INSTITUTIONAL REPOSITORIES AND THE PRINCIPLE OF OPEN ACCESS: CHANGING THE WAY WE THINK ABOUT LEGAL SCHOLARSHIP

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I. INTRODUCTION

The open access movement espouses the principle that access to all scholarly communication, including legal scholarship, should be made available to the world at no cost via the Internet. This access is accomplished primarily by archiving digital scholarly work in online repositories, which are subsidized by authors and their institutions. There are no expectations of royalties or payment of any kind for the authors' work, and there are no subscription fees to create access barriers for the users. This Article discusses institutional repositories, how they enable open access to legal scholarship, and how they are changing the way we think about legal scholarship.

Given that a great deal has been written recently about the open access movement, particularly with respect to legal scholarship,[1] and that open access benefits so many at so little cost, this Article presumes that open access to legal scholarship will soon be adopted and implemented by every law school in the United States. Law school faculties who have adopted the principle of open access and who have started to self-archive in institutional repositories now have the means to share work more efficiently in its early stages, allowing authors to receive valuable feedback before publication and to reach new audiences for work post-publication. If fully realized, open access has the potential to redefine legal scholarly publishing. At a minimum, adopting the principle of open access and self-archiving scholarship in repositories increases an author's control over his or her work while also increasing the impact of the work through expanded readership and faster access.

A variety of applications for establishing legal scholarship repositories, both proprietary and open source, have evolved in recent years. These tools enable law faculties to collect, preserve, index, and distribute digital works. Forty percent of U.S. law schools now use some form of repository to distribute scholarship, both discipline-based repositories and institutional repositories.[2] The vast majority of legal scholarship repositories currently in existence are based on proprietary applications, although open source applications also exist.[3] These discipline-specific, "working paper" repositories are hosted by commercial providers, primarily SSRN's Legal Scholarship Network (LSN)[4] and the Berkeley Electronic Press's Legal

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1. *See infra* note 67.
2. *See infra* notes 212–213 and accompanying text.
3. *See infra* Part IV.C.
4. *See infra* Part IV.B.3.a.

Repository (bepress),[5] and to a lesser extent, NELLCO's Legal Scholarship Repository.[6] By comparison, institutional repositories are primarily based on open source applications like EPrints[7] and DSpace,[8] and to a lesser extent, proprietary applications like ProQuest's Digital Commons.[9]

These repository technologies facilitate global open access to legal scholarship for both authors and readers. In fact, right now an author could access a commercial Web site hosting an online repository such as SSRN or bepress and publish his or her word-processed article. The author would need only a digital copy of the article and an Internet connection. No license, fee, special software, or law school account of any kind would be required. The author would submit the document as easily as e-mailing an attached file and would add a few descriptive keywords for search engines to index. Shortly thereafter, the article would be available to readers worldwide.

In addition to the discipline-based, working paper repositories with which most legal scholars are familiar, institutional repositories can be established to archive any form of digital object. These institutional repositories have almost limitless potential to assist legal scholars and teachers with the management of their digital assets. Institutional repositories allow law school faculties to permanently store their digital work on servers. By generating permanent Web addresses for scholarly works, institutional repositories preserve digital files for the future, making them as safe as possible given current technological limitations. Student scholarship can also be archived, accessed, and shared, as can digital teaching materials and data sets from empirical research. Original historical documents can be scanned and made available via institutional repositories—all indexed by Internet search engines. Institutional repositories built from open source applications also enjoy the advantage of being housed on servers under the direct control of their host institutions, and are thus not subject to subscription or access fees or other risks associated with depending on for-profit vendors to host repositories.

This Article begins by looking at the traditions and cultural values that make open access to primary legal sources and governmental information essential, and that make open access to legal scholarship the next logical step. This Article then traces the evolution of the open access movement that has given rise to institutional repositories, and which has become a global phenomenon affecting all academic disciplines. Further, this Article examines in detail the effects of applying open access principles to legal scholarship, current options for law schools wishing to establish a repository, and the growing number of law school repositories currently in existence. This Article explores how legal scholars use repositories in creative new ways to publish digital objects, changing the landscape of legal scholarship. Finally, this Article concludes that open access to legal scholarship is a principle that should be adopted by U.S. law schools because it is consistent with the American tradition of citizen access to government and legal information.

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5. *See infra* Part IV.B.3.b.
6. *See infra* Part IV.B.3.c.
7. *See infra* Part IV.B.1.a.
8. *See infra* Part IV.B.1.b.
9. *See infra* Part IV.B.2.a.

II. A TRADITION OF OPEN ACCESS TO LAW

Citizen access to government information underpins our concept of self-governance in the United States, and numerous services, regulatory schemes, and public watchdogs defend this tradition. For example, for more than 140 years, the U.S. Government Printing Office and the Federal Depository Library Program have made government information available to U.S. citizens.[10] The Freedom of Information Act requires that federal agencies disclose records requested in writing by any person.[11] Electronic communication media enable governmental television programming.[12] In addition, nearly all governmental entities at the federal, state and even many local levels now publish law, such as statutes, regulations, and case law, at no cost on the Internet.[13]

Faculties at U.S. law schools played key roles in the movement to provide free Web access to primary legal information. In 1990, faculty members at Case Western Reserve University School of Law persuaded the U.S. Supreme Court to publish the Court's opinions on the Internet, establishing the Hermes Project, and in 1992, Cornell Law School created the Legal Information Institute (LII).[14] The LII at Cornell makes a collection of U.S. laws, court decisions, and related legal materials available for free on the Web.[15] LII is now but one of the many Web sites that provide free access to legal information.[16] The LII model has since been copied worldwide and a total of thirteen LIIs now exist.[17] The success of the public access

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10. The Government Printing Office (GPO) produces and distributes federal government information products. The Federal Depository Library Program (FDLP) ensures that the public has access to government information by distributing material to depository libraries in all fifty states. More information about the FDLP is available on the GPO Web site. U.S. Gov't Printing Office, About the Federal Depository Library Program (FDLP), http://www.gpoaccess.gov/fdlp.html (last visited Aug. 20, 2006).

11. 5 U.S.C. § 552 (2000).

12. Local public access television provides public, educational, and governmental programming pursuant to the Cable Communications Policy Act of 1984, which requires U.S. cable companies to provide access to media technology and cable distribution on the local cable systems. Pub. L. No. 98-549, 98 Stat. 2779 (1984) (codified as amended in scattered sections of 47 U.S.C.).

13. *See, e.g.*, Carol A. Parker, *Legal Resources on the Internet*, MICH. BAR J., May 2003, at 40–41, *available at* http://www.michbar.org/journal/pdf/pdf4article567.pdf; Carol A. Parker, *Legal Resources on the Internet (Part II)*, MICH. BAR J., June 2003, at 44–46, *available at* http://www.michbar.org/journal/pdf/pdf4article583.pdf.

14. Daniel Poulin, *Open Access to Law in Developing Countries*, 9 FIRST MONDAY (2004), http://www.firstmonday.org/issues/issue9_12/poulin/index.html; *see also* Michael Carroll, *The Movement for Open Access Law*, 10 LEWIS & CLARK L. REV. 741, 743–47 (2006) (providing an excellent overview of the history of the movement to make primary law freely available on the Internet). Professor Carroll also makes the point that the same arguments that were raised in opposition to the work of Tom Bruce and Peter Martin at Cornell, with regard to establishing LII to serve a previously under-served audience, are likely to be voiced with regard to the value of making legal scholarship freely available—arguments that were disproved by the success of the LII project. *Id.*

15. Cornell Law School, Legal Information Institute, http://www.law.cornell.edu/ (last visited Aug. 17, 2006).

16. Some representative sites include LawSource, American Law Sources On-Line (ALSO!), http://www.lawsource.com/also/ (last visited Feb. 28, 2007); FindLaw, http://www.findlaw.com/ (last visited Feb. 28, 2007); Hieros Gamos, Worldwide Legal Directories, http://www.hg.org/ (last visited Feb. 28, 2007); and LexisNexis, LexisOne, http://www.lexisone.com/ (last visited Feb. 28, 2007).

17. The thirteen Legal Information Institutes are Asia, Australasia, UK and Ireland, Canada, The Commonwealth, Cyprus, Droit Francophone, Hong Kong, JuriBurkina, New Zealand, Pacific Islands, Southern Africa, and USA (Cornell). World Legal Info. Inst. (WorldLII), http://www.worldlii.org/ (last visited Feb. 28, 2007). In 2002, at the LII meeting at the Montreal Law via Internet Conference, the Montreal Declaration on Public Access to Law was adopted, which states:

to law movement demonstrates that there is an audience for legal material other than lawyers who already have access to it via commercial databases.[18] Open access proponents now advocate that the same open access principles should be applied to legal scholarship.

III. EXTENDING THE PRINCIPLE OF OPEN ACCESS TO LEGAL SCHOLARSHIP

With all branches of government now publishing law on the Web for worldwide dissemination and citizen access, is it reasonable to expect that publicly funded colleges and universities should publish the results of their research on the Web as well? Open access proponents say "yes," and also encourage scholars at private institutions to make their scholarship accessible.[19] The concept of open access resonates with the public and with government officials, as well as with members of the academic community, and open access has been much in the news lately.[20] Media attention has helped make the case for open access. A recently introduced federal bill, the Federal Research Public Access Act,[21] is indicative of the growing support for open access.[22] This bill would mandate archiving the results of

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> • Public legal information from all countries and international institutions is part of the common heritage of humanity. Maximising access to this information promotes justice and the rule of law;
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> • Public legal information is digital common property and should be accessible to all on a non-profit basis and, where possible, free of charge….

WorldLII, Montreal Declaration on Public Access to Law, http://www.worldlii.org/worldlii/declaration/montreal_en.html (last visited Aug. 17, 2006). There are few legal barriers in the United States to disseminating primary legal information in this way because the vast majority of it is in the public domain for copyright purposes. *See* Carroll, *supra* note 14, at 746.

18. *See* Carroll, *supra* note 14, at 747.

19. Public universities and colleges enjoy public funding and also enjoy governmental immunity from liability. *See, e.g.*, Allan E. Korpela, Annotation, *Modern Status of Doctrine of Sovereign Immunity as Applied to Public Schools and Institutions of Higher Learning*, 33 A.L.R.3D 703, § 4[d] (1970) ("A state or agency thereof, operating an institution of higher learning, is generally held immune, in the absence of a constitutional or legislative enactment to the contrary, from tort liability for acts or omissions in connection with such operation."). Even private institutions enjoy the benefits of federal financial aid programs and are thus subject to various constitutional equal rights protections. *See generally* Annotation, *Action of Private Institution of Higher Education as Constituting State Action, or Action Under Color of Law, for Purposes of Fourteenth Amendment and 42 U.S.C.A. § 1983*, 37 A.L.R. FED. 601 (1978).

20. *See, e.g.*, Peter Suber, Open Access News, http://www.earlham.edu/~peters/fos/fosblog.html (summarizing news stories on the open access movement).

21. Federal Research Public Access Act, S. 2695, 109th Cong. (2006).

22. Open access proponents have succeeded in getting legislation introduced in several countries, including the United States, that would mandate author self-archiving in some of the physical sciences. Various bills have been introduced in both the U.S. House and Senate that, if enacted, would facilitate or even mandate open access to federally funded research results. The most significant, The Federal Research Public Access Act (FRPAA), was introduced in May of 2006 and would mandate the archiving of a substantial portion of all federally funded research results within six months of publication in peer-reviewed journals. *Id.* Research funded by eleven federal agencies—the bulk of annual U.S. research expenditures of fifty-five billion dollars—would be affected, including the following departments and agencies: Agriculture, Commerce, Energy, and Homeland Security and Environmental Protection Agency, National Aeronautics and Space Administration, National Science Foundation, and National Institutes of Health (NIH). Alliance for Taxpayer Access, Federal Research Public Access Act, http://www.taxpayeraccess.org/frpaa/ (last visited Apr. 15, 2007) (eleven agencies); Alliance for Taxpayer Access, Open Letter to the Higher Education Community (July 28, 2006), http://www.taxpayeraccess.org/frpaa/Provosts_openletter_06-JUL.pdf (fifty-five billion dollars). The open access movement is generally described as starting in the physical sciences, especially in the context of grant-funded research. Spurred on first by the

approximately fifty-five billion dollars of federally funded research in open access repositories.[23]

To fully appreciate the principle of open access and the impact of its application on legal scholarship, it is necessary to have a complete understanding of the concept. Section A of this part describes the evolution of the principle of open access and clarifies the goals of and the means for achieving open access to legal scholarly communication. Section B of this part examines how the application of the principle of open access to legal scholarship via self-archiving in institutional repositories is gaining acceptance among legal scholars and how it increases the impact of legal scholarship but does not adversely affect existing law school-subsidized student-edited journals.

A. Open Access, Institutional Repositories, and Self-Archiving Defined

Proponents of open access seek to make the results of all scholarly communication available to the public on the Internet without charge.[24] Such access might exist in addition to the access currently provided by print journals and commercial databases, or it might replace more traditional means of access. Both approaches are already in use in several instances. The open access movement is limited to scholarly works that are produced without expectation of payment, as is much of the work produced by law school faculties today.

A fuller definition of open access scholarship, as it applies to all academic disciplines, was published in 2002 in the Budapest Open Access Initiative (BOAI),[25] a major international statement on the open access movement sponsored by the Open Society Institute.[26] The BOAI definition includes background information, a list of signatories, and the following definition of open access:

> The literature that should be freely accessible online is *that which scholars give to the world without expectation of payment*. Primarily, this category encompasses their peer-reviewed journal articles, but it also includes any

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Europeans and subsequently in this country by the NIH, it next moved into the social sciences and humanities. The grassroots nature of the open access movement and the degree to which it has brought together a diverse group of proponents make for interesting reading. For an in-depth treatment of the open access movement, see Eprints, Open Access, http://www.eprints.org/openaccess/ (last visited Feb. 28, 2007); Charles W. Bailey, Jr., *The Scholarly Electronic Publishing Bibliography*, 7 J. ELECTRONIC PUB. (2001), http://epress.lib.uh.edu/sepb/sepb.pdf; Adrian K. Ho & Charles W. Bailey, Jr., *Open Access Webliography*, 33 REFERENCE SERVICES REV. 346 (2005), *available at* http://www.escholarlypub.com/cwb/oaw.htm; JOHN WILINKSY, THE ACCESS PRINCIPLE: THE CASE FOR OPEN ACCESS TO RESEARCH AND SCHOLARSHIP (2006), *available at* https://mitpress.mit.edu/books/willinsky/TheAccess Principle_TheMITPress_0262232421.pdf.

23. Federal Research Public Access Act, S. 2695, 109th Cong. (2006).

24. *See, e.g.*, *infra* note 27 and accompanying text.

25. The Budapest Open Access Initiative may be read in its entirety at Budapest Open Access Initiative, Feb. 14, 2002, http://www.soros.org/openaccess/read.shtml. At its December 2001 meeting held in Budapest, the Open Society Institute pledged to promote open access to scholarly communication; that pledge has become known as the Budapest Open Access Initiative. There are now 4,275 individual and 380 organizational signatories to the Initiative; however, the Initiative contained no enabling mechanisms. Budapest Open Access Initiative, View Signature, http://www.soros.org/openaccess/view.cfm (last visited Apr. 15, 2007).

26. The Open Society Institute (OSI), a foundation network founded by philanthropist George Soros, "aims to shape public policy to promote democratic governance, human rights, and economic, legal, and social reform....OSI implements a range of initiatives to support the rule of law, education, public health, and independent media." Open Society Institute (OSI), About OSI and the Soros Foundations Network, http://www.soros.org/about/overview (last visited July 17, 2006).

> unreviewed preprints that they might wish to put online for comment or to alert colleagues to important research findings. There are many degrees and kinds of wider and easier access to this literature. By "open access" to this literature, we mean its *free availability on the public internet*, permitting any users to read, download, copy, distribute, print, search, or link to the full texts of these articles, crawl them for indexing, pass them as data to software, or use them for any other lawful purpose, without financial, legal, or technical barriers other than those inseparable from gaining access to the internet itself. The only constraint on reproduction and distribution, and *the only role for copyright in this domain, should be to give authors control* over the integrity of their work and the right to be properly acknowledged and cited.[27]

1. Evolution of the Principle of Open Access

The Budapest Initiative did not appear overnight but rather was the product of the sense of dissatisfaction that many authors felt with the existing publishing regime. Previously, authors and educational institutions were content to relinquish control over their work to commercial or academic society publishers, in many cases giving the publisher an exclusive copyright in the process. In exchange, the commercial publisher disseminated the work in print and sought a profit. In the process, authors and institutions received valuable services such as peer review, management of the publication process, registration of copyrights, and creation of a print repository of the work.[28] With the advent of the Internet, however, and aggressive acquisitions and consolidations within the commercial publishing industry, the equilibrium of the traditional author-publisher bargain was disturbed.[29]

By the early 1990s, serious discussions were occurring within the academic community, primarily among scientists, about the Internet's potential impact on scholarly publishing.[30] In addition to exploring the potential of the Internet for disseminating research, scholars were beginning to express concern over barriers to access that were frequently erected by increasingly expensive subscription fees and by restrictive copyright policies.[31] In other words, scholars began to realize that by publishing only in subscription journals, fewer and fewer readers had access to their work. In a culture that valued recognition and reader impact, this trend was troubling.[32]

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27. Budapest Open Access Initiative, http://www.soros.org/openaccess/read.shtml (last visited July 17, 2006) (emphasis added).

28. *See* Theodore Bergstrom & R. Preston McAfee, *End Free Ride for Costly Journals*, LIBR. J., Dec. 15, 2005, at 88, *available at* http://www.libraryjournal.com/article/CA6289896.html.

29. *See id.*

30. *Introduction* to SCHOLARLY JOURNALS AT THE CROSSROADS: A SUBVERSIVE PROPOSAL FOR ELECTRONIC PUBLISHING 1, 1–9 (Ann Shumelda Okerson & James J. O'Donnell eds., 1995), *available at* http://www.arl.org/bm~doc/subversive.pdf.

31. *Id.*

32. *See* Walt Crawford, *Open Access and Survivable Libraries*, ECONTENT, June 2005, at 42, 42.

> The OA premise is straightforward: Scholars who write scholarly articles for scholarly refereed journals get paid in the currency of reputation and citations. Associate professors write scholarly articles to communicate research findings, but also to gain tenure. Tenured faculties write to communicate research findings and to gain reputation and new grants. They don't get paid for the articles (or, typically, for refereeing submitted articles), but do gain from wide dissemination.

Id.

By the mid-1990s, academics were proposing to use the Internet as an alternative publishing mechanism, open access online journals were beginning to appear, and self-archiving of scholarly works was proposed. These measures were seen not only as desirable outcomes in their own right, but they were also seen as a means to check an increasingly powerful academic society and commercial publishers.[33] Given the central role of the Internet in providing the technological means for easily disseminating scholarship, it is not surprising that the earliest open access proponents were concentrated in the fields of science, technology, and medicine, often referred to as STM.[34] For the past decade, the STM disciplines have dominated the discussion about whether scholars should exert more control over their work, either through author self-archiving or through creating open access journals.[35]

At the same time, dissatisfaction with the traditional publishing model was also growing among academic librarians whose budgets were insufficient to keep up with increasing commercial journal subscription costs.[36] Commercial publishers enjoyed record profits as journal subscriptions increased at a rate up to four times higher than inflation indexes.[37] Notably, the early proponents of open access—science, technology, and medicine—were the fields the hardest hit by the increased rates for commercial journal subscriptions.[38] Few disciplines were unaffected, however. Even the humanities—whose scholarship is often published in monographs or nonprofit journals—were affected because librarians often chose to cut monographic expenditures in an attempt to maintain subscriptions to the more expensive STM

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33. *See Introduction* to SCHOLARLY JOURNALS AT THE CROSSROADS, *supra* note 30.

34. *See id.*; *see also* Crawford, *supra* note 32, at 42.

35. Professor Stevan Harnad, Professor of Electronics and Computer Science at the University of Southampton, is credited with being one of the first to propose open access self-archiving and peer-reviewed, open access journals as the optimal way to disseminate scholarly communications. *See Introduction* to SCHOLARLY JOURNALS AT THE CROSSROADS, *supra* note 30. A self-described "subversive," Professor Harnad has presented and written extensively on the topic. His articles and presentations may be accessed at his Web page, Univ. of Southampton, Steven Harnad, http://www.ecs.soton.ac.uk/people/harnad (last visited Feb. 21, 2007). Professor Harnad was also heavily involved in the creation of the first widely available institutional repository application, Eprints. *Cf.* Eprints, Open Access, http://www.eprints.org/openaccess/ (last visited Feb. 21, 2007); Robert Tansley & Stevan Harnad, *Eprints.org Software for Creating Institutional and Individual Open Archives*, D-LIB MAG., Oct. 2000, http://www.dlib.org/dlib/october00/10inbrief.html#HARNAD.

36. Some see the open access movement as a way out of the budget crisis caused by escalating journal subscription costs and encourage academics to self-publish electronically as a countermeasure to high subscription prices. For example, the Scholarly Publishing and Academic Resources Coalition (SPARC) "is an alliance of academic and research libraries and organizations working to correct market dysfunctions in the scholarly publishing system" via open access "to address the high and rising cost of scholarly journals, especially in science, technology, and medicine." SPARC, http://www.arl.org/sparc/ (last visited Feb. 21, 2007). "Developed by the Association of Research Libraries [in June 1998], SPARC has become a catalyst for change. Its…focus is to facilitate the emergence of systems that capitalize on the networked environment to disseminate research." *Id.* SPARC currently enjoys more than 200 institutional members. SPARC, SPARC Members, http://www.arl.org/sparc/org/members.html (last visited Feb. 21, 2007). SPARC uses membership fees to provide capital for start up programs that provide alternatives to "current high-priced commercial journals and digital aggregations," as well as to advocate and educate. SPARC, About SPARC, http://www.arl.org/sparc/about/index.html (last visited Feb. 21, 2007).

37. *E.g.*, Brenda Dingley, *U.S. Periodical Prices—2003*, 47 LIBR. RESOURCES & TECHNICAL SERVICES 192, 194 (2003) ("The comparative figures serve to illustrate the fact that U.S. periodicals prices continue to rise at approximately twice the rate of the HEPI [Higher Education Price Index], and more than four times the rate of the CPI [Consumer Price Index].").

38. Carla Stoffle, *A Library View of the SPARC Initiative*, AGAINST THE GRAIN, Apr. 2001, at 34, 34, *available at* http://www.arl.org/sparc/bm~doc/ATG.pdf.

journals.[39] Despite such efforts, libraries are canceling journal subscriptions at an ever-increasing rate, and this trend continues.[40] Again, at the risk of overstating the motivation of open access proponents, this is problematic because without access to scholarly literature, researchers do not have access to significant portions of the work of others in their field. Lack of access also causes problems for authors because if other researchers cannot access a work, they cannot cite the work—an important consideration when tenure review committees include citation analyses in their candidate evaluations.[41]

2. The Two Types of Open Access Publishing

Despite a fair amount of media coverage, much academic debate (especially within the physical and biological science disciplines), and partial implementation of the concept of open access, confusion about open access still exists. This confusion exists largely because there are actually two distinct forms of open access publishing. The two forms of open access publishing are (1) archiving digital "eprints" of articles in institutional repositories that house both "preprints" (working papers not yet published elsewhere) and "postprints" (work already published by a journal) and (2) online scholarly journals available to the public without a subscription. These two forms are often confused by the casual observer, or even deliberately obfuscated by those who do not agree with the goals of the movement.

The first form of open access publishing depends on institutional repositories to house digital archives of scholarly works.[42] As discussed above, archiving both preprints and postprints is anticipated. Author self-archiving of "eprints" in

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39. Robbing Peter to pay Paul has been a fact of life for academic librarians for more than a decade. In April 1997, the Association of Research Libraries (ARL) released the results of its annual statistical survey for academic year 1995–1996, which demonstrated the beginnings of this phenomenon that continues to this day. Posting of Julia C. Blixrud, jblix@cni.org, to ARL-Announce@cni.org (Apr. 18, 1997), ARL Statistics Verify Demands for Research Services, https://arl.org/Lists/ARL-ANNOUNCE/Message/92-P.txt.

> Figures of expenditures for library materials show that while ARL libraries are spending more, they continue to get less. During the last decade, libraries shifted expenditures for monographs to meet some of the demands of increasing serial prices. Data show that while they more than doubled expenditures for serials from 1986 to 1996, ARL libraries purchased 7% fewer serials and 21% fewer monographs. The purchasing power for ARL libraries continues to decline.

Id.

40. *See, e.g.*, Lauren MacDonald, *UF May Have to Dump 507 Journals*, GAINESVILLE SUN (Fla.), Aug. 2, 2006, *available at* http://www.gainesville.com/apps/pbcs.dll/article?AID=/20060802/LOCAL/208020357/1078/news (reporting that the University of Florida's library system will cut 507 journals in 2007 unless it receives $750,000 to maintain the subscriptions for another year). Notably, the author of the article interviewed a University of Florida political science junior who said, "'In the short term, it's a shame that they'll have to make these cancellations.' But in the long term, he said, he hopes more journals will publish articles and papers online, where nonsubscribers will still have access to the information." *Id.* Arguably, the undergraduate student's comments can be taken as an indication that the message of open access proponents is being heard by many stakeholders in the academic community.

41. Citation counts figure prominently in the promotion and tenure policies in nearly all academic disciplines. Recently, scholars have called for revising these policies to recognize new Internet-based media. Joline Blais et al., *New Criteria for New Media* (Jan. 2007), http://newmedia.umaine.edu/interarchive/new_criteria_for_new_media@m.html (arguing for the consideration of Internet publications in tenure decisions in "new media" departments).

42. For a detailed discussion of how institutional repositories operate, see *infra* Part IV.A. A recent survey showed that 10.8 percent of academic institutions currently have an institutional repository in operation. KAREN MARKEY ET AL., CENSUS OF INSTITUTIONAL REPOSITORIES IN THE UNITED STATES 1 (2007), http://www.clir.org/pubs/reports/pub140/pub140.pdf.

institutional repositories is often called the "green road" to open access.[43] Institutional repositories are either general in nature (maintained by an author's institution for use by all of its colleges and departments) or discipline-based (maintained by an author's institution or a third party such as an academic society).[44] Arguably, law-based working paper repositories found on the free Web but maintained by commercial vendors such as the Social Science Research Network's Legal Scholarship Network[45] and the Berkeley Electronic Press[46] also provide green road open access to scholarship and therefore should be regarded as digital archives of legal scholarship.[47]

The second form of open access publishing—open access journals—involves publishing in online journals and making the work open and accessible immediately, without licensing or subscription fees to the user. New business models are emerging that shift publication costs to sponsoring authors and institutions in lieu of charging users for access.[48] Open access journals are often called the "gold road" to open access.[49] The Budapest Open Access Initiative endorsed both the green road and the gold road approach.[50]

It is this dual nature of open access publishing—author self-archiving as well as open access journals—that contributes to much of the confusion about open access.[51] Also, some misunderstand open access to be a movement that attempts to put journal publishers out of business, or a movement that is inherently anti-copyright.[52] In fact,

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43. Jean-Claude Guédon, *The "Green" and "Gold" Roads to Open Access: The Case for Mixing and Matching*, 30 SERIALS REV. 315, 316 (2004). Some commentators describe a further distinction between eprint archives, i.e., copies of material published elsewhere, and eprint repositories, i.e., both grey literature and material published elsewhere. *See, e.g.*, ALMA SWAN ET AL., DELIVERY, MANAGEMENT AND ACCESS MODEL FOR E-PRINTS AND OPEN ACCESS JOURNALS WITHIN FURTHER AND HIGHER EDUCATION 4 (2004), *available at* http://www.jisc.ac.uk/uploaded_documents/E-prints_delivery_model.PDF. However, most commentators typically use the terms archive and repository interchangeably.

44. This Article uses the term repository to refer to both general institutional repositories and discipline-based repositories.

45. SSRN, Legal Scholarship Network (LSN), http://www.ssrn.com/lsn/ (last visited Mar. 2, 2007).

46. Berkeley Electronic Press, http://www.bepress.com (last visited Mar. 2, 2007).

47. Admittedly, most legal scholars probably do not equate LSN or bepress with open access archives. More likely, they regard these sites as subscription services or tools to announce and share working papers with their peers. However, when examined in light of their role in providing open access to scholarship, LSN and bepress must be regarded as de facto repositories.

48. Many permutations of open access journals exist. Journals may be unqualifiedly open access with immediate and full access. Journals may delay open access until the expiration of a predetermined embargo period; they may publish in a dual mode with simultaneous subscription-based print and online open access; they may make abstracts freely available, but not the full text of the articles; or they may employ a cooperative model under which institutions provide financial support for their authors. By some estimates, approximately ten percent of journals worldwide now provide some form of open access. An excellent description of the multitude of approaches to open access scholarship is provided by Peter Suber, a Professor at Earlham College. James L. Morrison & Peter Suber, Interview, *The Free Online Scholarship Movement: An Interview with Peter Suber*, TECH. SOURCE, Sept./Oct. 2002, *available at* http://technologysource.org/article/free_online_scholarship_movement.

49. Guédon, *supra* note 43, at 316.

50. *See* Budapest Open Access Initiative, http://www.soros.org/openaccess/read.shtml (last visited Mar. 2, 2007).

51. "'Many people confuse [self archiving] with open-access publishing—and this confusion has set back self-archiving more than anything else.'" Clive Cookson, *Scientists Reignite Open Access Debate*, FIN. TIMES (London), Aug. 31, 2005, at 4 (quoting Stevan Harnad).

52. *See, e.g.*, Rick Weiss, *Bill Seeks Access to Tax-Funded Research; Grant Recipients Would Be Required to Post Findings on Internet*, WASH. POST, May 3, 2006, at A21, *available at* http://www.washingtonpost.com/wp-dyn/content/article/2006/05/02/AR2006050201506.html. However, the President and CEO of the Association of

it is neither. Green road author self-archiving does not require changing existing journal business models, including those of law journals,[53] and it is not anti-copyright because the movement seeks only to ensure that authors retain sufficient rights to permit self-archiving in a repository.[54]

Proponents of open access support author self-archiving rather than open access journals primarily because of the desire to retain the existing peer-review process currently provided by journal publishers.[55] Institutions and their traditions change slowly. Publishing in peer-reviewed journals is mandatory for most tenure-track scholars, and peer-review is not inexpensive.[56] Also, tenure review committees are uncomfortable with non-traditional publication venues that are not yet acknowledged as authoritative.[57] For those who favor the green road to open access, any cost savings for libraries would be a tangential outcome of the open access movement, but such savings are not the driving force behind their support for open access. The driving force is simply to have this work freely available on the Internet.

Some commercial and academic society publishers oppose even the green road to open access, i.e., author self-archiving. Critics of the green road to open access maintain that making articles available on the Web will cause libraries to cancel journal subscriptions, which will lead to the financial failure of scholarly journals and the collapse of the quality control and peer-review processes that publishers provide.[58] Open access proponents counter that these claims are unsubstantiated and that "evidence has shown that not only can journals co-exist and thrive alongside author self-archiving, they can actually benefit from it. Authors, institutions, [funders] and publishers benefit from the increased visibility, use and impact of research articles that are self-archived and freely available to all."[59]

American Publishers, Patricia S. Schroeder, stated:

> "It is frustrating that we can't seem to get across to people how expensive it is to do the peer review, edit these articles and put them into a form everyone can understand," Schroeder said.
>
> In the age of the Internet, everyone wants everything free, Schroeder said. "But we can't figure out what exactly the business model would be. And if you just got the raw research, you wouldn't have a clue" how to use it, she said.

Id.

53. In fact, the green road depends on the continuing existence of journals for publication because authors merely archive a copy of their published works in an institutional repository.

54. Too often authors needlessly sign away their rights to publishers and find themselves barred from subsequently archiving postprints of published work. *See infra* Part V.C.

55. The need to preserve the traditional peer-review process is often put forward in arguments against open access. *See* ASS'N OF LEARNED & PROF'L SOC'Y PUBLISHERS, THE FACTS ABOUT OPEN ACCESS: A STUDY OF THE FINANCIAL AND NON-FINANCIAL EFFECTS OF ALTERNATIVE BUSINESS MODELS FOR SCHOLARLY JOURNALS 25 (2005) [hereinafter ALPSP STUDY]. Consequently, the peer-review process itself has come under scrutiny and has been called into question by open access proponents. *See, e.g.*, Lila Guterman, *Peer-Review Researchers Explore Hyped Conclusions, Open Access, and Bias*, CHRON. HIGHER EDUC., Sept. 30, 2005, at A19 (finding that industry financing of medical papers is associated with hyped conclusions, which was the result of the failure of reviewers and editors to do their jobs as peer-reviewers).

56. *See* Joseph Raben, *Tenure, Promotion and Digital Publication*, DIGITAL HUMAN. Q., Spring 2007, http://www.digitalhumanities.org/dhq/vol/001/1/000006.html (discussing the status of online publication and tenure in the humanities).

57. *See id.*

58. This fear has been expressed by many commercial publishers. *See* ALPSP STUDY, *supra* note 55, at 13, 56.

59. Cookson, *supra* note 51. Several studies now exist demonstrating that open access increases readership. *See, e.g.*, Stevan Harnad & Tim Brody, *Comparing the Impact of Open Access (OA) vs. Non-OA Articles in the*

Notably, many of those who oppose gold road publishing in open access journals are willing to concede that works could be archived in green road repositories after a suitable post-publication waiting period. This would ensure that journals retain a period of exclusivity that would keep subscriptions commercially viable.[60] Such compromises usually result in a six- or twelve-month "embargo" period before archiving is permitted. This alternative is not without controversy; both sides have weighed in with statistics to support their positions.[61]

Some publishers are now experimenting with open access journals that provide peer review by shifting production costs away from subscription fees to author and institution sponsorship fees.[62] Subsidizing the publication costs of open access journals simply shifts costs from library budgets to researchers and the departments that support them. Proponents of open access journals, however, maintain that these subsidies will still cost less in the long run than paying commercial journal subscription fees.[63]

Same Journals, D-LIB MAG., June 2004 (showing that journals allowing author archiving grew significantly from 2003 to 2004).

60. *See, e.g.*, Peter Suber, NIH Public-Access Policy: Frequently Asked Questions, http://www.earlham.edu/~peters/fos/nihfaq.htm (last visited Mar. 7, 2007) (discussing the perceived benefits of the embargo period allowed under the National Institutes of Health's policy of requiring the results of NIH-sponsored research to be archived in the PubMed Central repository).

61. It is difficult to determine whether journal subscription rates are negatively affected by author self-archiving when libraries are also forced to cancel journal subscriptions because of budget shortfalls. *See supra* notes 36–40 and accompanying text. However, there have been analogous reports that sales of scholarly monographs are adversely impacted when free PDF versions are also made available on the Web. *See* Bob Doyle, *Opening Access to Content*, ECONTENT, June 2005, at 28, 28 (noting that, in a study of 3,300 books that also have free online versions, sales are negatively impacted by as much as one-third when the free version is in PDF; however, sales modestly improved when the Web version was in HTML presumably because purchasers had been able to browse the contents before making the investment in a hard copy).

62. The open access publisher Public Library of Science charges authors between $1,250 and $2,500 depending on the journal to subsidize the peer-review process. Public Library of Science (PloS), Publication Fees for PloS Journals, http://www.plos.org/journals/pubfees.html (last visited Mar. 7, 2007).

63. Professor Peter Suber described the costs of open access journals in a 2002 interview:

> [O]pen-access journals have expenses. The main one is peer review. One way to cut costs is to take advantage of increasingly sophisticated software that automates the clerical work of an online journal: processing online submissions, tracking manuscripts, tracking referees, converting file formats, preparing files for the Web, posting them online, generating statistics (e.g., on acceptance rates, referee loads, and throughput times), and facilitating communication among editors, referees, and authors. Remember that for most journals in most fields, the non-clerical work done by editors, reviewers, and authors is donated. But even after taking steps to keep their costs down, open-access journals will still need some revenue, or a subsidy, to cover those costs. The general funding model is for journals to charge authors or their sponsors for the costs of dissemination. That way, they needn't charge readers or their sponsors for access. The dissemination fee for a journal article might be paid by the author, but would more likely be paid by the author's employer (university or laboratory) or funding source (foundation or government). Some publishers can supplement dissemination fees with priced add-ons to the free literature, such as current awareness services, customization, or a print edition.
>
> In the long run, all institutions involved will pay less under this model than under the current model. Universities and their libraries will pay less because a growing number of their journals will be free of charge. Publishers will pay less because online dissemination costs much less than traditional dissemination. Moreover, priced journals will cost libraries and other subscribers less. Because they can't compete for long against free journals, either they will fold, convert to an open-access business model, or reduce their prices. If they don't, more and more libraries will cancel them.

Morrison & Suber, *supra* note 48.

Both green road and gold road proponents view the free dissemination of scholarly communication as a goal that is consistent with the culture of an academy that values peer recognition rather than royalties and as a goal that is inherently good for its own sake because it facilitates the dissemination of knowledge.[64] The less controversial green road to open access via author self-archiving has gained much support, while the more controversial gold road, which seeks to convert all scholarly publishing to open access, has encountered more resistance.[65] As such, in the area of legal scholarship, much of the debate has centered on the green road to open access and its implications.[66]

B. The Principle of Open Access and Legal Scholarship

Given our tradition of citizen access to legal information, it is a natural progression for legal scholars to consider whether the principle of open access could improve the way legal scholarship is disseminated and whether open access could increase the impact of scholarly works. Recently, commentators have started to call for legal scholars to adopt the principle of open access.[67] One of the more prominent efforts, dubbed "Open Access Law," was established in 2005.[68] Advocates for open access to legal scholarship, however, have not received as much attention as have open access advocates within other disciplines, and legal scholars are generally perceived as being slow to embrace the principle of open access.[69] This is no doubt

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64. Hal Abelson, *Institutional Repositories*, *in* ELECTRONIC, SCIENTIFIC, TECHNICAL, AND MEDICAL JOURNAL PUBLISHING AND ITS IMPLICATIONS: PROCEEDINGS OF A SYMPOSIUM 53 (2004), *available at* http://books.nap.edu/html/e_journals/ch6.html ("[T]he increasing tendency to proprietize knowledge, to view the output of research as intellectual property, is hostile to traditional academic values.").

65. *See, e.g.*, Posting of Stevan Harnad, harnad@ecs.soton.ac.uk, to American-Scientist-Open-Access-Forum@listserver.sigmaxi.org (Jan. 7, 2004), http://www.ecs.soton.ac.uk/~harnad/Hypermail/Amsci/3379.html ("The golden road is the more radical road to OA, and hence the slower and more uncertain one….[The green road] should be the one adopted first, now, by publishers. This is a far less risky step.").

66. A few open access proponents have called for gold road open access law journals, but many take a more cautious position and advocate for green road archiving as a first step. Representative of this more cautious position is the stance taken by the American Association of Law Librarians Open Access Task Force. Paul George et al., *The Future Gate to Scholarly Legal Information*, AALL SPECTRUM, Apr. 2005, at 1, 1, http://www.aallnet.org/products/pub_sp0504/pub_sp0504_MB.pdf. The task force determined that open access to legal scholarship should be encouraged and that it is consistent with the culture of the legal community, which assumes that legal information, including scholarship about legal information, should be readily available. *Id.* at 2. The task force endorsed author self-archiving as the ideal approach for open access to legal scholarship, "which need not replace the existing print copy." *Id.*

67. *See, e.g.*, Dan Hunter, *Walled Gardens*, 62 WASH. & LEE L. REV. 607, 617–18 (2005), *available at* http://ssrn.com/abstract=635141 (follow "Download Document" icon); Carroll, *supra* note 14, at 759; Jessica Litman, *The Economics of Open Access Publishing*, 10 LEWIS & CLARK L. REV. 779, 783 (2006).

68. Creative Commons was launched by Lawrence Lessig, Professor of Law, Stanford Law School, in May of 2002. In June 2005, Creative Commons, together with Lawrence Lessig of Stanford, Dan Hunter from Wharton School at the University of Pennsylvania, and Michael Carroll at Villanova Law School, initiated its Open Access Law program. Press Release, Creative Commons, Creative Commons and Science Commons Announce Open Access Law Program (June 6, 2005), *available at* http://creativecommons.org/press-releases/entry/5464; *see also* Science Commons, Open Access Law Program, http://sciencecommons.org/projects/publishing/oalaw.html (last visited Nov. 21, 2006).

69. An example of this perception was evident in the promotional material for the Lewis and Clark Law Review's 2006 Symposium, *Open Access Publishing and the Future of Legal Scholarship*, which posed the following question: "Interestingly, the open access publishing model has not yet become as popular in legal scholarship as in other fields. Why has legal scholarship lagged in the open access publishing movement?" Lewis & Clark Law School, Open Access Publishing and the Future of Legal Scholarship, http://www.lclark.edu/dept/

partly because of the fact that law journal subscription fees are not overly expensive and therefore have not provoked a revolt the way prohibitively expensive subscriptions charged by commercial publishers have in other disciplines.[70] Law is the exception to the rule that scholarship is published primarily in expensive, peer-reviewed commercial or academic society journals controlled by a handful of powerful publishers. Legal scholarship has traditionally been published in inexpensive, decentralized law school-subsidized journals, which have not experienced the inflationary pressures experienced in other fields.[71] Consequently, legal scholars' access to the work of their peers has never been limited or jeopardized by cost and there has been little call to make "postprints" freely available simply for the sake of retaining access to the material.[72]

Instead legal scholars appear to use repositories because they realize a professional benefit from doing so. Evidence shows that self-archiving copies of published articles in open access institutional repositories results in increased readership for the work, as well as enhancing the reputation of the authors and their schools.[73] It also shows that self-archiving in institutional repositories does not adversely affect law school-subsidized journals and may actually enhance their reputation.[74]

1. Institutional Repositories Increase the Audience for Legal Scholarship

A growing number of legal scholars, particularly younger scholars, have been archiving working paper "preprints" since 1994 in the popular SSRN Legal Scholarship Network (LSN) repository.[75] Legal scholars are also developing an

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blaw/springsympos2006.html (last visited Nov. 19, 2006); *see also* Pamela Bluh, *"Open Access," Legal Publishing, and Online Repositories*, 34 J.L. MED. & ETHICS 126, 127 (2006), *available at* http://ssrn.com/abstract=897784 (last visited August 16, 2006) (follow "Download Document" icon) ("In the community of legal scholars and policymakers, open access policy is still in its infancy….[and the] open access movement has received relatively little attention in legal publishing circles.").

70. *See, e.g.*, James G. Milles, *Redefining Open Access for the Legal Information Market*, 98 LAW LIBR. J. 619, 630 (2006), *available at* http://papers.ssrn.com/sol3/papers.cfm?abstract_id=940789 (follow "Download Document" icon).

71. In 2005, the average annual subscription price for a non-commercial law journal was $37.02. In 2005, the average annual subscription price for a commercial law journal was $240.73. AM. ASS'N OF LAW LIBRS., PRICE INDEX FOR LEGAL PUBLICATIONS (3d ed. 2005). This is not to say that law libraries have not experienced their own budgetary crises. Law library budgets have suffered from price increases in commercially published material aimed at legal practitioners as opposed to legal scholars. Some commentators have proposed that law schools should direct some of their resources toward publishing open access materials for practitioners in order to curb the ever-escalating subscription fees charged by commercial legal publishers. Milles, *supra* note 70, at 619.

72. Legal scholars as a community have never experienced the threat of loss of access to the work of their peers because they have always had low cost access to it via steeply discounted academic subscriptions to Westlaw and Lexis. Olufunmilayo B. Arewa, *Open Access in a Closed Universe: Lexis, Westlaw, Law Schools, and the Legal Information Market*, 10 LEWIS & CLARK L. REV. 797, 828–29 (2006). Therefore, the threat of loss of access because of cost is not likely to be a motivating factor in the decision to deposit works in an open access repository. In fact, one commentator recently coined the phase "open access in a closed universe" to describe this phenomenon of ready access via Lexis and Westlaw. *Id.* at 798.

73. *See infra* Part III.B.1.

74. *See infra* Part III.B.2.

75. *Cf.* SSRN, Legal Scholarship Network, *supra* note 35. Currently the largest and most popular open access repository of legal scholarship, SSRN "was formed in 1994 to enable scholars to share and distribute their research worldwide at an early stage of production." Bernard S. Black & Paul L. Caron, *Ranking Law Schools: Using SSRN to Measure Scholarly Performance*, 81 IND. L.J. 83, 95 (2006).

appreciation for open access archiving of "postprints" and other instances of digital scholarly communication.[76] A comprehensive measurement of the total amount of legal scholarship currently archived in open access repositories has not been published, but the LSN provides some insight into the amount of open access legal scholarship in existence. As of March 2007, there were approximately 114,300 full-text documents in SSRN.[77] Separate figures for the LSN are not published by SSRN; however, the managing director of the LSN has stated that roughly twenty-five percent of SSRN content is in the LSN.[78] This translates to nearly 29,000 legal documents in that repository alone.

As mentioned above, one of the driving forces behind legal scholars' use of repositories appears to be the desire to increase readership, and thus increase the impact of the work. Using repositories to increase the audience for scholarship is one of the strongest arguments open access proponents have to motivate faculty to participate. Citation analyses conducted in other academic disciplines have demonstrated that open access publishing expands the audience for the work.[79] There is now evidence that the same trend occurs with legal scholarship archived in open access repositories because repositories provide access to non-traditional audiences.[80] This evidence demonstrates that, just as LII established more than a decade ago for primary law, an audience exists for legal scholarship apart from legal scholars and attorneys who already have access to it via commercial databases. SSRN has reported that during a spot check conducted in 2005, only thirty eight percent of downloads came from within the United States.[81]

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76. *Cf.* Carroll, *supra* note 14, at 754 (discussing the progress being made in open access law repositories and arguing that "[p]osted drafts can be, and should be, updated with electronic copies of the published version once a paper appears as an article").

77. Social Science Research Network (SSRN), http://www.ssrn.com/ (last visited Mar. 8, 2007) (providing a running total of all full-text downloadable PDF documents).

78. Black & Caron, *supra* note 75, at 95.

79. A study of computer science papers published between 1989 and 2000 showed that more highly cited articles are significantly more likely to be online. Most likely, the papers were more highly cited because of their easier availability. Steve Lawrence, Letter to the Editor, *Free Online Availability Substantially Increases a Paper's Impact*, 411 NATURE 521, 521 (2001), *preprint available at* http://citeseer.ist.psu.edu/online-nature01/. Open access scholarship has a greater impact on research than traditional scholarship as demonstrated by a four-discipline citation analysis using the ISI Web of Science database. Kristin Antelman, *Do Open-Access Articles Have a Greater Research Impact?*, 65 C. & RES. LIBR. NEWS 372, 372 (2004), *available at* http://eprints.rclis.org/archive/00002309/01/do_open_access_CRL.pdf; *see also* Open Citation Project, *The Effect of Open Access and Downloads ("Hits") on Citation Impact: A Bibliography of Studies*, http://opcit.eprints.org/oacitation-biblio.html (last visited Sept. 3, 2006); Harnad & Brody, *supra* note 59. To date, no formal analysis of the impact of open access upon legal scholarship citation rates has been undertaken. Given the nearly ubiquitous electronic access to law review articles provided by academic Lexis subscriptions now available in many countries throughout the world, it is possible that the citation practices for legal scholarship might not be affected by open access. On the other hand, despite ready access to law journal content via university-licensed databases, scholars may prefer the ease and convenience of citing legal scholarship found on the open Web. It is also possible that even with nearly ubiquitous Lexis and Westlaw access to published work, increasing citations to open access work might merely reflect the utility of faster access to new work than is possible with the traditional law journal publication cycle. For further discussion of this point, see *infra* Part V.A.

80. *See* Black & Caron, *supra* note 75, at 112 ("SSRN…offers an interdisciplinary and global platform both for authors and readers.").

81. *Id.* at 95, 113. Professor Michael Carroll also argues in favor of open access for its ability to improve multidisciplinary and international dialogue. Carroll, *supra* note 14, at 756–57. Professor Michael Madison, on the other hand, observes that the current promotion and tenure system provides little incentive for legal scholars to seek out new audiences. *Cf.* Michael J. Madison, *The Idea of the Law Review: Scholarship, Prestige and Open Access*,

2. Institutional Repositories Do Not Adversely Affect Law Journals

There is no reason for law journals to refuse authors the ability to self-archive postprints of articles they publish. Yet some journals still refuse, presumably because of the fear that open access will diminish subscription revenue. However, as discussed above, self-archiving is likely to increase readership through new audiences and is unlikely to diminish traditional audiences who already access content through print and licensed databases.[82] Also, publishing legal scholarship has never been about generating revenue, because student-edited law journals are heavily subsidized by law schools.[83] The work of Professor Jessica Litman in this area is especially compelling given her economic analysis of the present system of law school-subsidized journals.[84] Professor Litman provides a sobering look at the true cost of producing legal scholarship and observes that the majority of the costs arise out of the subsidy provided to authors, i.e., law faculty salaries, and not out of the production costs of the journals themselves, which are minimal in comparison.[85] According to Litman, "[t]hat subsidy...is an investment in the production and dissemination of legal scholarship whose value is unambiguously enhanced by open access publishing."[86] Additionally both authors and law journals are concerned with prestige and branding. Journals' names are their brands and authors want their work to carry the brand of a top journal.[87] Consequently, the law journal business model is well suited to support open access because law school-subsidized journals can only be enhanced by open access to content, especially journals at lower-tier law schools that can use Internet access to attract more readers.[88]

Arguably, law school-subsidized journals could go even further than permitting author self-archiving by converting their publication process to gold road open access without diminishing any of the factors that motivate authors, journals, and law schools to support the current system of law school-subsidized journals.[89] In

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10 LEWIS & CLARK L. REV. 901, 904 (2006). He argues that legal scholars write primarily to impress other legal scholars and therefore open access principles are not likely to be adopted by legal scholars unless they can be tied to the existing "economy of prestige." *Id.* at 909, 918–20.

82. *See supra* Part III.B.1.

83. Litman, *supra* note 67, at 789.

84. *Id.*

85. *Id.* at 787–89.

86. *Id.* at 783. In comparison, scholars and librarians in other academic disciplines are asked to essentially pay twice for the results of their work—work that was in many cases subsidized by taxpayers via grant-supported research projects. They first pay by subsidizing the creation of the work itself, and they pay a high price again to access the results of the work after it is published in a scholarly journal—work that was nearly always provided to the publisher without expectation of payment. *See* Theodore Bergstrom & R. Preston McAfee, *End of Free Ride for Costly Journals*, LIBR. J., Dec. 15, 2005, at 88, 88, unedited letter *available at* http://www.hss.caltech.edu/~mcafee/Journal/OpenLetter.pdf; Dana Blankenhorn, Moore's Lore, Monopolists at the Academic Gates (Dec. 14, 2005), http://mooreslore.corante.com/archives/2005/12/14/monopolists_at_ the_academic_gates.php.

87. *See, e.g.*, Michigan Law Review Open-Access Policy, http://www.michiganlawreview.org/submit/openaccess.htm (last visited Mar. 12, 2007) ("The *Michigan Law Review* does not require that the Author attribute first publication to the Journal; we find that generally, our *authors want to attribute publication to the Michigan Law Review*." (emphasis added)); *see also* Madison, *supra* note 81, at 923 (arguing that both journals and authors "need the justification and prestige that the current publishing system supplies").

88. *See* Litman, *supra* note 67, at 113 ("So long as contributors were assured of receiving attribution for their work, [journals and authors] would all benefit from open access publication.").

89. *See* Hunter, *supra* note 67, at 617–18; Litman, *supra* note 67, at 791. Even the tail-of-the-dog argument

fact, many journals have already converted to gold road open access and now publish their content on the open Web.[90]

IV. ESTABLISHING A LAW SCHOOL REPOSITORY

As already noted, open access via author self-archiving depends on institutional repositories. Section A of this part examines how institutional repositories work and how they form the backbone of the green road to open access. Section B of this part discusses the current options for establishing a repository, and section C identifies the U.S. law schools that currently have institutional repositories.

A. How Institutional Repositories Work

Institutional repositories are essentially servers that store and make freely available on the Web digital collections that capture and preserve a university or a discipline's intellectual output. It is in such discipline-based or institutional repositories that proponents of open access encourage authors to archive their eprints, provided that they have retained enough of their copyrights to permit this form of reproduction and distribution. The Scholarly Publishing and Academic Resources Coalition (SPARC),[91] an alliance of academic and research libraries that promotes open access, provides a more formal definition of institutional repositories, a definition which captures the nuances of how archiving in institutional repositories differs from simply publishing material on a local Web page:

> Stated broadly, a digital institutional repository could be any collection of digital material hosted, *owned or controlled, or disseminated* by a college or university, irrespective of purpose or provenance. Here, however, we will narrow our definition to focus on a particular type of institutional repository—one capable of supporting two complementary purposes: *as a component in a restructured scholarly publishing model, and as a tangible embodiment of institutional quality*.
>
> Defined for our purposes then, an institutional repository is *a digital archive of the intellectual product created by the faculty, research staff, and students of an institution* and accessible to end users both within and outside of the

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that citation checkers must have a paper copy is no longer a barrier to gold road open access law journals as law journal editors are finally starting to move away from insisting on print copies for citation purposes. Many now rely on licensed databases such as HeinOnline, Westlaw, or Lexis. Citing work published in open access gold road online journals is equally feasible. For a discussion of law journal reliance on electronic copies for citation checking, see Karen Beck, *The Time Has Come for Electronic Cite Checking*, AALL SPECTRUM, Apr. 2000, at 36, 36, *available at* http://www.aallnet.org/products/pub_sp0004_Time.pdf; Mary Rumsey & April Schwartz, *Paper Versus Electronic Sources for Law Review Cite Checking: Should Paper Be the Gold Standard?*, 97 LAW LIBR. J. 31 (2005).

90. The *Tribal Law Journal*, published by the University of New Mexico School of Law, is an example of a gold road, online law journal. The *Tribal Law Journal* does not have a print analogue and has been freely available on the Web since its inception. *See Tribal Law Journal*, http://tlj.unm.edu/. It is not known how many gold road law journals exist. In a 2004 survey conducted by Professor Dan Hunter, at least fifteen open access law school journals were identified. Hunter, *supra* note 67, at 628. The Directory of Open Access Journals (DOAJ) tracks free, full-text scholarly journals in all subjects and languages. Launched in 2003, the DOAJ has identified 2,596 journals to date, including fifty-three covering law and sixty-four covering political science subjects. Directory of Open Access Journals (DOAJ), http://www.doaj.org/ (last visited Mar. 12, 2007).

91. For a more detailed discussion of SPARC, see *supra* note 36.

> institution, with few if any barriers to access. In other words, the content of an institutional repository is:
> • Institutionally defined;
> • Scholarly;
> • Cumulative and perpetual; and
> • Open and interoperable.[92]

An institution that uses a repository is thus capable of providing access, long-term storage, preservation, and indexing of its digital materials.[93] By association, the material contained in them carries the imprimatur of the host university, college, or school, which assures the reader that this scholarly work carries the "tangible embodiment of institutional quality."[94] Therefore, there is much more to the concept than simply providing a Web site for eprints.

Institutional repositories address a growing problem for scholars who work in the digital environment. Faculties are developing research material and scholarly publications in increasingly complex digital formats.[95] Preserving and distributing this content is a time-consuming chore for individuals and their departments to manage. Institutional repositories provide the means to manage research material and publications in a professionally maintained archive while providing greater visibility and accessibility over time. Repositories have evolved in the past five years into tools that can manage peer-reviewed series, working papers, monographs, and many other publication types. Most repositories are capable of archiving any kind of digital object related to scholarship, teaching, and service, including data sets and sound and video files.[96]

True multimedia institutional repositories can provide access to material that is not typically published elsewhere, including theses, association proceedings, technical reports, and images and slide shows, as well as other digital objects generated in the course of academic service, teaching, and scholarship, such as administrative documents, course notes, learning objects, student work, and data collected by faculty during the course of their work. Unfortunately, the discussion

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92. RAYM CROW, THE CASE FOR INSTITUTIONAL REPOSITORIES: A SPARC POSITION PAPER 16 (2002), *available at* http://www.arl.org/sparc/bm~doc/ir_final_release_102.pdf (emphasis added).

93. Clifford A. Lynch, *Institutional Repositories: Essential Infrastructure for Scholarship in the Digital Age* (ARL Bimonthly Rep. No. 226, 2003), *available at* http://www.arl.org/resources/pubs/br/br226/br226ir.shtml.

> A university-based institutional repository is a set of services that a university offers to the members of its community for the management and dissemination of digital materials created by the institution and its community members. It is most essentially an organizational commitment to the stewardship of these digital materials, including long-term preservation where appropriate, as well as organization and access or distribution.

Id.

94. *See* CROW, *supra* note 92, at 16.

95. The increasing interest in multidisciplinary and empirical research has resulted in law faculties generating, among other things, large data sets for statistical analysis. More law faculties are also incorporating multimedia files into their classroom presentations. One need only look at the conference programs for organizations such as the Center for Computer Assisted Legal Instruction (CALI), http://www2.cali.org/index.php?fuseaction=conference.home (last visited Mar. 12, 2007), and the Association of American Law Schools (AALS), http://www.aals.org/am2006/theme.html (last visited Mar. 12, 2007), to see this trend reflected.

96. *See generally* OPEN SOCIETY INSTITUTE, A GUIDE TO INSTITUTIONAL REPOSITORY SOFTWARE (3d ed. 2004), *available at* http://www.soros.org/openaccess/pdf/OSI_Guide_to_IR_Software_v3.pdf (providing information about the various types of file formats that can be supported by institutional repositories).

of eprints and who should control their reproduction and distribution rights often dominates the open access conversation, overshadowing any discussion of other beneficial uses for institutional repositories.

Most institutional repositories work in similar ways. Developers have tried to make loading objects into a repository as easy as attaching a file to an e-mail. The interface is typically designed to allow scholars to add descriptive metadata or keywords while submitting a digital object.[97] The descriptive keywords added by an author during submission facilitate search engine indexing and are a vital component of making the object retrievable. Institutional repository proponents maintain that having authors add their own descriptive keywords leads to the use of indexing terms that are specific to a discipline, thus facilitating retrieval.[98] Once submitted, the object goes into a temporary holding area where it undergoes review by a gatekeeper who verifies the legitimacy of the submission, and possibly enhances the metadata used to describe the object, before completing the final uploading.[99] The intent is to create a low-barrier system that will encourage author submissions.[100] The review by the gatekeeper is intended to be minimal, although policies vary among institutions. All repositories rely on the end-user having the necessary computer application to open the digital object once it has been retrieved from the repository.[101] Many institutional repositories provide some form of usage measurement as well, typically in the form of hit counts or download counts, to offer insight into readership levels.[102] Most also provide some form of e-mail alerting option to announce new submissions.[103]

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97. Metadata, or data about data, might be the only portion of an item's record that is indexed by search engines like Google, so the richer the metadata, the more likely researchers will locate the object in the future. *See* Wikipedia, Metadata, http://en.wikipedia.org/wiki/Metadata (last visited Mar. 12, 2007).

98. E-mail from Johannes Van Reenen, Assistant Dean and Associate Professor, University Libraries, Univ. of N.M., to the author (Feb. 19, 2007) (on file with author and New Mexico Law Review).

99. Ed Sponsler & Eric F. Van de Velde, *Review: Eprints Software*, SPARC E-NEWS, Aug.–Sept. 2001 (on file with New Mexico Law Review). A Web-based demonstration of a typical submission process is available at the Digital Commons Web site. ProQuest-CSA, Content Upload Demo, http://umi.com/products_umi/digitalcommons/DigitalCommons.htm (last visited Mar. 12, 2007). Digital Commons is a popular repository application and is discussed in Part IV.B *infra*.

100. The goal of all repository designers is to make it simple and easy for authors to load an eprint into a repository. Nevertheless, a common objection to self-archiving is that it places a burden on the author by requiring him or her to also include descriptive keywords as metadata to facilitate later access by other researchers. An author will have to go through the following steps to archive an eprint: determine whether the work is eligible to archive (a copyright analysis); obtain a digital copy suitable for the archive (possibly converting to PDF or other common format in the process); initiate uploading, which is similar to initiating an e-mail attachment; enter descriptive keywords and possibly an abstract for search engine indexing; grant a click-through license for the archive to distribute the work; and conduct a final review before completing. In the case of scholarly eprints, most authors prefer to publish in PDF format to make it harder for readers to manipulate the content with word processors. Before loading a PDF eprint into most repositories, someone has to convert the word-processed file to a PDF—a process that does increase the work of loading an eprint into a repository and may present technological barriers for some. A recent study showed that most items can be loaded and described in as little as ten minutes. Leslie Carr & Stevan Harnad, *Keystroke Economy: A Study of Time and Effort Involved in Self-Archiving* (2005), http://eprints.ecs.soton.ac.uk/10688/01/KeystrokeCosting-publicdraft1.pdf.

101. Common applications include word-processing programs, spreadsheet programs, and portable document format (PDF) readers such as Adobe Reader.

102. *See, e.g.*, ProQuest-CSA, Digital Commons Features, http://www.umi.com/products_umi/digitalcommons/features.shtml (last visited Mar. 7, 2007); Open Society Institute, *supra* note 96, at 19 (listing system-generated usage statistics and reports available for various open source applications).

103. *See, e.g.*, ProQuest-CSA, Digital Commons Features, *supra* note 102.

Policy development is another important part of the process of establishing a repository. Institutional repositories are intended to serve as a permanent archive of an institution's or a discipline's work. Policies and procedures can help determine what should be archived as well as who will be authorized to do so. Appropriate procedures also ensure that the submitter has retained sufficient rights in the work to permit archiving in a repository.[104]

Finally, what goes in must come out or it will be of little value to an institution's legacy or to authors trading in the currency of scholarly impact and reputation. All major institutional repositories are now indexed by Google Scholar[105] and most also support federated searching[106] across all repositories that comply technically with the Open Archives Initiative's Protocol for Metadata Harvesting (OAI-PMH).[107] In other words, repositories that follow certain technical specifications established by the Open Archives Initiative enable federated searching of their data, as well as data in all other compliant repositories, regardless of the application used to create the repository. This ensures optimum visibility and retrievability for items archived in these repositories. Establishing an OAI-PMH compliant repository ensures that researchers from any discipline can search metadata, indexing terms, and abstracts

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104. For assistance with policy formulation, see RAYM CROW, SPARC INSTITUTIONAL REPOSITORY CHECKLIST & RESOURCE GUIDE (2002), http://new.arl.org/sparc/bm~doc/IR_Guide_&_Checklist_v1.pdf.

105. Google, About Google Scholar, http://scholar.google.com/intl/en/scholar/about.html (last visited Mar. 7, 2007). Google Scholar was released in November 2004. Google Scholar, however, does not search all open access archives and it also searches more than just open access repositories. Marydee Ojala, *Open Access: Open Sesame or Opening Pandora's Box?*, ECONTENT, June 2005, at 30, 35. As of this writing, Microsoft is working on Windows Live Academic Search, currently in beta testing. Microsoft, Live Search Academic, http://academic.live.com (last visited Mar. 7, 2007). The site, which is billed as a competitor to Google Scholar, reportedly uses OAI standards for harvesting metadata. *See* Barbara Quint, *Windows Live Academic Search: The Details*, INFORMATION TODAY, Apr. 17. 2006, http://www.infotoday.com/newsbreaks/nb060417-2.shtml (reviewing Windows Live Academic Search).

106. Federated searching enables "a user to search multiple, independent, discretely mounted data sources or databases through a single query." Janelle Julien, Editor's Note, *Federated Search: A Needle in a Haystack?*, Nov. 14, 2006, http://www.aiim.org/article-docrep.asp?ID=32140.

107. Open Archives Initiative, Protocol for Metadata Harvesting, http://www.openarchives.org/pmh/ (last visited Mar. 7, 2007). The Open Archives Initiative (OAI) began in 1999. Open Archives Forum, History and Development of OAI-PMH, http://www.oaforum.org/tutorial/English/page2.htm (last visited Mar. 7, 2007). The OAI is leading the effort to develop interoperability standards for interfaces, searching, and other services. *See* Richard A. Danner, *Electronic Publication of Legal Scholarship: New Issues and New Models*, 52 J. LEGAL EDUC. 347, 357 (2002); Danner, *supra* note 43, at 594–95. Early proponents of institutional repositories, especially those associated with the OAI, have worked for years to develop Internet protocols to standardize institutional repositories, including methods for metadata creation, standardized searching across platforms, and institutional repositories. Open Archives Forum, *supra*. At the time open source institutional repository applications became widely available in 2000, Google Scholar was not indexing the content of institutional repositories. Initially, much of the impetus for researcher participation in institutional repositories was to make their materials more accessible on the Internet. Michael Kanellos, *HP, MIT Delve Deep with Digital Library*, CNET NEWS.COM, Nov. 4, 2002, http://news.com.com/2100-1001_3-96488.html (interviewing Mackenzie Smith, MIT's DSpace project director). OAIster is probably the best-known harvesting application for OAI-PMH compliant repositories, but others exist. Launched in 2002 by the University of Michigan, OAIster does not harvest sites that are not OAI-PMH compliant like SSRN. As of March 2007, OAIster had harvested more than 10.9 million records from 752 repositories, many of them covering legal subjects. OAIster, http://oaister.umdl.umich.edu/o/oaister (last visited Mar. 7, 2007); OAIster, Reports, http://oaister.umdl.umich.edu/o/oaister/reports.html (last visited Mar. 7, 2007). This was up from 3.7 million records in November 2004 and 5.7 million records as of August 2005. Heather Morrison, *Dramatic Growth of Open Access: Revised Update*, The Imaginary Journal of Poetic Economics (Aug. 20, 2005), http://poeticeconomics.blogspot.com/2005/08/dramatic-growth-of-open-access-revised.html. For a list of other federated searching tools, see Open Citation Project, Core Metalist of Open Access Eprint Archives, http://opcit.eprints.org/explorearchives.shtml (last visited Mar. 7, 2007).

associated with articles. It also ensures that the scholarly community is not completely dependant upon commercial indexers like Google to locate archived works.

Hundreds of institutions around the world have created repositories in the past five years, with some going so far as to mandate that faculty self-archive their publications.[108] Several registries of both repositories and open access policies have been established.[109] By June of 2005, open access registries estimated that fifteen percent of the 2.5 million articles published by the world's 24,000 journals had been archived in OAI-compliant repositories, and ninety-three percent of registered journal publication policies permitted some form of author self-archiving. However, only about fifteen percent of authors worldwide take advantage of the opportunity to self-archive.[110]

B. Establishing a Law School Repository

Law schools and other institutions or groups wishing to establish a repository can choose between several well-developed software applications. Options include:

(1) building a multi-media repository from open source software;[111]
(2) licensing a multi-media repository based on proprietary software;[112] or
(3) sponsoring a commercially hosted site limited to law eprints only.[113]

Any law school that intends to establish a repository will also need to ensure that it provides adequate support for the project, anticipating that many members of law faculties are not interested in mastering the idiosyncrasies of a given repository

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108. *See* ARTHUR SALE, THE PATCHWORK MANDATE (2006), http://eprints.utas.edu.au/410/01/Policies_for_Repository_Managers.pdf (discussing the pros and cons of mandating author self-archiving).

109. In 2003, open access proponents released a major international initiative known as the Berlin Declaration on Open Access to Knowledge in the Sciences and Humanities. Released by the Max Planck Society and the European Cultural Heritage Online (ECHO), the Berlin Declaration is notable for the involvement of scholars from the humanities as well as the sciences. The Declaration signatories agreed on various open archive principles and committed to enabling them in their home countries. The Berlin Declaration also recommended the creation of open access registries. Open Access Conference, Berlin Declaration, http://oa.mpg.de/openaccess-berlin/berlindeclaration.html (last visited Mar. 7, 2007); *see also* Max Planck Society, http://www.mpg.de/english/portal/ (last visited Mar. 7, 2007); European Cultural Heritage Online (ECHO), http://echo2.mpiwg-berlin.mpg.de/home (last visited Mar. 7, 2007). In 2003, the SHERPA project (Securing a Hybrid Environment for Research Preservation and Access), formed by a group of British universities, established a registry of repositories called the Directory of Open Access Repositories (OpenDOAR), http://www.opendoar.org/ (last visited Mar. 7, 2007); *see also* SHERPA, OpenDOAR Project, http://www.sherpa.ac.uk/projects/opendoar.html (last visited Mar. 7, 2007). SHERPA also offers RoMEO—its registry of journal publication policies concerning postprint self-archiving. SHERPA, RoMEO, http://www.sherpa.ac.uk/romeo.php (last visited Mar. 7, 2007); *see also* Bill Hubbard, *SHERPA and Institutional Repositories*, 16 SERIALS 243 (2003). In 2003, the Registry of Open Access Repositories (ROAR), http://roar.eprints.org/ (last visited Mar. 7, 2007), and the Registry of Open Access Repository Material Archiving Policies (ROARMAP), http://www.eprints.org/signup/fulllist.php (last visited Mar. 7, 2007), were established by the University of Southampton. As of this writing, 497 OAI-compliant institutional repositories have been registered and twenty-nine institutions and research funders have adopted self-archiving policies. Posting of Stevan Harnad, harnad@ecs.soton.ac.uk, to SPARC-IR@arl.org (July 23, 2006), https://mx2.arl.org/Lists/SPARC-IR/Message/437.html; *see also* Stevan Harnad, *Optimality, Inevitability, and Conflicts of Interest*, Open Access Archivangelism (July 30, 2006), http://openaccess.eprints.org/index.php?/archives/118-Optimality,-Inevitability,-and-Conflicts-of-Interest.html.

110. Posting of Stevan Harnad, harnad@ecs.soton.ac.uk, to Dspace-General@mit.edu, http://mailman.mit.edu/pipermail/dspace-general/2005-June/000628.html (June 11, 2005).

111. *See infra* Part IV.B.1.

112. *See infra* Part IV.B.2.

113. *See infra* Part IV.B.3.

system. With adequate training and administrative support, publishing in repositories can be routine. Faculty members should nevertheless be involved in providing descriptive terms and abstracts to help future researchers locate the material.

1. Open Source Software

Although the field of law is an exception, most academic disciplines use institutional repositories that have been created in-house with open source applications obtained from the two most popular institutional repository developers, Eprints and DSpace.[114] Open source institutional repositories are perceived to be an economical and easy route to green road publishing, yet experience has shown that the investment of time and money may be greater than originally predicted.[115] While network infrastructure and servers are not likely to be a barrier for most educational institutions, the manpower and expertise needed to work with open source code may be a limitation for smaller institutions or law schools. Given such limitations, smaller institutions or law schools might consider consortial institutional repositories or licensed applications.[116] Law schools within university systems may want to check with their central administration before striking out on their own. It is possible that a university repository has already been created, and if not, the central information technology department or university library system might be persuaded to create one. Working within a university system creates increased visibility for the work of a law faculty within the central university administration, and a law school can typically participate in a university repository without cost to the law school.[117]

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114. Both software developers maintain Web sites. EPrints for Digital Repositories, http://www.eprints.org (last visited Mar. 8, 2007); DSpace Federation, http://www.dspace.org (last visited Mar. 8, 2007). There are other open source applications available. *See* ROAR, Browse, http://archives.eprints.org/?action=browse#version (last visited Mar. 8, 2007) (listing software currently in use by ROAR registered, OAI-PMH compliant repositories; in addition to EPrints and DSpace, the next most frequently used applications are bepress, ETD-db, and OPUS; however, other minor players exist). The Open Society Institute also provides detailed information on the features of repository software currently in use. *See* Budapest Open Access Initiative, A Guide to Institutional Repository Software, http://www.soros.org/openaccess/software/ (last visited July 28, 2006).

115. Data tracking the cost of implementing an open source repository are sketchy, but some exist. When multimedia institutional repositories first emerged, the only options were do-it-yourself open source applications like EPrints and DSpace. The initial buzz was that "creating and maintaining an OAI-compliant open-access archive requires little or no funding. The software is free, the labor is trivial, and universities can donate the server space without noticing." Morrison & Suber, *supra* note 48. But within a few years, open source proponents conceded that the annual management costs were much higher than they anticipated. *See* Posting of Steve Hitchcock, sh94r@ecs.soton.ac.uk, to American-Scientist-Open-Access-Forum@listserver.sigmaxi.org (Nov. 30, 2005), http://amsci-forum.amsci.org/archives/American-Scientist-Open-Access-Forum.html (follow "2005" hyperlink; follow hyperlink to message number 94). Proprietary vendors such as the Berkeley Electronic Press have tried to use the cost issue to their advantage to persuade people to rely on proprietary packages that arguably make ongoing management more cost effective. *See, e.g.*, Berkeley Electronic Press, bepress Repository Technology, http://www.bepress.com/repositories.html (last visited Aug. 11, 2006) (scroll down to the section titled "A Note about Open Source vs. Commercial Implementations"). Open source developer communities have responded by providing start up support and services aimed at guiding institutions away from expensive mistakes associated with start up and implementation. *See* Hitchcock, *supra*. The SPARC Web site provides a balanced, realistic look at institutional repository costs that institutions need to anticipate. SPARC, *supra* note 36. *See generally* CROW, *supra* note 92.

116. For licensed software options, see Part IV.B.2 *infra*.

117. Part IV.C, *infra*, identifies twenty-two university institutional repositories not currently used by affiliated

a. EPrints

EPrints made author self-archiving viable on a global scale. Developed in 2000 at Southampton University, EPrints was the first OAI-compliant software to become widely available.[118] Now a mature and flexible application, EPrints software can be downloaded from the EPrints Web site under the GNU open source license.[119] EPrints is a very popular choice for institutional repositories and enjoys wide use throughout the world, including two established by U.S. law schools, and one university institutional repository in use by a U.S. law school.[120] It places a particular emphasis on archiving eprints, as opposed to other digital objects and data sets, but any kind of digital object can be archived.[121] A variety of repositories have been implemented with EPrints, including consortial institutional repositories, discipline-specific institutional repositories, open access journals, and theses and dissertation repositories. EPrints is flexible enough to operate within portals.[122] The EPrints developers also offer service and consulting packages, including assistance with training and policy development.[123]

b. DSpace

DSpace is the next-most popular open source application for establishing an in-house repository, including three university institutional repositories in use by U.S. law schools.[124] Released in 2002, after joint development by MIT Libraries and Hewlett Packard, DSpace is an OAI-compliant application that can be downloaded from the DSpace Web site under the BSD open source license.[125] Like EPrints

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law schools, although presumably the law schools have access to them. The ROAR registry search engine will quickly identify an open source repository that is maintained by a college or university. Registry of Open Access Repositories (ROAR), *supra* note 109.

118. Tansley & Harnad, *supra* note 35.

119. In 2002, EPrints affiliated with GNU for release under the GNU open source license. *See* Posting of Christopher Gutteridge, eprints-support@ecs.soton.ac.uk, to American-Scientist-Open-Access-Forum@ istserver. sigmaxi org (July 4, 2002), http://amsci-forum.amsci.org/archives/American-Scientist-Open-Access-Forum.html (follow "2002" hyperlink; follow hyperlink to message number 429). CalTech was one of the first institutions to create a repository with Eprints. Sponsler & Van de Velde, *supra* note 99 (describing the CalTech developers' experience with Eprints).

120. EPrints for Digital Repositories, *supra* note 114. As of this writing, 220 EPrints repositories have been registered by ROAR. Browse GNU Eprints, http://archives.eprints.org/?page=all&version=eprints2 (last visited Mar. 9, 2007). Law Schools currently using EPrints repositories include Duke, Hofstra, and Pace. *See infra* Part IV.C (listing schools that use EPrints).

121. Posting of Arthur Sale, ahjs@ozemail.com.au, to American-Scientist-Open-Access-Forum@ listserver.sigmaxi.org (Nov. 20, 2005), http://amsci-forum.amsci.org/archives/American-Scientist-Open-Access-Forum.html (follow "2005" hyperlink; follow hyperlink to message number 127).

122. EPrints, Example Repositories, http://www.eprints.org/software/examples/ (last visited Mar. 12, 2007).

123. EPrints, Services, http://www.eprints.org/services/ (last visited Mar. 12, 2007).

124. ROAR, Browse, http://roar.eprints.org/index.php?action=browse#version (last visited Mar. 10, 2007); *see also* DSpace Federation, http://wiki.dspace.org/index.php//DspaceInstances (last visited Mar. 10, 2007). Law schools currently using DSpace repositories include Cornell, Kansas, and New Mexico. Dspace at Cornell Univ., Law School, http://dspace.library.cornell.edu/handle/1813/477 (last visited Mar. 12, 2007); KU ScholarWorks, Law Community, http://kuscholarworks.ku.edu/dspace/handle/1808/748 (last visited Mar. 12, 2007); DSpace UNM, Law School Community, https://repository.unm.edu/dspace/handle/1928/331 (last visited Mar. 12, 2007).

125. *See* DSpace, Introducing DSpace, http://www.dspace.org/ (last visited Mar. 12, 2007); *see also* MacKenzie Smith et al., *DSpace: An Open Source Dynamic Digital Repository*, 9 D-LIB MAG., Jan. 2003, http://www.dlib.org/dlib/january03/smith/01smith.html.

repositories, DSpace repositories can be used for archiving both eprints and other digital data; however, DSpace places an emphasis on preservation of all types of digital information, including scientific data sets.[126] Usage statistics and e-mail alerts are available.[127] A Mellon grant provided initial support for promoting DSpace, and documentation and policy models are available, as well as a developer community.[128] The full text of articles loaded into DSpace is indexed by search engines, unlike articles loaded into SSRN and EPrints, which are only indexed at the abstract or metadata level.[129]

c. LEDA

Although now defunct, some mention must be made of The Legal Education Document Archive (LEDA),[130] an open source application developed by Harvard Law School and Cornell Law School at the same time EPrints was being developed at Southampton. LEDA was an OAI-compliant "federated, multisite digital library of legal scholarship" based on a simple "Web publishing system that [held] faculty and student work product."[131] Documents were uploaded by the authors and persistent identifiers for the digital objects were provided.[132] LEDA was ahead of its time and it did not catch on with other law schools. At one point LEDA was used by Harvard, Cornell and Duke; however, all three schools have since changed to other systems.[133]

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126. Kanellos, *supra* note 107; *see also* Sale, *supra* note 121.

127. Open Society Institute, *supra* note 96 (describing system-generated usage statistics and reports available for various open source applications).

128. MIT LIBRARIES, FINAL REPORT OF THE INITIAL DEVELOPMENT OF THE DSPACE FEDERATION 1 (2004), http://www.dspace.org/federation/mellon-dspace.pdf; DSpace Wiki, Main Page, http://wiki.dspace.org/ (last visited Mar. 12, 2007).

129. Open Society Institute, *supra* note 96 (describing full-text search capabilities for various open source applications including DSpace). Notably, the bepress Legal Repository also permits full-text indexing by search engines. *See infra* note 199 and accompanying text.

130. A LEDA Web site is still maintained but no content can be accessed from it. Legal Electronic Document Archive (LEDA), http://leda.law.harvard.edu/leda/ (last visited Aug. 19, 2006). "LEDA began under the auspices of the Harvard Law School Library, and is now jointly managed by HLSL and the Cornell Legal Information Institute, with most development work taking place at Cornell. Duke and Emory are also among the early adopters." LEDA, Project Overview, http://leda.law.harvard.edu/leda/manual/ (last visited Mar. 12, 2007). Tom Bruce, a principal technical architect of LEDA, presented the LEDA system at the 2001 CALI conference. Session video and materials are still available at CALI, Conference Materials, http://cnt.kentlaw.edu/conference/materials/getSession.asp?T=57&ID=2001C22a2 (last visited Aug. 19, 2006); *see also* Kevin Butterfield, *The Open Archives Initiative*, 26 TECHNICAL SERVICES L. LIBR., Mar./June 2001, http://www.aallnet.org/sis/tssis/tsll/26-0304/inet.htm (reporting on the Open Archives Initiative (OAI) and the LEDA project); Danner, *supra* note 43, at 600 (author was one of the original LEDA participants).

131. CALI, *supra* note 130.

132. At the time, the LEDA developers were working closely with developers working on the OAI standard, and were thus inspired to implement to OAI-PMH protocol in their new LEDA application. *See* E-mail from Thomas R. Bruce, Director, Legal Information Institute, to the author (Aug. 21, 2006, 11:03 AM) (on file with author and New Mexico Law Review).

133. Cornell is using its university repository based on DSpace, as well as hosting repositories in bepress, SSRN, and NELLCO's Legal Scholarship Repository. Duke has established a separate law school repository based on EPrints, as well as hosting repositories in bepress, SSRN, and NELLCO's Legal Scholarship Repository. Harvard is currently hosting a repository in SSRN. *See infra* Part IV.C.

2. Proprietary Software

Licensing an institutional repository package is a recent option for institutions that do not wish to undertake working with open source code. Currently there is only one vendor in this market—ProQuest. ProQuest is a for-profit corporation that creates and publishes databases for libraries and educational institutions worldwide.[134] Its repository application, Digital Commons, is the third-most commonly used today, including two established by U.S. law schools, and seven university institutional repositories in use by U.S. law schools.[135]

Digital Commons, released in 2004, is based on software developed by the Berkeley Electronic Press (bepress) in collaboration with the University of California in the course of creating the California Digital Library's very successful eScholarship Repository.[136] Like the open source applications EPrints and DSpace, Digital Commons supports multimedia; however, unlike Eprints and DSpace, institutional repositories built with Digital Commons store their content on servers owned and maintained by bepress.[137] Contracting with a vendor to host a repository eliminates the chore of maintaining a server, but it also means that the institution does not have full control over the site and that the content could be lost if the vendor dissolves. Arguably, allowing a commercial vendor to host an archive contradicts one of the rationales for establishing an institutional repository: providing a means of controlling and preserving electronic scholarship that was otherwise under the control of third-party publishers. Nevertheless, many universities, smaller academic institutions, and a few law schools have opted to use Digital Commons rather than tackle do-it-yourself open source applications.[138] The management features of Digital Commons are built-in, making it essentially a turnkey system. Digital Commons is OAI-compliant and institutional repositories running on it may be registered by ROAR. RSS feeds and customized e-mail alert options are available, as well as an online user forum, personalized saved searches, customizable vocabulary for keyword and subject area fields, and usage reports.[139]

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134. Press Release, ProQuest-CSA, ProQuest Announces New Institutional Repository System (June 25, 2004), http://proquest.com/pressroom/pressrelease/04/20040625B.shtml.

135. *See* ROAR, Browse, *supra* note 114. As of this writing, there are fifty-two instances of Digital Commons institutional repositories registered with ROAR. ROAR, Browse, *supra* note 114. Law schools currently using Digital Commons repositories include Boston College, Columbia, Pace, U.C. Berkeley, U.C. Hastings, U.C.L.A., and Connecticut. *See id.*

136. Cal. Digital Library, eScholarship Repository, http://repositories.cdlib.org/escholarship/ (last visited Mar. 12, 2007); *see also* Terence K. Huwe, *Social Sciences E-Prints Come of Age: The California Digital Library's Working Paper Repository*, ONLINE, Sept. 2002, at 38–42, *available at* http://www.accessmylibrary.com/coms2/summary_0286-25889135_ITM.

137. ProQuest-CSA, Does Digital Commons Include Hosting?, http://umi.com/techsupport/answers/dcm/dcm_ans_637.shtml (last visited Apr. 15, 2007).

138. For a list of some of the universities that have begun to use Digital Commons, see ProQuest-CSA, Digital Commons Repositories, http://www.umi.com/products_umi/digitalcommons/default.shtml#repositories (last visited Mar. 12, 2007).

139. ProQuest describes Digital Commons as "[t]he quickest, easiest way to launch your IR":

> There's no need for special technical skills or HTML training, no need to enlist local hardware, software, or systems experts. You get all this:
>
> • HTML templates, PDF conversion, XML exporting
> • Browsing and full-text searching
> • Institutional site branding, custom cover sheets
> • Data transfer to third-party indexing services and much more.

Because it was developed by Berkeley Electronic Press, which is known for its expertise in developing applications for online peer-reviewed journals, Digital Commons includes features that make it easy to establish gold road, online journals in addition to digital archives.

3. Repositories Limited to Legal Scholarship

Two companies currently offer proprietary options for law schools interested in establishing open access repositories for law faculty eprints only: the Social Sciences Research Network (SSRN)[140] and the Berkeley Electronic Press.[141] In addition to hosting eprints on their servers, these companies provide management and promotional services, including e-mail alerts. The non-profit New England Law Library Consortium (NELLCO) has also established a repository, the Legal Scholarship Repository (LSR), which is available for its members' use.[142] NELLCO's LSR is based on bepress software and is hosted and managed by bepress.[143] Unlike the open source institutional repositories that predominate in the sciences, technology, and medicine, or the more general Digital Commons application, which has gained a following among many U.S. universities, these services provide archives that are expressly intended for legal scholarship eprints that have been converted to PDFs.

Certain features of these proprietary, hosted sites distinguish them from true institutional repositories. These repositories do not support multimedia files (e.g., video or sound), and few are registered with ROAR.[144] The fact that the vast majority of open access legal eprints are currently archived in these unregistered repositories may explain why open access legal scholarship tends to go unnoticed by the rest of the open access community. This fact may also contribute to the perception that legal scholars do not "get" open access and lag behind other disciplines in this regard. Applying SPARC's definition of institutional repositories to law school repositories hosted by SSRN and bepress[145] tends to demonstrate that those repositories should count as institutional repositories, because while these discipline-based repositories do not meet all of the elements of SPARC's definition of a repository, they come very close in most respects.[146] Admittedly, one should be

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ProQuest-CSA, Digital Commons, http://il.proquest.com/products_umi/digitalcommons/default.shtml (last visited Mar. 12, 2007).

140. *See infra* Part IV.B.3.a.

141. *See infra* Part IV.B.3.b.

142. NELLCO is a non-profit corporation composed of academic, private non-profit, and government law libraries. NELLCO provides for resource sharing and cooperation among its twenty-five full members, and sixty-five affiliate members. NELLCO is governed by a Board of Directors composed of the directors of its full-member libraries. *See* NELLCO, http://www.nellco.org/ (last visited Mar. 12, 2007); *see also infra* Part IV.B.3.c.

143. *See* NELLCO, Legal Scholarship Repository, http://lsr.nellco.org/ (last visited Mar. 12, 2007).

144. The SSRN system is not OAI-PMH compliant and it is not known if the institutional collections in the LSN could be registered for ROAR or OpenDOAR; however, bepress systems are OAI-PMH compliant and probably could be registered by ROAR or OpenDOAR. E-mail from Gregg Gordon, President and CEO of SSRN, to the author (Aug. 30, 2006) (on file with author and New Mexico Law Review); Berkeley Electronic Press, Selected Works vs. Faculty Publication Pages, http://works.bepress.com/comparison.html (last visited Apr. 15, 2007).

145. SPARC defines institutional repositories as a component in a restructured scholarly publishing model and a tangible embodiment of institutional quality. CROW, *supra* note 92, at 4.

146. SSRN and bepress arguably do not meet SPARC's definition of an institutional repository because the

concerned about whether for-profit companies can be relied upon to provide long-term access to content in a manner that is consistent with the goals and principles of the open access movement.[147] Nevertheless, while purists may take issue with characterizing services such as SSRN and bepress as institutional repositories,[148] a great many legal scholars now enjoy the benefits of open access to scholarship because of the existence of these sites. For the time being, therefore, because these sites dominate open access legal scholarship to such an extent any discussion of open access to legal scholarship must include an examination of both of these commercial services.

a. SSRN's Legal Scholarship Network

Founded by academics in 1994, the Social Sciences Research Network is a closely held, for-profit corporation known for providing "eLibraries" in ten social science disciplines, including the Legal Scholarship Network.[149] The SSRN site is co-hosted by the Stanford Law School.[150] SSRN was created to provide a means "for scholars to share and distribute their research worldwide long before their papers worked their way through the journal refereeing and publication process"[151] (i.e., preprints or working papers). More recently, authors have been submitting postprints as well.[152] The LSN is well known among legal scholars, and it has become the largest collection of open access legal eprints available today.[153] SSRN encourages legal scholars to submit their eprints into LSN "subject matter journals" at no cost to the author.[154] After completing a verification process, SSRN staff does

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academic institutions do not control the servers. *See id.* at 16 (defining institutional repositories).

147. Both bepress and SSRN have policies that essentially support open access to the extent that it is consistent with allowing the companies to profit. *See* Berkeley Electronic Press, Guest Access Policy, http://www.bepress.com/quasi_openaccess.html (last visited Mar. 9, 2007); Social Science Research Network, SSRN's Commitment to Users, http://www.ssrn.com/lsn/ (last visited Mar. 9, 2007).

148. One element of the SPARC definition that law school repositories hosted by bepress and SSRN cannot consistently demonstrate is that of interoperability because SSRN is not OAI-PMH complient. *See* ROAR, *supra* note 109 (search for "SSRN"). The bepress platform is OAI-PMH compliant, but few of its repositories are registered as such with ROAR. *See* ROAR, Browse, *supra* note 114 (showing fifty-two registered bepress repositories). SPARC's definition states:

> Defined for our purposes then, an institutional repository is a digital archive of the intellectual product created by the faculty, research staff, and students of an institution and accessible to end users both within and outside of the institution, with few if any barriers to access. In other words, the content of an institutional repository is:
>
> • Institutionally defined;
> • Scholarly;
> • Cumulative and perpetual; and
> • Open and *interoperable*.

CROW, *supra* note 92, at 16 (emphasis added).

149. *See* Posting of Matt Bodie to Prawfsblawg, An Interview with SSRN's Gregg Gordon, http://prawfsblawg.blogs.com/prawfsblawg/2006/06/an_interview_wi.html (June 15, 2006, 11:49 AM); *see also* Social Science Research Network (SSRN), *supra* note 77.

150. Social Science Research Network (SSRN), *supra* note 77.

151. *See* Letter from Michael C. Jensen, Chairman, SSRN (Fall 2005), http://ssrn.com/update/general/mjensen.html. More information on the history of SSRN is available at the SSRN Web site. *Id.*; *see also* Bodie, *supra* note 149.

152. Posting of Dan Markel, to Prawfsblawg, Wither SSRN?, http://prawfsblawg.blogs.com/prawfsblawg/2006/01/whither_ssrn.html (Jan. 19, 2006, 3:15 AM).

153. *See supra* note 75.

154. SSRN, Legal Scholarship Network (LSN), *supra* note 45.

the actual loading into the database.[155] Most of the eprints contained in these "journals" are then made available for public downloading at no charge, making eprints in the LSN openly accessible. Freelance submissions to subject matter journals identify authors as members of law school faculties, but the journals are not associated with any given institution, and are solely under SSRN's control. The LSN publishes download counts for each eprint that it hosts. LSN provides three measurement tools: Top Authors, Top Institutions, and Top Papers.[156] For years, legal scholars have freely and enthusiastically submitted working papers to LSN subject matter journals and in return gained valuable feedback from colleagues, more exposure for their work, and a measure of its impact through download statistics.[157] For a fee, law schools can subscribe to weekly, e-mail-based abstracts announcing new submissions to the free LSN subject matter journals.[158]

In addition to submitting eprints to the free LSN subject matter journals, law schools may pay to sponsor an LSN "research paper series" in which their faculty eprints can be archived and downloaded at no cost.[159] These collections are essentially de facto open access institutional repositories, as only faculty at sponsoring schools can submit eprints to their collections. Readers can subscribe to receive free e-mail announcements of new submissions to these collections.[160] Three different levels of hosting fees are assessed, and the higher the fee, the higher the level of promotional service rendered by LSN for each sponsored collection.[161] It should be noted that in some respects the research paper series in the LSN resemble gold road open access journals where authors and their institutions subsidize publication.[162] Unlike other open access online journals, however, LSN provides no editorial services. Law schools are free to continue to pay to load as many papers into their collection as they wish.

The LSN also "partners" with law journal publishers who host abstracts of their content at the LSN site.[163] Because many of these publishers charge readers to download the full text of their articles, the LSN site is not totally open access.[164] The

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155. *Cf.* SSRN, Online Submission System, http://www.ssrn.com/update/forms/absubmission.html.

156. Social Science Research Network (SSRN), *supra* note 77; *see also* Bodie, *supra* note 149.

157. Statistics on the number of times a paper is downloaded from SSRN are becoming an additional measure of the impact of the work. Law schools have been eager to sponsor repositories in exchange for the increased institutional exposure and its concomitant reputational enhancement. For further discussion of download counts, see *infra* Part V.B.

158. SSRN provides free subscriptions to its e-mail-based abstracting journals to users in developing countries. *See* Jensen, *supra* note 151.

159. *Cf.* Social Science Research Network (SSRN), *supra* note 77 (follow "Research Paper Series" button).

160. *See id.* (follow a "Subscribe" button to receive e-mail announcements).

161. E-mail from Cathy Blocher, Director of Partner Relationships, Social Science Research Network, to the author (May 8, 2005, 5:46 PM) (on file with author and New Mexico Law Review).

162. Many commercial publishers are experimenting with gold road open access journals that shift production expenses to authors and institutions in the form of sponsorship fees, rather than through a business model that recovers costs through subscription fees, especially for peer-reviewed STM journals. *See, e.g.*, Public Library of Science (PLos), Publication Fees for PloS Journals, http://www.plos.org/journals/pubfees.html.

163. *See* SSRN, Fee Based Partner Publications, http://www.ssrn.com/update/general/partners.html (last visited Apr. 15, 2007).

164. When browsing SSRN, an icon shows whether a fee is required to view a document. *E.g.*, SSRN, Display Journal Browse, http://papers.ssrn.com/sol3/DisplayJournalBrowse.cfm (last visited Mar. 9, 2007) (follow any "New" button). Two examples of such commercial publishers are Blackwell Publishing and Oxford University Press. Notably, both of these publishers have begun to experiment with producing gold road open access journals

fact that several commercial publishers choose to associate their journals with a site hosting open access eprints gives credence to the argument that open access increases readership and is thus beneficial to journal publishers. Several law school journals have also partnered with LSN to host their content, which can be made freely available like a gold road open access journal.[165]

SSRN, and thus LSN, is indexed by Google[166] at the abstract level and, as a result, non-traditional readers are able to find the legal scholarship housed in LSN, despite the fact that the site is not OAI-PMH compliant and is not registered with ROAR or OpenDOAR.[167] As of March 2007, the total number of full-text documents in all ten SSRN eLibraries was approximately 114,639, and the total number of authors in SSRN was approximately 72,639.[168] Approximately twenty-five percent of this content is in the LSN.[169] As of August 2006, sixty-seven U.S. law schools sponsor some type of institutional collection at the site.[170]

b. bepress Legal Repository

Founded in 1996 by academics frustrated with the costs and delays of the scholarly publishing industry, the Berkeley Electronic Press is a privately held, for-profit corporation well-known as a publisher of peer-reviewed online journals.[171] Bepress is also well known as a software developer and has created applications for managing online journals (EdiKit and LawKit), institutional repositories (Digital Commons), and a popular application for online submission of articles to law journals for publication consideration (ExpressO).[172]

Bepress has also created an open access repository of law faculty eprints called the bepress Legal Repository.[173] Like SSRN, it contains collections that are not affiliated with a particular law school, as well as collections that are sponsored by

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based on an author-pays business model. *See* Blackwell Publishing, About Online Open, http://www.blackwellpublishing.com/static/onlineopen.asp?site=1 (last visited Aug. 16, 2006); Oxford Journals, Oxford Open, http://www.oxfordjournals.org/oxfordopen/ (last visited Aug. 16, 2006).

165. The Delaware Journal of Corporate Law and the Iowa Law Review, among others, have partnered with LSN to host their content. *See* SSRN, Browse SSRN's Partners in Publishing, http://papers.ssrn.com/sol3/DisplayPipPublishers.cfm (last visited Mar. 9, 2007).

166. Blocher, *supra* note 161.

167. Gordon, *supra* note 144.

168. SSRN, Browse SSRN eLibrary by Network/Journal/Topic, http://papers.ssrn.com/sol3/DisplayJournalBrowse.cfm (last visited Mar. 9, 2007). As of fall 2005, over 47,000 authors had uploaded more than 89,000 papers and abstracts into SSRN, and users downloaded over eight million full-text documents. At that time, downloads for all of SSRN were occurring at the rate of over 300,000 per month. Jensen, *supra* note 151.

169. Separate figures for the LSN are not published by SSRN; however, Bernie Black, the managing director of SSRN, has stated that roughly twenty-five percent of SSRN content is in the LSN. Black & Caron, *supra* note 75, at 95.

170. *See infra* Part IV.C.

171. *See* Paula J. Hane, *bepress.com Introduces Innovative Scholarly Publishing Model*, INFO. TODAY, Mar. 2001, at 1, 56 (interviewing bepress co-founder Robert Cooter, Professor of Law, University of California, Berkeley, and discussing among other things his inspiration for founding bepress); Greg Tananbaum, *Re-shaping Scholarly Publishing: The Berkeley Electronic Press Solution*, 13 LOGOS 164, 169 (2002).

172. Berkeley Electronic Press, http://www.bepress.com/ (last visited Aug. 26, 2006); *see also* Tananbaum, *supra* note 171, at 164–69 (describing in detail the EdiKit concept and application).

173. Berekely Electronic Press, bepress Legal Repository, http://law.bepress.com/repository/ (last visited Mar. 10, 2007).

various law schools.[174] Freelance submissions are made by uploading eprints into the ExpressO Preprint Series (EPS), which are then reviewed by bepress staff before the submissions are completed.[175] Each eprint is indexed by the author during submission, using the subjects in the Current Index to Legal Periodicals (CILP).[176] There is no cost to upload eprints to the ExpressO Preprint Series.[177] The eprints contained in the EPS are available for public downloading at no charge.[178] Unlike LSN, bepress does not charge for e-mail-based announcements of new submissions to the EPS.[179] The EPS also offers a list of most frequently downloaded papers.[180] Currently, the company sends authors monthly reports of download counts but does not publish this information on the bepress Web site for public consumption.[181]

In 2004, bepress created an application for law schools wishing to host a "working paper series" in its Legal Repository.[182] Like sponsoring a "research paper series" in the SSRN Legal Scholarship Network, this approach allows a law school to pay to sponsor an open access collection of its faculty eprints at the bepress site. Management and promotional services for the collection are also provided, including e-mail announcements of new submissions.[183] Unlike LSN, the law repositories hosted by bepress automatically convert word-processed documents to PDFs during submission, thus sparing users the trouble of having to separately convert documents to a PDF prior to loading. This is also the case for eprints loaded through the EPS.[184]

The bepress Legal Repository Web site pulls together all open access eprints published with bepress software, including those in Digital Commons.[185] Otherwise

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174. *Id.*

175. ExpressO, Frequently Asked Questions About ExpressO, http://law.bepress.com/expresso/faq.html (last visited Mar. 10, 2007).

176. Marian Gould Gallagher Law Library, CILP—Subject Headings, http://lib.law.washington.edu/cilp/revsub.html (last visited Aug. 15, 2006).

177. Bepress Legal Repository, ExpressO Preprint Series, http://law.bepress.com/expresso/eps/ (last visited Apr. 15, 2007).

178. *Id.*

179. Bepress Legal Repository, Notification and RSS, http://law.bepress.com/repository/announcements.html (last visited Apr. 15, 2007).

180. Bepress Legal Repository, The 10 Most Popular Articles in the ExpressO Preprint Series, http://law.bepress.com/expresso/eps/topdownloads.html (last visited Mar. 10, 2007).

181. *See infra* note 235 and accompanying text.

182. Berkeley Electronic Press, bepress Legal Working Paper Series, http://law.bepress.com/repository/join.html (last visited Mar. 10, 2007).

183. *Id.* Bepress states that its mass mailing service is several times larger than that of any other promotional service—presumably a reference to SSRN—and they are able to provide these services at a lower price. *Id.* Anecdotally, recent law librarian postings on the Academic Law Libraries Special Interest Section (ALL-SIS) listserv bear this out with reports of time consuming efforts to create e-mail lists for SSRN to use in promoting their hosted site, and other separate reports reporting that the bepress promotional services do not require extra work on the part of the institutional sponsor. Posting to ALL-SIS@aallnet.org (Mar. 16, 2006) (on file with author).

184. Berkeley Electronic Press, bepress Repository Technology, http://www.bepress.com/repositories.html (last visited Mar. 10, 2007).

185. *See* ProQuest-CSA, Digital Commons, http://www.umi.com/products_umi/digitalcommons (last visited Mar. 11, 2007). As of this writing, two law schools are running their own institutional repositories on Digital Commons software (University of Maryland and University of Georgia) and one maintains an institutional repository on a university institutional repository running Digital Commons (Pace). DigitalCommons@University of Maryland School of Law, http://digitalcommons.law.umaryland.edu/ (last visited Mar. 10, 2007); Digital Commons@The University of Georgia School of Law, http://digitalcommons.law.uga.edu/ (last visited Mar. 10, 2007); DigitalCommons@Pace, School of Law Faculty Publications, http://digitalcommons.pace.edu/lawfaculty/

stated, the bepress Legal Repository simultaneously searches all law school institutional repositories created with Digital Commons software, the NELLCO Legal Scholarship Repository that is hosted by bepress, all law school-sponsored working paper series, and all non-affiliated articles submitted through the free ExpressO Preprint Series. The bepress Legal Repository also promotes commercial law journals, including bepress's own peer reviewed, online law journals, but that content is not available for free.[186] Law school journal publishers can also sponsor an online journal and, by so doing, make their content available at no cost.[187]

Bepress also offers an innovative search tool called "Research*Now* Open Access," which covers all open access content published by bepress.[188] It allows searchers to cast their net beyond the bepress Legal Repository.[189] Another option, "Research*Now* Full Access," includes open access as well as licensed bepress content.[190] Both can search across all disciplines or be limited by topic.[191] Current statistics on top papers and top downloads from Research*Now* are provided. Research*Now* contained 111,604 papers as of August 2007; it has provided 7,724,348 full-text downloads to date and 4,563,262 downloads in the past year.[192]

Content in the bepress Legal Repository is indexed by Google at the full-text level.[193] All bepress applications are OAI-PMH compliant, although to date only the Digital Commons and NELLCO law school repositories have been registered with

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(last visited Mar. 10, 2007). Institutional repositories based on Digital Commons, such as the University of Maryland and Pace repositories, are searchable from the bepress Legal Repository Web site, *supra* note 173.

186. Some examples of bepress's own peer-reviewed online journals are *Global Jurist*, *International Commentary on Evidence*, *Issues in Legal Scholarship*, *Muslim World Journal of Human Rights*, *Review of Law & Economics*, and *Theoretical Inquiries in Law*. Berkeley Electronic Press, bepress Legal Repository, *supra* note 173 (under the heading "Peer-Reviewed Journals").

187. For example, the *Connecticut Public Interest Law Journal*, which is hosted by the NELLCO Legal Scholarship Repository, is linked to from the "Peer Reviewed Journals" section at the bepress Legal Repository Website. *Id.* Presumably, like bepress's fee-based journals, law school journals could also assess an access fee. Doing so, however, is likely to create a significant barrier to readership.

188. *See* Berkeley Electronic Press, Research*Now* Frequently Asked Questions, http://researchnow.bepress.com/faq.html (last visited Mar. 10, 2007).

189. *Id.*

190. *Id.*

191. *Id.*

> RESEARCH*NOW* OPEN ACCESS provides GUEST ACCESS to the roster of peer-reviewed, Berkeley Electronic Press journals, as well as COMPLETELY UNRESTRICTED ACCESS to working papers, preprints and other "grey literature" from participating institutional and subject-matter repositories. Research*Now* Open Access is FREE TO ALL READERS.

Id. Research*Now* Full Access provides the same capabilities, plus more.

Research*Now* also integrates with Blackboard Web course software. Press Release, Blackboard Inc. & Berkeley Electronic Press, Blackboard and Berkeley Electronic Press Announce Research*Now* Content Blackboard Building Block (Feb. 28, 2006), *available at* http://www.bepress.com/press022806.html. The bepress guest access policy is described on its Web site. Berkeley Electronic Press, Guest Access Policy, *supra* note 147. This is also called "quasi-open access." Sean O'Doherty, "Quasi-Open" Access: The bepress Experience, Presentation at SSP 2006 Annual Conference, http://www.sspnet.org/files/public/SSPSeminar01ODoherty.pdf.

192. Berkeley Electronic Press, Research*Now*, http://researchnow.bepress.com (last visited Mar. 10, 2007).

193. Bepress Legal Repository, Information for Authors, http://law.bepress.com/repository/faq-authors.html (last visited Apr. 15, 2007).

ROAR.[194] As of March 2007, thirty-six U.S. law schools are sponsoring some type of institutional collection at the site.[195]

c. NELLCO's Legal Scholarship Repository

The New England Law Library Consortium (NELLCO)[196] provides an institutional repository, the Legal Scholarship Repository (LSR), in which its members may participate.[197] Participating law schools can establish a site on the LSR and create multiple publication series based on their individual needs.[198] Each participating member assigns a project manager to work with faculty and market the LSR at their institution.[199] A substantial portion of the cost of the repository license is underwritten by NELLCO, with the remaining cost shared by participating members.[200] The LSR is based on the Berkeley Press EdiKit journal management software,[201] which is OAI-PMH compliant.[202] The LSR is registered with ROAR[203] and OpenDOAR.[204] Because it is based on bepress software, converting documents to PDF format during the loading process is automatic.[205] The LSR server is physically maintained by bepress.[206] Another feature of the LSR is its tie-in with the bepress's ExpressO service. Authors submitting to ExpressO from schools that participate in the LSR are automatically prompted during the ExpressO submission to archive a copy of the work in the LSR.[207] E-mail alerts announcing new submissions are available.[208] Currently fifteen U.S. law schools use the NELLCO Legal Scholarship Repository.[209] At the time of this writing, the LSR contained a total of 1,047 OAI-compliant records.[210]

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194. ROAR, http://archives.eprints.org/ (last visited August 26, 2006); OpenDOAR http://www.opendoar.org/ (last visited August 26, 2006). A search of both ROAR and OpenDOAR reveals that the NELLCO and Digital Commons institutional repositories are registered.

195. Berkeley Electronic Press, bepress Legal Repository, *supra* note 173.

196. *See supra* note 142.

197. NELLCO Legal Scholarship Repository, http://lsr.nellco.org (last visited Mar. 10, 2007).

198. *See id.*

199. E-mail from Tracy L. Thompson, Executive Director, NELLCO, to the author (Aug. 17, 2006, 7:49 AM) (on file with author and with New Mexico Law Review).

200. E-mail from Tracy L. Thompson, Executive Director, NELLCO, to the author (Aug. 10, 2006, 12:30 PM MST).

201. E-mail from Tracy L. Thompson, Executive Director, NELLCO, to the author (Aug. 10, 2006, 2:50 PM MST).

202. E-mail from Tracy L. Thompson, Executive Director, NELLCO, to the author (Aug. 17, 2006, 7:49 MST).

203. ROAR, Search for a Repository, http://roar.eprints.org/index.php?action=search&query=nellco (last visited Feb. 18, 2007).

204. OpenDOAR, Search or Browse for Repositories, http://www.opendoar.org/find.php?search=nellco (last visited Feb. 18, 2007).

205. *See supra* note 184 and accompanying text.

206. *See supra* note 137 and accompanying text.

207. E-mail from Tracy L. Thompson, Executive Director, NELLCO, to the author (Aug. 10, 2006, 3:24 PM MST).

208. NELLCO, bealert, http://lsr.nellco.org/search_by_subject.html (last visited Mar. 10, 2007).

209. NELLCO, Legal Scholarship Repository, *supra* note 143.

210. ROAR, http://archives.eprints.org.

C. Legal Scholarship Repositories Currently in Use

For the greater part of a decade, the only repository option for legal scholars was SSRN.[211] In the intervening years, SSRN has come to dominate open access legal scholarship, but several other options for law school institutional repositories also exist. At present, seventy-seven of the ABA-approved, J.D.-granting law schools[212] make available some type of repository in which their scholars can self-archive eprints.[213] Of those schools, sixty-seven have paid to sponsor a Law School Research Papers collection in SSRN's Legal Scholarship Network.[214] Thirty schools have paid to sponsor a bepress Legal Repository Working Paper Series.[215] Nineteen law schools currently pay SSRN or bepress to host their repositories rather than use existing university repositories that presumably are available to them.[216]

The following four law schools have established independent, in-house law school repositories: Duke University, Pace University, University of Georgia, and University of Maryland.[217] All but the University of Georgia also host commercial sites.[218] Three law schools, University of California-Hastings, University of Kansas,

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211. *See supra* Part IV.B.3.a.

212. At the time of this writing, there were 193 ABA-approved, J.D.-granting law schools. ABA, ABA-Approved Law Schools, http://www.abanet.org/legaled/approvedlawschools/approved.html (last visited July 17, 2006). Thus, about forty percent of the schools use online repositories.

213. To arrive at the figure of seventy-seven law schools, I examined the ROAR and OpenDOAR registries of open access institutional repositories in July 2006 for registered law school repositories, registered university repositories in use by law schools, and registered university repositories that law schools could presumably use but were not currently doing so. *See* ROAR, *supra* note 109; Directory of Open Access Repositories (OpenDOAR), *supra* note 109. I also examined the bepress Legal Repository, *supra* note 173, and the SSRN Legal Scholarship Network, *supra* note 45, for law school-sponsored collections. These data are, thus, generally reliable and representative of the current landscape, but no claim is made that they are comprehensive or completely accurate and I apologize in advance if any of the information conveyed here is inaccurate. Furthermore, given the dynamic nature of the repositories, the institutional participants are likely to change over time. All statements made in this Article concerning the types of institutional repositories in use by various schools are based on this analysis.

214. Boston College, Boston University, Brooklyn, Buffalo, Cardozo, Cleveland-Marshall, Case Western, Columbia, Cornell, Duke, Emory, Florida State, George Mason, George Washington, Georgetown, Harvard, Hofstra, Indiana University, Loyola, Marquette, Michigan State, New York Law, New York University, Northeastern, Northwestern, Notre Dame, Ohio State, Princeton, Roger Williams, Rutgers, St. Johns, Seton Hall, Stanford, Temple, Thomas Jefferson, Tulane, University of Akron, University of Alabama, University of Arizona, University of California-Berkeley, University of California-Davis, University of California-Los Angeles, University of Chicago, University of Cincinnati, University of Colorado, University of Houston, University of Illinois, University of Maryland, University of Michigan, University of Missouri-Columbia, University of Minnesota, University of North Carolina, University of Pennsylvania, University of San Diego, University of Southern California, University of St. Thomas, University of Texas-Austin, University of Utah, University of Virginia, University of Wisconsin, Vanderbilt, Villanova, Wake Forest, Washington and Lee, Washington University, William Mitchell, and Yale.

215. Boston College, Columbia, Cornell, Duke, Emory, Fordham, Franklin Pierce, George Mason, Georgetown, New York University, Northwestern, Pace, Princeton, Roger Williams, Rutgers, Suffolk, University of California-Berkeley, University of California-Los Angeles, University of Connecticut, University of Illinois, University of Maryland, University of Michigan, University of Pennsylvania, University of Pittsburgh, University of San Diego, University of Southern California, University of Virginia, University of Vermont, Villanova, and Yale. The vast majority of schools hosting a bepress site also host an SSRN site and many of them use NELLCO as well.

216. Boston University, Cornell, Florida State, George Mason, George Washington, Georgetown, Indiana, New York University, Ohio State, Roger Williams, University of Arizona, University of Illinois, University of Maryland, University of Michigan, University of Pennsylvania, University of Texas-Austin, University of Utah, University of Wisconsin, and Washington University.

217. *See supra* note 213.

218. *See supra* note 213.

and University of New Mexico, use their university repositories exclusively (i.e., they do not currently host a series on either the SSRN or bepress sites).[219] The following thirteen law schools are not currently using a university repository to which they presumably have access, nor have they established separate law school repositories either in-house or through a commercial vendor: Brigham Young University, Catholic University, Drake University, Drexel University, Florida International University, State University of New York, Texas A & M University/South Texas, Texas Tech University, University of Nebraska-Lincoln, University of Oregon, University of Rhode Island, University of Washington, and Wayne State University.[220]

Given the volume of open access eprints that law faculties are now submitting to the open access repositories, it is somewhat ironic that legal scholars are perceived as not "getting" open access. This perception is partially deserved, however, because legal scholars remain seemingly unaware of the larger principle of open access and continue to self-archive merely for their own professional benefit. Additionally, it should be noted that, while growing numbers of legal scholars use repositories, the majority of law schools still do not provide an institutional repository for their faculty members. Of course, scholars at these universities are free to submit to the freelance portions of the LSN and bepress Legal Repository.

Now that institutional repository options other than SSRN and bepress exist, law schools should look carefully at whether they want to continue to depend solely on commercial vendors to host their content or whether they also want to establish multimedia institutional repositories over which they have complete control. Recently, other commentators have expressed concern over the dominance of SSRN in this market.[221] Realistically, the popularity of SSRN and bepress does not bode well for more widespread adoption of multimedia institutional repositories by law schools. Law as a discipline seems to be content to entrust its archives to commercial publishers, while at the same time scholars in other disciplines are working hard to distance themselves from commercial publishing interests.[222] Given this dynamic, it seems likely that the motivation of the majority of law schools establishing repositories today is based on the promotional services provided by SSRN and bepress, rather than on any desire to make their work freely available, which would be consistent with the principle of open access.[223] Nevertheless, while law schools are unlikely to distance themselves from SSRN and bepress, they should consider establishing independently controlled, multimedia institutional repositories in addition to using these commercial services.[224] Doing so allows a school to reap the benefit of preserving and sharing other forms of digital objects such as teaching

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219. *See supra* note 213.

220. *See supra* note 213.

221. James Grimmelmann, *SSRN Considered Harmful* (2007), http://james.grimmelmann.net/files/SSRNConsideredHarmful.pdf.

222. Danner, *supra* note 107, at 361 (warning that legal scholars using such services risked becoming reliant on expensive commercial services to provide online access at the same time other disciplines sought to use technology to create noncommercial means of access).

223. *See id.* at 360–61. This likelihood was observed by Professor Danner as early as 2002. *Id.*

224. Non-profit consortiums like NELLCO and groups like AALS and CALI could become partners in such efforts.

materials, data sets from empirical research, and digitized historical documents. Additionally, law schools should register their repositories and policies with ROAR and OpenDOAR if at all possible. Doing so would raise the profile of these legal repositories among the open access community at large.

V. CONSEQUENCES OF USING LAW SCHOOL REPOSITORIES

This Part examines some of the changes that are occurring as legal scholars begin to use institutional repositories. One of the more significant developments is the benefit scholars gain from having access to articles before publication. Authors have also benefited from access to repository download counts, providing an additional measure of the impact of their work. The desire to archive work in repositories has led to increased awareness on the part of authors for the need to retain the necessary portion of their copyrights. Finally, institutional repositories provide a means to access scholarly communications that are not otherwise published, including student works. While these are nascent developments, they are indicative of the ways in which institutional repositories impact the methods of disseminating legal scholarship.

A. Benefits of Separating Access from Publication

As noted previously, legal scholars began to submit articles, typically in the form of "working papers," to SSRN when it was launched in 1994.[225] The apparent willingness of legal scholars to post their work in such repositories appears to be something of an anomaly in academia. In this respect, legal scholars are ahead of their peers in other disciplines who have been slower to embrace repositories.[226]

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225. *See supra* Part IV.B.3.a.

226. In June 2006, SSRN reported a seventeen-percent growth rate in total papers submitted and a fifteen percent growth rate in the total number of authors compared with its December 2005 statistics. Posting of Gregg Gordon, Gregg_Gordon@SSRN.com, to SSRN-Super@publisher.ssrn.com (June 23, 2006, 4:24 PM) (on file with author and New Mexico Law Review). But worldwide, only about fifteen percent of published scholarly articles are archived in repositories. Posting of Stevan Harnad, harnad@ecs.soton.ac.uk, to DSpace-General@mit.edu (June 11, 2005), *available at* http://mailman.mit.edu/pipermail/dspace-general/2005-June/000628.html. The exception is high energy physics researchers, whose ArXiv.org repository has been successfully hosting preprints since 1991. *See* Danner, *supra* note 107, at 355. One could conclude that discipline-specific repositories are more likely to be heavily used than are institutional repositories that rely on federated searching to pull together related subject material. However, the greatest barriers to self-archiving behavior among scholars are probably apathy and a lack of awareness about the benefits that derive from open access to scholarship:

> Free online scholarship (FOS) is within the reach of scholars themselves. We needn't wait for markets or legislation, and we needn't beg others (like commercial publishers) to provide it for us. So in that sense, the main problem is that scholars need to be awakened to this beautiful possibility. Scholars are slow to pick up on the possibility for many reasons. They are focused on their teaching and research. They tend to be unfamiliar with the crisis in libraries that makes this solution especially compelling. Many think there is no problem at all and complacently reply to FOS initiatives by saying, "Don't fix what isn't broken." Some understand the problem but misunderstand the solution, falling victim to some damaging myths about FOS—for example, that it bypasses peer review, violates copyright, or costs money that can't be found. There are other impediments, but the main ones are right here at home.
>
> Commercial publishers are not the problem; we can achieve FOS without their cooperation. The more we succeed, however, the more we can expect them to follow suit or lower their prices. Our goal is to create open access, not to put anyone out of business, though we know that success will put competitive pressure on many existing publishers.

Morrison & Suber, *supra* note 48.

Precisely why legal scholars are more enthusiastic about repositories than other scholars is the subject of speculation at this point. However, it seems clear that legal scholars are probably not motivated by the basic principle of open access because many legal scholars are still unaware of the movement. In many cases, self-archiving appears to occur even as those involved remain unaware of the larger open access debate.[227] The slow but steady growth of legal preprint and postprint archiving likely demonstrates that legal scholars have discovered valuable benefits from archiving. Almost certainly these are benefits above and beyond merely increasing readership.[228] Instead, legal scholars appear to find utility in using repositories, which is quite distinct and separate from utility associated with publishing their work in law school-subsidized journals. Legal scholars find a benefit from having a means to access work that is separate from its subsequent publication in a law journal. Under this analysis, legal scholars need and want the existing publication system to continue, but they use repositories to gain benefits that are not provided by the traditional journal publication system.

The literature is replete with attempts to divine the true purpose of the law school-subsidized, student-edited journal.[229] In addition to publishing academic legal scholarship, these journals provide publishing outlets for tenure-track faculty, provide educational opportunities for students, and identify elite students for law firm employers. The literature is also replete with critiques of student-edited journals: lack of peer review; articles selected for publication on the basis of author reputation, without knowing the subject or the related literature, and without expert consultation or blind reads; and finally, complaints about long delays in the publication cycle and overly intrusive editing or rewrites.[230]

Repositories provide opportunities for informal peer review and avoid many of the problems associated with student-editing, allowing for quicker access to new work that would otherwise be mired down by the editing and publication processes. Therefore, open access working paper repositories provide solutions to some of the problems associated with student-edited journals, while leaving the beneficial parts of the system otherwise intact and unthreatened.

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227. Interestingly, growing awareness that scholars are starting to use SSRN and bepress to archive postprints has actually led to debate about whether this is a proper use of these services given their stated purpose as preprint repositories. Many scholars do not post preprints because they are fearful that they will be judged by the quality of their open access scholarship. Markel, *supra* note 152.

228. Madison, *supra* note 81 (observing that the current promotion and tenure system provides little incentive for legal scholars to seek out new audiences, and arguing that legal scholars write primarily to impress other legal scholars and, thus, open access principles are not likely to be adopted by legal scholars unless it can be tied into the existing "economy of prestige").

229. *See, e.g.*, Michael L. Closen & Robert J. Dzielak, *The History and Influence of the Law Review Institution*, 30 AKRON L. REV. 15 (1996) (overview of the history of the law review as an institution); Roger C. Cramton, *"The Most Remarkable Institution": The American Law Review*, 36 J. LEGAL EDUC. 1 (1986) (introduction and development of the law review concept); Symposium, *Why Law School Reviews?*, 4 FORDHAM L. REV. 1 (1935) (the role of law reviews); John Jay McKelvey, *The Law School Review*, 50 HARV. L. REV. 868 (1937) (the first fifty years of the existence of law reviews); Michael I. Swygert & Jon W. Bruce, *The Historical Origins, Founding, and Early Development of Student-Edited Law Reviews*, 36 HASTINGS L.J. 739 (1985) (historical origins and reasons for the continuing existence of law reviews).

230. *See, e.g.*, James Lindgren, *An Author's Manifesto*, 61 U. CHI. L. REV. 527 (1994) (arguing that more faculty control should be present throughout the process); Geoffrey Preckshot, *All Hail Emperor Law Review: Criticism of the Law Review System and Its Success at Provoking Change*, 55 MO. L. REV. 1005 (1990) (criticizing the law review institution on several grounds); Milles, *supra* note 70, at 631–32.

B. Download Counts and Evaluation Methods

In addition to accelerating the publication cycle, use of repositories has increased competitiveness among authors.[231] As discussed above, all open access repositories, including the two most popular repositories of legal scholarship, SSRN's Legal Scholarship Network and the Berkeley Electronic Press's bepress, provide some form of download counts or usage statistics for submitters.[232] Download counts provide scholars with a means to partially quantify the impact of their work, but they do not capture readers who access articles via commercial databases or print, nor do they provide a measure of quality comparable to citation counts. Nevertheless, one need only visit the topic of download counts to find evidence that one of the driving forces behind archiving in open access repositories is increased visibility, and thus increased impact of one's work.

Download counts have become the subject of much discussion, and the topic has even spilled over into the debate about law school rankings.[233] Currently, SSRN publicly displays download counts associated with each paper in its Legal Scholarship Network.[234] In contrast, bepress e-mails monthly reports of download counts to authors for papers posted in its Legal Repository, but it does not publish this information on the Web site for public consumption.[235] Scholars have reported that download counts provided by bepress tend to run about three times higher than download counts for the same paper at the SSRN site.[236] This seems counterintuitive, because SSRN is perceived as the predominant market leader and would presumably attract more legal scholars.[237] These reports, posted on the Prawfsblawg blog site in 2006, touched off much speculation about the way downloads are counted and garnered responses from representatives of both bepress and SSRN.[238] Both bepress and SSRN post abstracts separately from papers, and searchers access a paper only after first viewing its abstract.[239] SSRN requires two clicks to initiate downloading after reaching the abstract page. Typically, only one in three abstract views results

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231. "There's a conflict in that SSRN downloads are being used as a measure of scholarly productivity so there is pressure to post….competitiveness has crept in….people are putting up abstracts to mark off their territory….at the same time they are very cautious about what they put up." Posting to ALL-SIS@aallnet.org, *supra* note 183. For a discussion of this trend, see *infra* Part V.B.

232. For a detailed description of SSRN, bepress, and other popular applications for establishing an institutional repository, see *supra* Part IV.B. Part IV.B also shows that these two commercial vendors currently dominate the market for legal scholarship institutional repositories. *See supra* Part IV.C (listing applications used by law schools).

233. *See generally* Black & Caron, *supra* note 75.

234. Individual article download counts are posted together with the abstract for every article deposited into an SSRN e-Library. In addition, the download counts are posted for top papers according to categories ("network/journal/topic"). *See* SSRN, Display Journal Browse, *supra* note 164 (follow hyperlinks to title listings).

235. Posting of Dan Markel to Prawfsblawg, BEPress vs. SSRN?, http://prawfsblawg.blogs.com/prawfsblawg/2006/05/bepress_vs._ssrn.html (May 3, 2006, 1:39 PM).

236. *Id.*

237. This perception fails to consider that nontraditional audiences might also be accessing the work.

238. Markel, *supra* note 234; Posting of Dan Markel to Prawfsblawg, bepress, and SSRN: Part II, http://prawfsblawg.blogs.com/prawfsblawg/2006/05/bepress_and_ssr.html (May 4, 2006, 4:34 PM).

239. Notably, full-text articles in SSRN and bepress are not directly indexed by search engines—only the abstracts are indexed. In contrast, bepress and other repository applications such as DSpace facilitate search engine indexing of the full text of an article. *See supra* note 129 and accompanying text.

in a download.[240] With bepress, a reader can download an article with only one click after reaching an abstract. Bepress maintains that it generates more downloads than SSRN because it provides "'the fastest and easiest access to papers.'"[241] This recent exchange is indicative of the extent to which law faculties now closely monitor download counts for work posted in open access repositories.

Because download counts are becoming increasingly important, concerns have been raised that some authors might try to "game" the system and artificially inflate download counts.[242] Bepress has maintained that the reason it does not publish download counts on its Web site is that it wants to avoid "'the risk of those numbers being used to assign worth to a paper, faculty member or institution, and also of authors trying to game the system to increase their downloads.'"[243] The fact that SSRN publishes download counts indicates that it views this risk differently. SSRN maintains that it has "devoted substantial resources toward ensuring" that download counts are accurate.[244]

Informal reports indicate that scholars are using download counts to demonstrate to law journal editors that there is interest in a topic, and others have reported receiving publication offers based on posting a paper in SSRN.[245] This reflects a growing understanding on the part of both authors and journal editors that archiving copies of publications increases readership.[246] Legal scholars are also growing increasingly comfortable citing working papers in repositories rather than waiting to cite final publications.[247]

There are also reports of repository download counts being used as faculty evaluation tools. In another blog posting, scholars expressed concern that "SSRN is being used as a way to generate more information relevant to the evaluation of a potential scholar (should we hire her, well, let's consider how many articles are up on SSRN, or how many downloads the person's scholarship gets)."[248] This particular commentator was concerned that using these sites for evaluative purposes rather than as working paper forums would result in faculty members posting fewer preprints and more postprints, and that authors would lose a valuable resource for

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240. Posting of Bernard Black, SSRN Managing Director, to Prawfsblawg, http://prawfsblawg.blogs.com/prawfsblawg/2006/05/bepress_vs_ssrn.html (May 3, 2006, 5:22:37 PM); *see also* Bodie, *supra* note 149 (reporting that in general one in five abstract views results in a download).

241. Markel, bepress and SSRN: Part II, *supra* note 238 (quoting Jean-Gabriel Bankier, Vice President of Marketing, bepress).

242. Posting of Matt Bodie to Prawfsblawg, Bepress: The Other Legal Repository, http://prawfsblawg.blogs.com/prawfsblawg/2005/11/bepress_the_oth.html (Nov. 17, 2005, 10:05 AM) (quoting Gregg Gordon, CEO of SSRN).

243. *Id.* (quoting Jean-Gabriel Bankier, Vice President of Marketing, bepress).

244. Bodie, *supra* note 149.

245. *See* Posting to ALL-SIS@aallnet.org, *supra* note 183.

246. "The tide is turning and…many journals now appreciate that posting to SSRN is a positive event, and gets the content of their publication much greater attention." *Id.*

247. As one scholar stated:

> I ran a search on either Lexis or Westlaw, and found that essays on SSRN have been cited over 1,000 times within law review articles. This suggests that many researchers don't wait until formal publication to make use of available secondary sources. It also suggests a general acceleration of scholarly discussion, and so professors may risk being left out of the conversation if they don't post drafts online.

Id.

248. Markel, *supra* note 152.

constructive feedback in the process.[249] Other commentators, however, report that they continue to freely post working papers and are not concerned about this possible trend.[250] In other academic disciplines, provosts have encouraged colleges and departments to recognize work published in less traditional forums, including open access journals and repositories, for promotion and tenure criteria.[251] There are no published reports, however, that such practices have been proposed or adopted by legal scholars.

Finally, as mentioned above repository download counts have made their way into the debate about law school rankings. In 2005, the Indiana Law Journal held a symposium entitled *The Next Generation of Law School Rankings*.[252] Three of the presenters looked at download counts from SSRN's Legal Scholarship Network and compared them with other ranking methodologies currently in use, including traditional citation counts.[253] SSRN managing director Bernard Black of the University of Texas School of Law believes that SSRN download counts "can provide information about scholarly impact, in a way that differs from other measures."[254] Professor Black posits that hit counters and download counts provide much more quantifiable information than mere citation counts and provide a complimentary measure for other ranking systems.[255]

C. Author Rights and Law Journal Publication Agreements

Post-publication archiving is possible only if an author retains sufficient rights to permit depositing the work in an open access repository. The desire on the part of legal scholars to submit eprints to repositories, whatever their motivation for so doing, has greatly increased awareness of the need for authors to carefully scrutinize journal publication agreements.

Within the traditional print publication system, there was little incentive for authors to ensure that they retained reproduction or distribution rights to their work.[256] Many print law journals provided blanket permission for print copies to be used for educational purposes provided proper attribution was given.[257] Also, most authors ascribed to the fair use copyright exception[258] the ability to reproduce and distribute their own material in print course packs or as classroom handouts and rarely gave the matter another thought. The arrival of digital content and the Internet in particular raised many new questions about author rights, not just because authors might wish to self-archive in repositories, but also because of the emergence of

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249. *Id.*

250. *Id.*

251. Scott Jaschik, *Rallying Behind Open Access*, INSIDE HIGHER ED, July 28, 2006, http://www.insidehighered.com/news/2006/07/28/provosts.

252. *See* Ind. School of Law—Bloomington, The Next Generation of Law School Rankings Symposium, http://www.law.indiana.edu/front/special/2005_rankings_nextgen/ (last visited Mar. 11, 2007).

253. *Id.* Symposium papers are available on SSRN at http://papers.ssrn.com/sol3/JELJOUR_Results.cfm?form_name=journalbrowse&journal_id=711521 (last visited Sept. 4, 2006).

254. Bodie, *supra* note 149.

255. Black & Caron, *supra* note 75.

256. "Nobody who participates in any way in the law journal article research, writing, selection, editing and publication process does so because of copyright incentives." Litman, *supra* note 68, at 779.

257. For example, the *New Mexico Law Review* gives such permission on its copyright page.

258. 17 U.S.C. § 107 (2000).

course Web sites and electronic course reserves. Today, educators and researchers want free, fast, and easy digital access to scholarship for electronic dissemination. Accessing content in password-protected mega sites such as Westlaw or Lexis is cumbersome and restrictive, especially if non-law students are enrolled in a course. Getting permission from authors and publishers to scan and use the works of others on class Web sites is burdensome. Questions of copyright ownership are increasingly common and many authors are now realizing that they do not have a clear idea of the terms of the publishing agreements that they may have signed over the years.

Publication agreements can vary greatly among journals, and not all journal policy makers are aware of the principle of open access. While some law journals now permit author self-archiving, some still insist on obtaining exclusive rights to the work that they publish.[259] When confronted with a journal publication agreement that seeks exclusive rights, or even a limited time period of exclusivity, authors are now beginning to negotiate with journals to insist that they retain at a minimum the right to archive the work in a post-print repository at some point.[260]

Recent work by Professor Dan Hunter[261] demonstrates that top law journals are more likely to insist on obtaining exclusive rights to the work that they publish. His investigation revealed that these journals may be motivated to do so because of financial inducements in the form of more favorable royalties promised by Lexis and Westlaw if exclusive copyrights are obtained, thus making the subsequent licensing of electronic distribution rights to Lexis and Westlaw more valuable.[262]

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259. *See supra* note 227.

260. More experienced scholars are cautioning new law professors to be careful of signing publication agreements without reviewing them first. Rick Bales, *Thinking About Scholarship*, AALS NEW LAW PROFESSORS SECTION INAUGURAL NEWSL., 13–14 (2005) (maintaining that the only legitimate interest law journals have in limiting distribution is ensuring that the work does not end up in a rival publication or some other "source that fails to give proper attribution to the original journal").

261. Associate Professor of Legal Studies and Business Ethics, Wharton School, University of Pennsylvania.

262. Of course the creators of these works receive nothing. The issues surrounding law journals that insist on obtaining exclusive rights were first publicized by Larry Lessig and Dan Hunter. *See* Posting of Lawrence Lessig to Lessig Blog, Never Again, http://www.lessig.org/blog/archives/002780.shtml (Mar. 15, 2005, 2:29 PM); *see also* Hunter, *supra* note 67, at 630–31. In 2004, Professor Dan Hunter conducted a survey of the main law reviews in 176 U.S. accredited law schools. *Id.* Forty-three percent responded. Fifteen schools reported that they publish on the Web as open access journals. Thirty schools had no policy on author archiving of their work, or resolved requests on a case-by-case basis. Twenty-six allowed author archiving. Nine reviews completely forbade archiving. *Id.* Professor Hunter noted that this effort on the part of Westlaw and Lexis was undertaken "prior to the widespread adoption of SSRN and bePress" and opines that it could reflect that these commercial interests do see open access repositories as a threat to their financial interests. *Id.* n.13. Scholars in other disciplines who are similarly interested in journal publication polices created the RoMEO registry of journal copyright and self-archiving policies. SHERPA, RoMEO, *supra* note 109. Legal scholars can submit law journal publication agreements to the RoMEO registry for inclusion in that database. A July 2006 examination of RoMEO by the author revealed that four law journal agreements have been submitted so far: Michigan, Yale, Stanford, and Harvard. Of these four, only Michigan is described as being completely supportive of green road self-archiving, freely permitting preprint and postprint archiving. SHERPA/RoMEO, Publisher Copyright Policies & Self-Archiving, http://www.sherpa.ac.uk/romeo.php?all=yes (last visited Mar. 11, 2007); *see also* Michigan Law Review, Open-Access Policy, *supra* note 87. Georgetown requires exclusive rights, barring all preprint and postprint archiving, Yale allows postprint archiving only after a twelve-month embargo, and Stanford allows only preprint archiving (even though Stanford Law School is a co-host of the SSRN site, which also archives postprints). SHERPA/RoMEO, *supra*.

Law journal licensing of exclusive electronic distribution rights to commercial database vendors has led to surprising new sources of revenue for these companies. For example, Amazon.com now sells Internet access to full-text law review articles under a deal struck with Gale Publishing, which, like West Publishing, is a subsidiary of parent company Thomson Publishing.[263] It is unlikely that the authors who created these works knew that the publication agreements they signed with law journals ultimately enabled Gale Publishing and Amazon.com to sell their work on the Internet.[264]

Although law journals have attempted to justify seeking exclusive rights by arguing that they need royalty payments because of inadequate financial support from their law school administrations, carefully worded publication agreements can enable subsequent licensing of electronic rights to commercial database vendors without necessitating relinquishment of all author rights.[265] Commercial vendors will continue to publish law journal articles even if they are available on the free Web. The principle users of these services—attorneys in law firms—will likely prefer to access journal articles through commercial databases because it is efficient and convenient, just as they use commercial databases to access primary legal sources in spite of the fact that they are often available for free on the Web.[266]

Various resources exist for authors interested in preserving their right to self-archive. The Association of American Law Schools (AALS) has provided a model journal publication agreement since 1998, well before the rise to prominence of SSRN and bepress and the open access movement generally.[267] In this respect, the AALS should be commended for its foresight and efforts to protect author rights. SPARC offers an "Author's Addendum to Publication Agreement" to use in modifying an agreement to ensure retention of author rights to create derivative works, as well as to ensure that the work will be available for self-archiving and non-commercial use by others as long as the author and journal are credited as the source of first publication of the work.[268] Many journal editors now permit authors

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263. *See* Gale, About Thomson Gale, http://www.galegroup.com/about/ (last visited Mar. 11, 2007).

264. The source of the Amazon.com articles seems to be Gale Publishing's database, LegalTrac. After identifying full-text law journal articles in LegalTrac, I was consistently able to locate the same articles for sale at Amazon.com for $5.95 each. *E.g.*, Amazon.com, http://www.amazon.com (search Books for "Sherri Burr"; follow second hyperlink in list of results). Thomson Gale includes the following disclaimer on its Web page:

> Thomson Gale respects the intellectual property of others. The licensors of all articles appearing in our databases have assured us that they have the right to authorize electronic distribution of the materials they provide to us. If you are a writer, and if you have questions or concerns regarding the electronic distribution of your materials, we recommend that you contact your publisher directly. If you dispute the right of your publisher to authorize electronic distribution, you may provide us with a written notification of your claim and we will disable access to the materials.

Gale, Important Notice to Freelancers, http://www.gale.com/freelance/ (last visited Mar. 11, 2007). One hopes that royalty payments for the sale of these articles are going to the law journals that initially licensed West to distribute them. Certainly the authors will see nothing for their work. I am grateful to Maryln Robinson and Roy Mersky at the Tarleton Law Library, University of Texas at Austin School of Law, for bringing this phenomenon to light. Posting to lawlibdir@lists.washlaw.edu (Apr. 28, 2005) (on file with author and New Mexico Law Review).

265. *See infra* note 271 and accompanying text.

266. *See* Hunter, *supra* note 67, at 618, 624, 631–33.

267. Ass'n of Am. Law Schools, Model Author/Journal Agreement, http://www.aals.org/deansmemos/98-24.html (last visited Aug. 29, 2006).

268. SPARC, Author's Addendum to Publication Agreement, http://www.arl.org/sparc/bm~doc/Authors

to append the SPARC Addendum to publication agreements.[269] Finally, Creative Commons[270] also offers resources for legal journals and scholars, including a model "publication agreement and copyright license."[271] Creative Commons also publishes "open access principles" for journals and sponsors an open access pledge for law authors as part of its Open Access Law initiative.[272] Legal scholars who support the principle of open access may wish to formally pledge to support it at the Open Access Law Web site.[273]

Just as the open access movement and the desire to self-archive are raising awareness among legal scholars of the need to carefully scrutinize licensing agreements, a growing number of law journal editors are reviewing journal publication agreements to ensure that they do not needlessly demand exclusive rights, even for a limited period of time.[274] All law journals should take steps to ensure that their publication agreements support open access to legal scholarship.[275]

Addendum2_1.pdf; *see also* SPARC, Author Rights, http://www.arl.org/sparc/author/addendum.html (last visited Mar. 11, 2007) (discussing the Author's Addendum).

269. The *New Mexico Law Review* is one such journal.

270. The Creative Commons Web site offers model license agreements. Creative Commons, Choose a License, http://creativecommons.org/license/ (last visited Mar. 11, 2007). The concepts espoused by Creative Commons are now sufficiently mainstream for Microsoft Office to offer a tool that allows authors to embed a Creative Commons license in documents produced in Microsoft Word. Martin La Monica, *Creative Commons Comes to Microsoft Office*, CNET NEWS.COM, June 20, 2006, http://news.com.com/2100-1032_3-6086018.html.

271. Science Commons, Open Access Law: Publication Agreement, http://sciencecommons.org/projects/publishing/oalawpublication.html (last visited Mar. 11, 2007).

272. Science Commons, Open Access Law Program, http://sciencecommons.org/projects/publishing/oalaw.html (last visited Mar. 11, 2007).

273. The program's Author Pledge requires authors to:

> encourage the adoption of Open Access principles in law journals. This means that:
>
> 1. When we have editorial control over a law journal we will adopt Open Access principles as part of editorial policy.
>
> 2. When we act as an advisor to a law journal we will encourage the editors to adopt Open Access principles as part of editorial policy.
>
> 3. When we act as authors contributing to a law journal, we contribute only to journals that adhere to Open Access principles, by offering an author at least the freedoms of a Creative Commons Attribution-Noncommercial license.

Science Commons, Open Access Law: Author Pledge, http://sciencecommons.org/projects/publishing/oalawpledge.html (last visited Mar. 11, 2007). As of July 2006, only a handful of authors had taken the pledge. Science Commons, Open Access Law: Authors, http://sciencecommons.org/projects/publishing/oalawauthors.html (last visited Nov. 21, 2006) (listing authors who have adopted the pledge).

274. In this regard, the work of Professor Dan Hunter has been invaluable. In addition to his work in helping to establish the Open Access Law program and the survey of law journal publication agreements he conducted in 2004, Professor Hunter wrote to all law school deans in 2005, urging them to move their law reviews forward to permit open access archiving and to encourage their faculty to publish in journals that have adopted open access author agreements. Letter from Dan Hunter, Assistant Professor of Legal Studies, Wharton School, University of Pennsylvania, to Law School Deans (Aug. 30, 2005) (on file with author).

275. As an aside, there is another, less altruistic reason for law journal editors to scrutinize their publication agreements. While reviewing publication agreements for possible conflict with the principle of open access, journal editors should review agreements for treatment of electronic distribution rights. In 2001, the U.S. Supreme Court held that publication agreements must expressly convey electronic distribution rights to the publisher or those rights remain with the author. New York Times Co. v. Tasini, 533 U.S. 483, 488 (2001), *available at* http://supct.law.cornell.edu/supct/html/00-201.ZS.html. Unless a law journal editorial staff has reason to review its publishing agreement, rather than taking on faith what is handed down every year from previous editors, it is likely that some law journal publishing agreements are still silent as to electronic distribution rights. While this would be to the benefit of the author, it would leave student-run law journals in some jeopardy when subsequently entering into electronic licensing agreements with Westlaw, Lexis, and HeinOnline. *See, e.g.*, Jonathan Kerry-Tyerman, *No Analog Analogue: Searchable Digital Archives and Amazon's Unprecedented Search Inside the Book Program as*

Journals may also want to formally adopt the principles espoused by the Creative Commons' Open Access Law initiative to show support for the open access movement.[276] Whether adopted formally or informally, these principles require that journal author agreements permit self-archiving of authors' work in institutional repositories. In return, authors promise to attribute first publication to the journal.[277]

D. Access to Material Not Previously Published

While most of the current conversation about open access to legal materials focuses on scholarship, research, teaching, and service, work can also be archived on multimedia institutional repositories. Online legal teaching materials have tended to be published in password-protected Lexis and Westlaw Web courses, but legal educators are beginning to explore the potential of open access teaching materials.[278] Law faculty members also come into possession of important original documents in the course of their work, gather large amounts of background material, and

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Fair Use, 2006 STAN. TECH. L. REV. 1, 37–38. Some practitioners have gone so far as to opine that even if electronic distribution rights are conveyed by the author to the publisher, that is not enough because the act of digitization itself produces the equivalent of a derivative work, which would require negotiating another authorization from the author. Eric Gardner, *Online Disputes Expose Publishers' Copyright Vulnerability*, LAW.COM, Mar. 6, 2006, http://www.law.com/jsp/law/LawArticleFriendly.jsp?id=1140689116012. The casual management of rights is not limited to legal scholars and non-profit law journal publishers. The phenomenon is widespread in academic communities and can adversely affect not just author rights, but even commercial publishers. When Google announced its library book scanning project, some publishers accused Google of copyright infringement, but when publishers went back to review their author agreements, many discovered the agreements were silent as to electronic rights. *Id.*

276. The Open Access Law program includes a Journal Pledge under which a participating journal adopts four principles as part of its publication policy:

> 1. The Journal will require from the Author no more than a reasonable, limited-term exclusive license for commercial publication. The Journal will not interfere at any time with the author's freedom to make his or her work available under a license as free as the Creative Commons Attribution-Noncommercial License.
>
> 2. In the event of reprinting or republication (of any part) of the Article the Author will always attribute first publication to the Journal, unless the Journal does not require this.
>
> 3. Upon publication of the Article, the Journal will make available to the Author an electronic version of the edited Article—such as the PDF or the word processing document of the published Article—with the expectation that this will be posted in an Open Access Repository.
>
> 4. In the event that the Journal does not use the Science Commons Open Access Law Model Publication Agreement, it will post a current copy of its publication agreement on its web site, and will ensure that its agreement complies with these four principles.

Science Commons, Open Access Law: Principles, http://sciencecommons.org/projects/ publishing/oalawjournal .html (last visited Mar. 18, 2007).

277. *Id.* As of March 2007, thirty-four law journals had adopted the Open Access Law journal policy. Science Commons, Open Access Law: Adopting Journals, http://science.commons.org/projects/publishing/oalawjournals .html (last visited Mar. 11, 2007).

278. *See generally* Matthew T. Bodie, *Open Access in Law Teaching: A New Approach to Legal Education*, 10 LEWIS & CLARK L. REV. 885 (2006) (exploring the potential outcomes of making law teaching material freely available for collaborative development and facilitating incorporation of court records and transcripts, etc. into the curriculum). SSRN has also announced plans to establish a Legal Teaching Network (LTN) to disseminate teaching materials. As a pilot, a subject matter journal called "LSN Educator" has been established within the existing LSN framework for course material. Lawrence A. Cunningham, *Scholarly Profit Margins: Reflections on the Web*, 81 IND. L.J. 271, 282 (2006). We would do well to also recall MIT's OpenCourseWare project, which was conceived as a means to give access to MIT's teaching materials. MIT OpenCourseWare, About OCW, http://ocw.mit.edu/ OcwWeb/Global/AboutOCW/about-ocw.htm (last visited Mar. 11, 2007); *see also* Florence Olsen, *MIT's Open Window: Putting Course Materials Online, the University Faces High Expectations*, CHRON. HIGHER EDUC., Dec. 6, 2002, at A31, *available at* http://chronicle.com/free/v49/i15/15a03101.htm.

conduct empirical research.[279] The potential for institutional repositories to disseminate important material that would otherwise languish in a file cabinet is one of the most exciting applications emerging from the development of institutional repositories. Faculty with access to an institutional repository can essentially become publishers without having to go through an information technology department. Developers of policies governing institutional repositories often choose not to limit the type of material that faculty can place in repositories, but instead step back to see how creatively the repositories can be used. Importantly, if law faculties digitized and shared original research materials in addition to the articles they ultimately create from them, they would be making an even greater contribution to legal scholarship.

Novel ways of using institutional repositories show that the only limitation is the imagination of the scholar. For example, the law faculty at the University of New Mexico School of Law uses its DSpace repository to disseminate material that would otherwise remain unpublished.[280] One member of the UNM law faculty used DSpace to publish the 1974 transcript of a federal district court trial, a trial which formed the basis for a U.S. Supreme Court opinion affirming tribal sovereignty.[281] Another faculty member is not only publishing reports but is also posting previously unpublished documents from the 1998 Western Water Policy Review Advisory Commission she chaired.[282] A third faculty member published updating material for a bankruptcy treatise.[283] Other faculty members published a clinic civil practice manual, thus sharing it with the public as well as making it permanently available for clinic students.[284] These materials are now all discoverable via Internet search engines, and the faculty members can share these documents with colleagues simply by sharing the Web addresses. The items are also less vulnerable to loss and "linkrot" because they now have persistent identifiers.[285] The faculty members who took the time to publish these materials in their institutional repository also gain the satisfaction of knowing that their efforts impact and inform future researchers.[286]

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279. Examples of the growing interest in empirical research is seen in programs such as the University of Missouri Kansas City's Conference, *Federal Civil Court Records of the National Archives: Opportunities for Empirical, Historical and Legal Research and Curriculum Design*, 75 UMKC L. REV. 1 (2006), held October 7 and 8, 2005, and the 2006 AALS Annual Meeting held in Washington, D.C., the theme of which was "Empirical Scholarship: What Should We Study and How Should We Study It?," Ass'n of Am. Law Schools, 2006 Annual Meeting, http://www.aals.org/am2006/ (last visited Aug. 27, 2006).

280. *See* Univ. of N.M., DSpaceUNM, https://repository.unm.edu (last visited Mar. 11, 2007).

281. Transcript for *Martinez v. Romney*, No. 9717 Civil, https://repository.unm.edu/handle/1928/342 (last visited Aug. 13, 2006); *see also infra* note 286. The U.S. Supreme Court opinion was *Santa Clara Pueblo v. Martinez*, 436 U.S. 49 (1978).

282. *See* Western Water Policy Review Advisory Commission, Community Home Page, https://repository.unm.edu/handle/1928/2748 (last visited Mar. 11, 2007).

283. NATHALIE MARTIN, GLANNON GUIDE TO BANKRUPTCY (UPDATES) (2005), https://repository.unm.edu/dspace/handle/1928/496.

284. This is an important contribution in a state that has few commercially published state law treatises or practice materials. APRIL LAND & JOSE MARTINEZ, CIVIL PRACTICE MANUAL (2005), https://repository.unm.edu/handle/1928/476.

285. For the role of institutional repositories and persistent identifiers in digital preservation, see *infra* Part V.F. *See also infra* note 290 and accompanying text (defining "linkrot").

286. The description of the 395-page federal district court trial transcript archived in UNM's DSpace demonstrates the importance of sharing original documents with other scholars:

> This is the transcript for the Federal District Court trial for Santa Clara Pueblo v. Martinez,…the

E. New Avenues for Publishing Student Scholarship

Law schools can publish student papers, legal theses, and dissertations in open access institutional repositories. Access to this material has previously been limited because it was rarely published, and even more rarely indexed. Print collections, where they existed, were created by binding and cataloging the material for local collections.[287] Law schools that create digital collections of these works can make them available to the world at large, as well as for publicity and outreach, especially with alumni. Many schools already inform alumni of recent faculty publications—alumni could also be informed of student scholarship published in repositories. Making student scholarship available in digital collections provides students with a connection to their schools after graduation. Knowing that their work will also be subject to scrutiny beyond the four walls of their professors' offices would also give law students added incentive to produce better scholarship. The University of New Mexico Law School currently publishes student honors papers in its repository.[288]

Law schools are in a position to mandate the submission of theses, dissertations, and other student papers into institutional repositories as a condition of graduation. This would make a statement in support of open access that is consistent with the culture and values of legal educators and with our tradition of access to legal information. Because many of these works are rarely published elsewhere, there is no existing publication structure to be threatened by open access archiving of the works. No royalties are lost. The works suddenly have visibility on a scale never before seen, and the authors can enjoy the benefits of usage statistics on their resumes. Law schools would be sending the message that they take student scholarship seriously. Providing open access to this work does not preclude its later publication. In this respect, student papers could be considered working papers or preprints.[289]

> significant case for affirming tribal sovereignty, sovereign immunity, and tribal governments' authority to determine the qualifications for membership….A search of the Westlaw and Lexis data bases shows that this case is among the most cited in constitutional and federal law as well as the focus of continuing law review articles and critiques by scholars. Until this transcript was made available [here], the scholarship on Santa Clara Pueblo v. Martinez was done without the benefit of the trial transcript details. This transcript reveals a fuller picture of the controversy. It documents the evidence and testimony from tribal members, Pueblo government officials, and the key "outside" expert, Florence Hawley Ellis, Ph.D., Anthropologist.

Transcript for *Martinez v. Romney*, No. 9717 Civil, *supra* note 281. The work has since formed the basis for three scholarly publications: Gloria Valencia-Weber, Santa Clara Pueblo v. Martinez*: Twenty-Five Years of Disparate Cultural Visions: An Essay Introducing the Case for Re-Argument before the American Indian Nations Supreme Court*, 14 KAN. J.L. & PUB. POL'Y 49 (2004); Rina Swentzell, *Testimony of a Santa Clara Woman*, 14 KAN. J.L. & PUB. POL'Y 97 (2004); Tim Vollmann, Revisiting *Santa Clara Pueblo v. Martinez*: What Can We Learn Thirty Years Later? Address at the 29th Federal Bar Association, Indian Law Conference (April 15–16, 2004) (available from Federal Bar Association, Publications, http://www.fedbar.org/pubcat.html#IND (last visited Apr. 15, 2007)).

287. Law theses and dissertations from major programs have been filmed and indexed by Hein and are sold as microfiche collections, but production costs are steep and so is the price. Consequently this microform collection is not widely held by U.S. law libraries. *Cf.* Posting of William S. Hein & Co., marketing@wshein.com, to Marketing@lists.washlaw.edu (May 7, 2004, 10:19:11 CDT), *available at* http://lists.washlaw.edu/pipermail/marketing/Week-of-Mon-20040503/000758.html.

288. Univ. of N.M., DSpaceUNM, Honors Papers, https://repository.unm.edu/dspace/handle/1928/2302 (last visited Apr. 22, 2007).

289. *See* Peter Suber, *Open Access to Electronic Theses and Dissertations (ETDs)*, SPARC OPEN ACCESS

F. Preserving Digital Scholarship

"Linkrot" is a familiar problem in the Web environment;[290] it results from using URLs to identify digital information. URLs are associated with a specific location on a server. If the digital information is moved, its relationship with that location is broken and the hyperlink becomes inoperable. A critical element to creating a stable digital archive involves the use of "persistent identifiers" for items loaded into a repository. Persistent identifiers are associated with a digital object rather than its location, making it possible to migrate an object to another institutional repository system without causing broken links. Loading an item into a repository created with any of the major institutional repository applications available today will create a persistent identifier, thus making it much more likely to be retrievable in the future.[291]

In addition to the problem of hyperlink degradation, there are other preservation challenges associated with digital material. One of the thorniest problems is the matter of hardware and software obsolescence. These issues generally receive limited attention in conversations concerning institutional repositories, as most institutional repository discussions tend to focus on issues of access rather than on issues of maintenance.[292] Even copies of articles published in online journals are not necessarily more secure than digital materials that languish on hard drives in law schools around the country.[293] The best form of insurance at present is to archive

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NEWSL., July 2, 2006, http://www.earlham.edu/~peters/fos/newsletter/07-02-06.htm#etds (setting forth much of the rationale expressed above for mandating open, electronic dissemination of theses and dissertations). Open access repositories of theses and dissertations in other disciplines have been in use for more than a decade now. The ROAR registry lists more than a dozen; including the NELLCO repository, which is used by Vermont and Cornell for their L.L.M. theses. NELLCO LSR, Vermont Law School LL.M. Dissertations on Environmental Law, http://lsr.nellco.org/vermontlaw/ldel/ (last visited Mar. 11, 2007); NELLCO LSR, Cornell Law School LL.M. Papers Series, http://lsr.nellco.org/cornell/lps/ (last visited Mar. 11, 2007). The promotion and advancement of such collections was greatly enhanced by the release in 1996 of open source software known as ETD-db. Many theses and dissertation collections in existence today are based on ETD-db, which helps institutions manage the large volume of submissions they must process each year.

> The ETD database (ETD-db) was developed at Virginia Tech as a joint project between the Graduate School at Virginia Tech, the Digital Library and Archives (a division of the University Libraries), and the National Digital Library of Theses and Dissertations. The current software…is available free of charge to members of the NDLTD.

ETD-db, http://scholar.lib.vt.edu/ETD-db/ (last visited Mar. 11, 2007).

290. *See, e.g.*, Bob Nardini, *Invisible Links*, ACADEMIA, July 2005, http://www.ybp.com/acad/features/0705_bugeja.html (describing a study that showed that one-third of the Web citations examined lasted less than four years).

291. *See generally* COMMERCE, ENERGY, NASA, DEFENSE INFORMATION (CENDI) MANAGERS GROUP, PERSISTENT IDENTIFICATION: A KEY COMPONENT OF AN E-GOVERNMENT INFRASTRUCTURE (2004), *available at* http://cendi.dtic.mil/publications/04-2persist_id.pdf; National Library of Australia, Preserving Access to Digital Information (PADI): Persistent Identifiers, http://www.nla.gov.au/padi/topics/36.html (last visited Mar. 18, 2007). *See also* Susan Lyons, *Persistent Identification of Electronic Documents and the Future of Footnotes*, 97 LAW LIBR. J. 681, 681 (2005) ("In 1994, there were just four instances of Web citations in three law review articles. By 2003 there were at least 96,946 citations to the Web in law review footnotes." (footnote omitted)); Danner, *supra* note 43, at 601; Sponsler & Van de Velde, *supra* note 99.

292. We are all familiar with the problem of digital information stored on devices that quickly became obsolete and which we can no longer easily access. *See, e.g.*, Danner, *supra* note 43, at 603.

293. There are several ongoing initiatives that seek to ensure preservation of electronic journals. A discussion of the issues surrounding preservation of content in electronic journals is well beyond the scope of this Article. However, the two most prominent initiatives are known as LOCKSS and Portico. LOCKSS, http://www.lockss.org

digital material in institutional repositories. As already mentioned, objects loaded into repositories are given persistent identifiers,[294] thus increasing the likelihood that access will continue in the future. Objects in repositories are also more likely to be systematically migrated to new applications and new hardware technologies by institutional repository managers.[295]

VI. CONCLUSION

Open access to legal scholarship is a concept whose time has come. Making legal scholarship freely available to the public on the Internet is consistent with the American tradition of citizen access to government and legal information. Open access can be easily accomplished by archiving copies of published articles, teaching materials, research data sets, digitized original documents, and student scholarship in institutional repositories. Institutional repositories also offer a reliable means of preserving digital scholarship. For years, legal scholars have deposited working papers in the SSRN open access repository; scholars should now also archive published articles. Many are beginning to do so.

Importantly, law school-subsidized journals will not be adversely affected by archiving published articles in repositories. On the contrary, evidence shows that readership of the work is increased, resulting in reputational gains for journals, authors, and their respective schools. Now that many options exist for establishing repositories, law schools should evaluate whether they want to continue to rely solely on commercial providers like SSRN and bepress. These providers do not support archiving multimedia digital objects and they are not under scholars' control. The long-term needs of the legal academy may be better served by also establishing multimedia repositories that are fully under the control of colleges and universities. The trend of relying on a few commercial providers to archive legal scholarship runs counter to trends in other academic disciplines that are moving away from reliance on a few commercial publishers and toward decentralized, federated repositories hosted on independent college and university networks.

(last visited Mar. 11, 2007); Portico, http://www.portico.org/ (last visited Mar. 11, 2007).

294. *See supra* note 291 and accompanying text.

295. *See* Danner, *supra* note 43, at 603.