawreview.uchicago.edu>, archived at <http://www.webcitation.org/687xhi8L2>.

106. For an example, see *Yale Visual Law Project*, YALE LAW SCHOOL, <http://yalevisuallawproject.org>, archived at <http://www.webcitation.org/67XjVIp3M>. An example from the hard sciences is the *Journal of Visualized Experiments*. JOVE, <http://www.jove.com>, archived at <http://www.webcitation.org/67XjWVovy>.

107. While it is possible to store video on repository systems, it is unclear how various repositories are dealing with the longer term needs of preserving audiovisual material, which usually requires some reformatting and migration to ensure accessibility. Plug-ins have been developed for publishing platforms such as OJS to offer multimedia content. Kathie Gossett et al., *Kairos-OJS Plugin Project: Author, Editor, and Reader Tools for Scholarly Multimedia*, PKP SCHOLARLY PUBLISHING CONFERENCE 2011, <http://pkp.sfu.ca/ocs/pkp/index.php/pkp2011/pkp2011/paper/view/287>, archived at <http://www.webcitation.org/67XjaEGl6>.

108. For example, YouTube offers a transcription service. See *Adding and Editing Captions/Subtitles*, YOUTUBE, <http://support.google.com/youtube/bin/answer.py?hl=en&answer=100077>, archived at <http://www.webcitation.org/67XjcUUoK>. There are also tools that can be used for creating

podcasts and videos through iTunes and YouTube (sometimes through the law school's account).¹⁰⁹ As libraries find ways to distribute their own content through these services, they could become more engaged in identifying these alternative content outlets and advising journals on the best way to market their content. Libraries are natural partners for law school media services and communications departments that also grapple with the dissemination and stewarding of audiovisual material.

Supporting “Futuristic” Thinking About the Law Journal/Article

¶55 What we think of as the “journal” or “journal article” is continuing to evolve and will probably be very different in years to come.¹¹⁰ Some libraries are already engaged in advising on web site production for journals. Taking a cue from the developments in other disciplines and in the e-book realm, journals will be exploring dynamic and flexible ways for users to view and use their content.¹¹¹ By providing additional assistance in metadata creation and encouraging availability of data sets, libraries could be more engaged in experimenting with journals on innovative interfaces, such as visualizations of data and mashups.¹¹² Libraries can also encourage journals to publish in open formats that make them easy to harvest and consume.¹¹³

transcription files. See, e.g., *Transcribing Speech in Video with Adobe Premiere and After Effects*, REAL-EYES (Mar. 5, 2010, 5:14 P.M.), <http://www.realeyes.com/blog/2010/03/05/caption/>, archived at <http://www.webcitation.org/681uQLZ0Q>.

109. Some examples of law schools with journals that offer podcasts and videos through YouTube and iTunes include, on iTunes: DePaul College of Law, UC Davis Law, University of North Carolina School of Law, and Northwestern University School of Law; on YouTube: University of Virginia School of Law, Duke Law School, Wayne State University Law School, University of San Francisco School of Law, and Stanford Law School.

110. Nicholas W. Jankowski et al., *Enhancing Scholarly Publishing in the Humanities and Social Sciences: Innovation Through Hybrid Forms of Publication*, PKP SCHOLARLY PUBLISHING CONFERENCE 2011, <http://pkp.sfu.ca/ocs/pkp/index.php/pkp2011/pkp2011/paper/view/326/185>, archived at <http://www.webcitation.org/681uaxXBD>. Discussions of the Durham Statement also acknowledge the changing nature of the journal and publication. Danner, Leong & Miller, *supra* note 9; Miller, *supra* note 9.

111. See Jennifer Howard, *New Forms of Reading and Publishing Take Center Stage at ITHAKA Conference*, CHRON. HIGHER EDUC. (Sept. 21, 2011), <http://chronicle.com/article/New-Forms-of-Reading-and/129104>, archived at <http://www.webcitation.org/67XjkXgFJ>.

112. Owen Stephens, *Mashups and Open Data in Libraries*, 24 SERIALS 245 (2011). Libraries could facilitate mashups of journal content with data, primary law, and other research sources. Book review articles could be mashed up with content related to the reviewed books.

113. See Miller, *supra* note 9, at [2]. Libraries and law journals could work together to develop a unified search interface across journals, beyond what is offered by the American Bar Association or Google. This search engine could facilitate production of table of contents services across open access journals. With the proper support, hosting, and open source journal publishing options like OJS and WordPress (especially with Annotum, a free platform using WordPress), libraries could collaborate to offer a free publishing platform for law journals, particularly in institutions that are not able to invest in repositories or that lack the technical staff to implement open source solutions themselves. See ANNOTUM, <http://annotum.org>, archived at <http://www.webcitation.org/67XjrZq5B>.

¶56 The publisher Elsevier recently presented its Article of the Future project for various disciplines.¹¹⁴ Librarians could help lead a similar project for law journals (perhaps through AALL or participants in the Durham Statement). Students and libraries could share innovative thoughts and best practices about producing scholarship. While this type of information sharing happens at various meetings,¹¹⁵ consistent, coordinated efforts to discuss these issues would be very beneficial and could provide support and inspiration for law journals that do not have substantial technical and staffing resources.

¶57 Libraries will have to help journals deal with the preservation issues inherent in these new dynamic formats.¹¹⁶ In contemplating future forms of legal scholarship, libraries should also be forward-thinking about how to preserve new “containers” for traditional article content and how to preserve dynamic new forms of content. While institutional repositories handle traditional article format and content very well, they do not necessarily handle nontraditional content, nor do they create alternative representations and incorporation of video or data, or facilitate ways of rethinking how articles are presented beyond the current linear presentation in issues and volumes.¹¹⁷ Libraries have used web archiving tools to capture “ancillary” content like blogs (often separately from traditional journal content), but they also need to partner with journals to develop their ancillary and dynamic content in ways that facilitate preservation, as opposed to trying to capture such content after its publication.

Conclusion

¶58 Law libraries (and librarians) are uniquely situated to help academic law journals evolve and flourish in a world where modes of publication are changing at a rapid pace. If we broaden our roles as their partners in publishing and think creatively and futuristically about what a law journal is, we can help ensure the integrity, accessibility, and relevance of this important area of legal scholarship. We should look to other disciplines (especially the sciences) and the university press–library partnership model for inspiration and explore concrete ways in which we can realize these goals. Many law libraries have embraced repositories, but it is questionable whether repository systems are presently fully equipped to deal with the changing, dynamic needs of journals.¹¹⁸ While some law libraries have already

114. *Article of the Future*, ELSEVIER, <http://www.articleofthefuture.com>, archived at <http://www.webcitation.org/67Xju1jLp>.

115. See, e.g., *Implementing the Durham Statement*, *supra* note 9.

116. See Michael Kelley, *Potential Crisis May Be Brewing in Preservation of E-Journals*, THE DIGITAL SHIFT (Feb. 23, 2012), <http://www.thedigitalshift.com/2012/02/preservation/potential-crisis-may-be-brewing-in-preservation-of-e-journals>, archived at <http://www.webcitation.org/681ugbOVM>.

117. See, e.g., *Article of the Future*, *supra* note 114.

118. The LOCKSS (Lots of Copies Keep Stuff Safe) program recently received an Andrew W. Mellon Foundation Grant to enable it to “develop new techniques for collecting dynamic digital content from modern publishing platforms, and ensuring its long-term preservation.” Press Release, LOCKSS, LOCKSS Program Receives Andrew W. Mellon Foundation Grant (Apr. 18, 2012), <http://www.lockss.org/news-media/news/lockss-program-receives-andrew-w-mellon-foundation-grant>, archived at <http://www.webcitation.org/67Xk33dwW>.

been experimenting with additional services and partnerships in publishing, there is ample room for more libraries to expand their services and implement new ways of facilitating and supporting forward-thinking publishing infrastructures for law journals.

Appendix

Checklist for Librarians Working with Law Journals

- ✓ Publication agreement
 - ✓ Author retains copyright?
 - ✓ Nonexclusive or temporary license?
 - ✓ Allows authors to self-archive?
 - ✓ Distribution rights/venues
- ✓ Version reference
 - ✓ Clear policy on article version/terminology
 - ✓ Clear marking of own faculty members' digital deposits
 - ✓ Collaborate on standards to be used by journals and law library community
- ✓ Use of persistent identifiers/DOIs
- ✓ Plagiarism (or duplicate publication) detection procedures and policies
- ✓ Policies and procedures for empirical work
 - ✓ Review by peers or those knowledgeable about research methods/statistics
 - ✓ Author submission/deposit of data for replication
 - ✓ Repository service for storing data (e.g., Dataverse)
 - ✓ Data markup/metadata
 - ✓ Licensing/terms of data use
 - ✓ Visualization/presentation options for data
 - ✓ Data citation standards
- ✓ Metadata for journal
 - ✓ OAI-PMH compliant
 - ✓ Standards for other web-based content
 - ✓ Accessibility for visually impaired
 - ✓ Taxonomies/ontologies
 - ✓ Author add-in options/author-contributed metadata
 - ✓ Technical formatting in footnoting/text for parsing
 - ✓ Hidden metadata to be scrubbed
 - ✓ Metrics/statistics
 - ✓ RSS available?
- ✓ Preservation of at-risk cited sources
 - ✓ Service (e.g., WebCite)
 - ✓ Proper web archiving by institution
 - ✓ Consistent use of or reference to particular sources
 - ✓ Collaboration with *Bluebook* on Rule 18
- ✓ Coverage in traditional bibliographic/indexing systems
 - ✓ International Standard Serial Number
 - ✓ Directory of Open Access Journals
 - ✓ Table of contents services
 - ✓ Full-text and indexing/abstracting databases (HeinOnline, LexisNexis, Westlaw, Bloomberg Law, LegalTrac, Index to Legal Periodicals and Books, nonlegal databases, etc.)

- ✓ OCLC/WorldCat
- ✓ Coverage of book reviews
- ✓ Coverage of companion content
- ✓ Social media presence
- ✓ Optimized for mobile devices
 - ✓ Apps?
 - ✓ Visible on all devices?
 - ✓ Kindle?, iTunes?
- ✓ Audiovisual content
 - ✓ Distribution channels (iTunes, YouTube, etc.)
 - ✓ Metadata/markup
 - ✓ Transcription/captioning
 - ✓ Linked with text and other sources
 - ✓ Partnering with media services and communications offices
- ✓ Holistic preservation—Is there content not being captured?