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Copyright and Open Access: Reconsidering University Ownership of Faculty Research

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I. INTRODUCTION

In 2001, a group of prominent scientists urged a boycott of scholarly journals that refused to provide free online access to research articles within six months after publication. In an open letter to colleagues they pledged to "publish in, edit or review for, and personally subscribe to only those scholarly and scientific journals" that complied with their demand.[1] They defended their stand with the proposition that "[a]s scientists, we are particularly dependent on ready and unimpeded access to our published literature, the only permanent record of our ideas, discoveries, and research results, upon which future scientific activity and progress are based."[2] Over 30,000

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1. Public Library of Science, Open Letter to Scientific Publishers, www.plos.org/about/letter.html (last visited Sept. 23, 2006).

2. Richard J. Roberts et al., *Building a "GenBank" of the Published Literature*, 291 SCIENCE 2318, 2318 (2001).

scientists from 177 countries signed the pledge to boycott. It did not work.[3]

Librarians are also unhappy with the current state of scholarly publishing. An annual subscription to some academic journals exceeds $20,000, forcing many university libraries to cancel hundreds of titles.[4] The irony of the current system is not lost on university administrators, who complain that commercial publishers obtain research papers for free from university faculty, enlist other faculty as unpaid referees and editors, and then charge exorbitant prices to sell the results back to the universities that paid for the research in the first place.[5]

The benefits of open access to scholarly research seem largely beyond debate.[6] Whether that access can be achieved without seriously disrupting the production and publication of scholarly research, however, is a different matter. Proposals have generally taken two forms.[7] One advocates reliance on a new generation of "open-access" journals committed to offering free online access to users. Funding, and the reluctance of researchers to forgo the prestige of publishing in

3. Apparently only a small number of scientists actually carried through with their pledge. Jeffrey R. Young, *Boycott Over Lack of Online Access to Journals is a Bust*, CHRON. HIGHER EDUC., May 31, 2002, at 34.

4. Duke University's Medical Center Library cancelled 525 of its 1,753 titles in 2004, citing annual subscription fees for journals such as *Brain Research* at $21,000. Cornell University cancelled more than 200 journals from publishing giant Elsevier alone. Lila Guterman, *The Promise and Peril of "Open Access,"* CHRON. HIGHER EDUC., Jan. 30, 2004, at 10. The Association of Research Libraries reports library expenditures for serials up 273% since 1986 (compared with a 73% rise in the Consumer Price Index). Expenditure Trends in ARL Libraries, 1986–2004, http://www.arl.org/stats/arlstat/graphs/2004/aexp04.pdf (last visited Sep. 23, 2006). The University of California system spends $30 million per year on periodicals. Bernard Wysocki, Jr., *Peer Pressure: Scholarly Journals' Premier Status is Diluted by Web—More Research is Free Online Amid Spurt of Start-Ups*, WALL ST. J., May 23, 2005, at A1.

5. *See* Lisa Guernsey, *A Provost Challenges His Faculty to Keep Copyright on Journal Articles*, CHRON. HIGHER EDUC., Sept. 18, 1998, at 29. "Faculty write the articles for them, faculty review the articles for them and faculty mostly edit the journals for them, and then we get to buy the journals back from a company that makes a very high profit." Pamela Burdman, *A Quiet Revolt Puts Costly Journals on Web*, N.Y. TIMES, June 26, 2004, at B3 (quoting Lawrence Pitts, Chair, Faculty Senate of the University of California system).

6. "Timely access to a broad range of current scientific publications is a necessity . . . for both our clinicians, so that they may care for patients with the most up-to-date data, as well as our scientists who are making the breakthroughs in such areas as cancer, infectious, cardiovascular and neurological diseases." Victoria Shelton, *Scientific Research: The Publication Dilemma*, ISSUES SCI. & TECH. LIBRARIANSHIP, Spring 2005, para. 6, http://www.istl.org/05-spring/article1.html (internal quotation marks omitted) (quoting Dorothy Bainton, Vice Chancellor of Academic Affairs, University of California at San Francisco).

7. *See, e.g.*, Budapest Open Access Initiative, www.soros.org/openaccess/read.shtml (last visited Sept. 26, 2006).

established journals, pose major challenges for this approach. Another approach centers on "self-archiving"—the deposit by authors of published articles in an accessible electronic archive, whether a personal website, institutional repository, or discipline-wide archive. Here the law of copyright presents a major obstacle. Researchers typically assign the copyright in their work to the journal that has agreed to publish it.[8] Any subsequent uploading of the work by a self-archiving author to a publicly accessible website may well infringe the publisher's copyright.[9] The usual rejoinder urges faculty to be better stewards of their copyrights.[10] However, even researchers knowledgeable about copyright are a poor bargaining match for the giant commercial publishers that dominate the industry.[11]

This Article makes a more controversial suggestion. Universities should exercise their legal right to claim ownership of copyright in the research publications produced by their faculty. Only universities can wield sufficient leverage to compel fundamental change in scholarly publishing. Although traditionally an anathema to faculty, university ownership of copyright in research can be implemented without undermining academic freedom or the economic and reputational interests of university faculty.

II. THE CHALLENGE OF OPEN ACCESS

There was no official beginning to the open-access movement.[12] Growing appreciation of the capabilities of the Internet and the World

8. In a British survey of journal publishers and academic authors in fifty-seven countries (the RoMEO Project), ninety percent of authors reported assigning their copyrights to publishers, and ninety-six percent of publishers indicated that they requested either an assignment of copyright or an exclusive license from the author. Elizabeth Gadd, Charles Oppenheim & Steve Probets, *The Intellectual Property Rights Issues Facing Self-archiving*, D-LIB MAG., Sept. 2003, para. 6–11, www.dlib.org/dlib/september03/gadd/09gadd.html.
9. *See infra* text accompanying notes 77–87.
10. *See, e.g.*, Guernsey, *supra* note 5. All four "scenarios for change" suggested in an Association of American Universities report on intellectual property involve faculty ownership of copyright in research. ASS'N OF RESEARCH LIBRARIES, REPORT OF THE AAU TASK FORCE ON INTELLECTUAL PROPERTY RIGHTS IN AN ELECTRONIC ENVIRONMENT (1994), www.arl.org/aau/IPTOC.html. *See also, e.g.*, Steven Bachrach et al., *Who Should Own Scientific Papers*, 281 SCIENCE 1459 (1998) (advocating author ownership of copyright in federally funded research).
11. Elsevier takes in about $1.6 billion every year from its scholarly journals. Wysocki, *supra* note 4.
12. A massive bibliography on open access published in 2005 includes over 1,300 references, with most (but not all) entries dated after 1998. *See* CHARLES W. BAILEY, JR., OPEN ACCESS BIBLIOGRAPHY: LIBERATING SCHOLARLY LITERATURE WITH E-PRINTS AND OPEN ACCESS JOURNALS (2005), *available at* http://www.escholarlypub.com/oab/oab.pdf; *see also* Peter Suber, Timeline of the Open Access Movement, www.earlham.edu/~peters/fos/timeline.htm (last revised July 4, 2006) (listing the births of the first online journals and other early developments).

Wide Web in the early 1990s led inevitably to visions of desktop access to information of all sorts. For scholars, the information of interest was the work of their fellow researchers. Since the colleagues responsible for the production of most of that information had no expectation of payment, and since in any event it was all in a good cause, it was possible to dream not only of access, but of free and immediate access.[13] For librarians and university administrators, open access offered a way to mitigate the consequences of subscription cancellations. The first formal statement of principles may have been the Budapest Open Access Initiative, which arose from a 2001 meeting of the Open Society Institute funded by billionaire George Soros. The Initiative understands "open access" to denote

> 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.[14]

A more technical definition of open access was promulgated by a group of biomedical research organizations at a 2003 meeting in Bethesda, Maryland, which encouraged researchers to deposit their work in accessible repositories on the following terms:

> The author(s) and copyright holder(s) grant(s) to all users a free, irrevocable, worldwide, perpetual right of access to, and a license to copy, use, distribute, transmit and display the work publicly and to make and distribute derivative works, in any digital medium for any responsible purpose, subject to proper attribution of authorship, as well as the right to make small numbers of printed copies for their personal use.[15]

Representatives of major European research institutes and national scientific agencies meeting later that year in Berlin adopted the same language.[16] A United Nations summit has also endorsed the call for open access to scientific research.[17]

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13. "The Internet has fundamentally changed the practical and economic realities of distributing published scientific knowledge and makes possible substantially increased access." Bethesda Statement on Open Access Publishing—Statement of the Institutions and Funding Agencies Working Group, www.earlham.edu/~peters/fos/bethesda.htm#institutions (last visited Sept. 1, 2006).
14. Budapest Open Access Initiative, *supra* note 7, para. 3. The Initiative has been signed by more than 300 organizations from around the world, including both the Association of College and Research Libraries and the Association of Research Libraries. Budepest Open Access Initiative, View Signatures, http://www.soros.org/openaccess/view.cfm (last visited Sept. 1, 2006).
15. Bethesda Statement on Open Access Publishing, *supra* note 13, para. 5 (footnote omitted).
16. Berlin Declaration on Open Access to Knowledge in the Sciences and Humanities para. 7, http://www.zim.mpg.de/openaccess-berlin/berlindeclaration.html (last visited Sept. 1, 2006).
17. "We strive to promote universal access with equal opportunities for all to scientific knowledge and the creation and dissemination of scientific and technical information, including open access initiatives for scientific publishing." World

Researchers as users of published works have been quick to take advantage of open access. A 2003 British survey of researchers in fifty-seven countries conducted as part of the RoMEO (Rights Metadata for Open Archiving) Project found that eighty-eight percent had made use of research papers that were freely available on the Internet, mostly accessed from individual webpages.[18] Even among researchers whose own works were not freely available on the Internet, seventy-four percent reported use of open-access sources.[19] The researchers commonly expected to display, print, save, and excerpt open-access works.[20] A substantial majority of users believed that any copies should be exact replicas of the original and that the author should be credited.[21]

If researchers as users have embraced open access, what of researchers as authors? A 2004 survey, primarily of U.S. and European journal authors, asked how the authors would respond if their employer or funding agency required them to deposit copies of their published articles in an open-access repository. The vast majority reported that they would do so willingly, with only three percent indicating that they would refuse.[22] The RoMEO survey found that a significant majority of authors considered it acceptable for other researchers to display, print, save, and excerpt an article that they had made freely available on the Internet.[23] The only restrictions that most authors would impose on the use of their open-access works

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Summit on the Information Society, Declaration of Principles § 28, http://www.itu.int/wsis/docs/geneva/official/dop.html (last revised Dec. 12, 2003).

18. Elizabeth Gadd, Charles Oppenheim & Steve Probets, *RoMEO Studies 3—How Academics Expect to Use Open-Access Research Papers*, 35 J. LIBRARIANSHIP & INFO. SCI. 171, 176 (2003) [hereinafter *RoMEO Studies 3*], *available at* http://www.lboro.ac.uk/departments/ls/disresearch/romeo/Romeo%20Studies%203.pdf.
19. *Id.*
20. *Id.* at 177.
21. *Id.* at 184. The Budapest Open Access Initiative, *supra* note 7, para. 3, declares that "[t]he 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."
22. ALMA P. SWAN & SHERIDAN M. BROWN, REPORT OF THE JOINT INFORMATION SYSTEMS COMMITTEE/OPEN SOCIETY INSTITUTE JOURNAL AUTHORS SURVEY 56–57 (2004), http://www.jisc.ac.uk/uploaded_documents/JISCOAreport1.pdf [hereinafter JISC/OSI JOURNAL AUTHORS SURVEY]. A follow-up survey of almost 1,300 researchers by the same authors similarly found that only a very small percentage would refuse to comply with a requirement mandating deposit of their work in an open-access archive. ALMA SWAN & SHERIDAN BROWN, OPEN ACCESS SELF-ARCHIVING: AN AUTHOR STUDY 62–63 (2005), http://www.keyperspectives.co.uk/openaccessarchive/reports.html (follow the "Swan, Alma and Brown" hyperlink) [hereinafter AUTHOR STUDY].
23. Elizabeth Gadd, Charles Oppenheim & Steve Probets, *RoMEO Studies 2—How Academics Want to Protect Their Open-Access Research Papers*, 29 J. INFO. SCI. 333, 343 (2003) [hereinafter *RoMEO Studies 2*], *available at* http://www.lboro.ac.uk/departments/ls/disresearch/romeo/RoMEO%20Studies%202.pdf. The survey

were limitations against alteration and use for certain purposes (probably understood as commercial use or sale).[24] The sole condition on use that attracted majority support from authors was attribution of authorship.[25] Thus, the restrictions and conditions that researchers as authors would impose on the use of their own open-access works closely parallel the limitations that researchers as users expect to observe when accessing the works of others.[26] Although this convergence of views, fortified by the general public interest in access to research, would seem to make open access an uncomplicated proposition, implementation remains a challenge.

A. Open-Access Journals

One response to the demand for open access to scholarly research has been the emergence of open-access journals. In the United States, the most prominent example may be the open-access journals published by the Public Library of Science (PLoS). PLoS describes itself as "a nonprofit organization of scientists and physicians committed to making the world's scientific and medical literature a public resource."[27] In 2003, it launched a series of open-access journals beginning with PLoS Biology; by 2006 there were seven PLoS journals. All work published in PLoS journals is immediately available online without charge, and users may download, reprint, and redistribute the work limited only by an obligation to credit the author and journal. The largest open-access publisher may be BioMed Central, a commercial publisher based in Britain with over 150 journals, some under its own editorial control and others administered by independent research groups.[28] Works published by BioMed Central are accessible on the same terms as those in PLoS journals. Although open-access publishers like PLoS and BioMed Central may play an increasingly prominent role, they are unlikely to become the dominant model for scholarly publishing.

Open-access journals face numerous obstacles. They are, of course, generally opposed by the commercial publishers, who can bring to bear the financial and political influence of a multibillion dollar industry. They are also opposed by many nonprofit publishers, particularly scientific societies that finance their activities with proceeds from the

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also found that a significant majority of authors thought it acceptable for others to lend or give a copy of the article to another person. *Id.*

24. *Id.* at 350–51.
25. *Id.* at 351.
26. *See RoMEO Studies 3*, *supra* note 18, at 178–85 (comparing the responses of users and authors).
27. Public Library of Science, www.plos.org (last visited Sept. 23, 2006).
28. *See* BioMed Central—About Us, http://www.biomedcentral.com/info/ (last visited Sept. 23, 2006).

sale of their own scholarly journals.[29] Promoters of open access counter that professional societies should not be in the position of depriving their members of open access to research,[30] but the societies have largely refused to cede the moral high ground.[31] The most formidable obstacle to the success of open-access journals, however, is not their competitors but their prospective authors.

The current lack of information about open-access publishing among researchers presents a very real problem for open-access journals, at least in the short term. In one survey of authors who had never published in an open-access journal, the explanation most frequently given was that the author was "not familiar enough with OA journals in my field to feel confident about submitting work."[32] In another study, even among a self-selected sample of 3,800 journal authors from ninety-seven countries who responded to an online survey on scholarly publishing, more than one-third reported that they knew "nothing at all" about open-access journals, and another forty-eight percent said they knew only "a little."[33]

Even if authors were better informed about open-access journals, publishing costs would remain a major issue. By all accounts, scholarly publishing is an expensive undertaking. Open-access journals largely eliminate printing and distribution costs by publishing online,[34] but editorial costs remain high. Experts estimate editorial costs at most scholarly journals at $3,000 to $4,000 per published article.[35] Expenses at the most prestigious journals are generally higher

29. Lila Guterman, *Scientific Societies' Publishing Arms Unite Against Open-Access Movement*, CHRON. HIGHER EDUC., Mar. 26, 2004, at 20. A former president of the American Society of Plant Biologists emphasized that "[a] large number of professional societies live by their publications." Guterman, *supra* note 4 (quoting James Siedow, Duke University Professor and Vice Provost).

30. Dr. Harold Varmus, a founder of the Public Library of Science, urges scientific societies to find other sources of income. "They shouldn't be surviving by denying to their members the virtues of Internet-based open-access publication." Guterman, *supra* note 4.

31. "We don't make unseemly profits, but any profits we make go back to the discipline of physiology and the membership." *Id.* (internal quotation marks omitted) (quoting Martin Frank, Executive Director, American Physiology Society).

32. JISC/OSI JOURNAL AUTHORS SURVEY, *supra* note 22, at 29. *See also* AUTHOR STUDY, *supra* note 22, at 12 (providing a follow-up survey with the same explanation predominating).

33. Ian Rowlands, Dave Nicholas & Paul Huntingdon, *Scholarly Communication in the Digital Environment: What Do Authors Want?*, 17 LEARNED PUB. 261, 269 (2004), *available at* http://www.ucl.ac.uk/ciber/ciber-pa-report.pdf.

34. Although most open-access journals are available only online, some publishers such as the Pubic Library of Science also offer print copies for a fee. *See* Frequently Asked Questions, Questions About the PLoS Journals: How Can I Get Printed Versions of the PLoS Journals?, http://www.plos.org/about/faq.html (last visited Sept. 23, 2006).

35. Wysocki, *supra* note 4.

due to the costs of processing a larger number of submissions.[36] Traditional scholarly publishing is based on a "user-pays" model in which publishing costs are recovered primarily through fees on access such as subscription charges and charges for reprints and online access. Open-access publishing is sometimes described as an "author-pays" model—a label that concisely captures a basic problem. The open-access journals of the Public Library of Science, for example, currently charge fees up to $2,500 to publish an article, although they express a willingness to waive the fee in appropriate circumstances; journals published by BioMed Central charge fees ranging from $625 to $1,795 per article.[37] For now at least, there is considerable resistance among potential authors. In one survey, almost half of the authors reported that they would be unwilling to pay any fee, even for publication in the best open-access journal in their field, and most of the remaining respondents would be unwilling to pay more than $500.[38] It remains unclear whether the reluctance among authors to bear the financial costs of open-access publishing can be overcome, although proponents note that authors already pay color printing, graphics, and even page charges to many traditional hardcopy publishers.[39]

Some early open-access initiatives have been funded by private foundations,[40] but ultimate success depends on a sustainable business model. The author-pays model is misnamed, since someone other than the author could accept the financial burden. Two obvious candidates are the author's academic institution or other employer, or the

36. Editorial costs at *Science*, the nonprofit journal of the American Association for the Advancement of Science that receives about 12,000 submissions per year, are estimated at more than $10,000 per published article. *Id.*

37. *See* Public Library of Science, Publication Fees for PLoS Journals, http://www.plos.org/journals/pubfees.html (last visited Sept. 23, 2006); BioMed Central, Frequently Asked Questions about BioMed Central's Article-Processing Charges, How Much is BioMed Central Charging?, http://www.biomedcentral.com/info/authors/apcfaq#howmuch (last visited Sept. 1, 2006).

38. Rowlands et al., *supra* note 33, at 272. "There is little evidence here of much stomach on the part of authors to pay charges at anything remotely near the rates that some commercial publishers claim are necessary for a long-term sustainable business model to develop. In fact, there is outright hostility." *Id.* Another survey reported that more than one-quarter of authors who had never published in an open-access journal were unwilling to pay any publication fee, and almost two-thirds would not pay more than $500. JISC/OSI JOURNAL AUTHORS SURVEY, *supra* note 22, at 43–44.

39. *See* Lila Guterman, *New Study Compares Open-Access and Traditional Publishing*, CHRON. HIGHER EDUC., Mar. 25, 2005, at 18. One recent study found that author fees were actually less common for open-access journals than for other publications. *See* ASS'N OF LEARNED & PROF'L SOC'Y PUBLISHERS, THE FACTS ABOUT OPEN ACCESS 10 (2005), www.alpsp.org/publications/FAOAcompleteREV.pdf.

40. The Public Library of Science, for example, received a $9 million start-up grant from the Gordon and Betty Moore Foundation. Guterman, *supra* note 4.

organization sponsoring the author's research. Paying a $1,500 publication fee for every article submitted by a faculty member would actually leave some academic institutions with costs rivaling their current payments for commercial subscriptions.[41] However, many open-access journals offer institutional "subscriptions" that provide free or reduced-cost publishing to authors at subscribing institutions. The Public Library of Science, for example, offers discounts of ten to seventy-five percent to authors from institutions that purchase memberships ranging in price from $2,000 to $100,000 annually, and has over 150 institutional members; BioMed Central has more than 350 institutional members, although an additional 300 memberships have been allowed to expire.[42]

When asked who should pay publication costs, a substantial majority of authors put research sponsors at the top of the their list.[43] Some major research sponsors do fund publication costs. The Howard Hughes Medical Institute and the United Kingdom's Wellcome Trust, two of the largest private supporters of biomedical research, specifically authorize researchers to use a portion of their funding to pay for open-access publishing.[44] Federal funding agencies such as the National Science Foundation and the National Institutes of Health allow publication fees as a direct cost of sponsored research.[45] Whether financial support derived from grants, authors, institutions, and research sponsors can translate into a sustainable business model for open-access journals is uncertain,[46] but financing may not be their biggest obstacle.

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41. One analysis of scholarly publications submitted by the faculty of Duke University in 2003 concluded that a $1,500 per-paper fee would have cost Duke $6.75 million—slightly above Duke's current budget for journals and databases. *Id.*

42. *See* PLoS Institutional Members, http://www.plos.org/support/instmembers.html (last visited Sept. 1, 2006); BioMed Central Members, http://www.biomedcentral.com/inst/ (last visited Sept. 1, 2006).

43. JISC/OSI JOURNAL AUTHORS SURVEY, *supra* note 22, at 47.

44. Guterman, *supra* note 4.

45. NAT. SCI. FOUND., GRANT PROPOSAL GUIDE 28 (2004), *available at* http://www.nsf.gov/pubs/gpg/nsf04_23/nsf04_23.pdf (revision of NSF 04-23, providing: "The proposal budget may request funds for the costs of documenting, preparing, publishing or otherwise making available to others the findings and products of the work conducted under the grant."); NAT. INSTS. OF HEALTH, NIH GRANTS POLICY STATEMENT 94 (2003), *available at* http://grants1.nih.gov/grants/policy/nihgps_2003/nihgps_2003_1_of_2.pdf ("Page charges for publication in professional journals are allowable if the published paper reports work supported by the grant and the charges are levied impartially on all papers published by the journal, whether or not by government-sponsored authors. The cost of reprints and publishing in other media, such as books, monographs, and pamphlets, also are allowable.").

46. "Full Open Access journals rely heavily on revenue streams such as grants, author-side fees, and institutional memberships along with a substantial amount of personal or departmental funding and volunteer labor. These sources of support

When authors who had never published in open-access journals were asked why they had not, sixty-nine percent said that their perception that open-access journals have low prestige and low impact was an important or very important factor.[47] The perception of lower impact may or may not be correct. A study comparing computer science articles that were freely available online with ones that were not indicated a 157% increase in the mean number of citations for the online articles.[48] Another study examining publications in philosophy, political science, electrical engineering, and mathematics found mean increases in citation rates for articles available online ranging from forty-five percent in philosophy to ninety-one percent in mathematics.[49] Citation rates, however, may reflect mere availability rather than actual influence or "impact." In any case, authors' perceptions matter here more than reality. Open-access journals receive fewer submissions, and hence are less selective,[50] making it difficult to improve their standing among prospective contributors. Unless open-access journals can somehow acquire the prestige necessary to attract high-quality submissions, they will not play a major role in scholarly publishing.

Perceptions of prestige appear closely linked to perceptions of the peer review process. When asked about various features of scholarly journals, authors placed peer review first in importance.[51] Here, too, open-access journals suffer in comparison to traditional journals. "A fairly common misconception has it that open access journals have lower standards of peer review, if indeed they employ it at all."[52] It may not, in fact, be a misconception—traditional journals in most disciplines almost universally employ external peer reviewers, while

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are less tried and true than subscription and advertising revenues." ASS'N OF LEARNED & PROF'L SOC'Y PUBLISHERS, *supra* note 39, at 24.

47. JISC/OSI JOURNAL AUTHORS SURVEY, *supra* note 22, at 29. "They perceive open access journals as having a smaller readership and lower citation rate, and of generally having a lower quality and prestige than the traditional journals in which they routinely publish." *Id.* at 63. *See also* AUTHOR STUDY, *supra* note 22, at 12 (noting the same concerns).

48. Steve Lawrence, *Free Online Availability Substantially Increases a Paper's Impact*, NATURE, May 31, 2001, at 521.

49. Kristen Antelman, *Do Open-Access Articles Have a Greater Research Impact?*, 65 COLL. & RES. LIBR. NEWS 372, 376 (2004), *available at* http://eprints.rclis.org/archive/00002309/01/do_open_access_CRL.pdf; *see also* Lila Guterman, *Peer-Review Researchers Explore Hyped Conclusions, Open Access, and Bias*, CHRON. HIGHER EDUC., Sept. 30, 2005, at 19 (reporting on an increase in citations to a medical journal after it became freely accessible online).

50. Guterman, *supra* note 39.

51. *See* JISC/OSI JOURNAL AUTHORS SURVEY, *supra* note 22, at 51–52.

52. *Id.* at 65.

some open-access journals rely only on editorial staff review.[53] Their comparative lack of prestige may make it difficult for open-access journals to attract qualified external reviewers, a problem aggravated by the continuing proliferation of journals, both traditional and open access. In theory, there is no reason why open-access journals cannot have a peer review process equivalent to traditional journals, and the experience of authors who have published in both seems to belie any systematic inferiority.[54] Again, however, the perception is what matters.

The perception that open-access journals are inferior raises concern among authors. When authors who had never published in an open-access journal were asked about their reluctance, over forty percent responded that publishing in such journals might adversely affect their chances for academic appointments or promotions, or otherwise negatively influence their career; over half worried that it might affect their chances of winning research grants.[55] Although some open-access journals such as those published by the Public Library of Science aim eventually to compete with the top tier of traditional publications, their prospects remain unclear.[56]

Open-access journals may or may not come to play an important role in the dissemination of scientific research, but obstacles and opposition make it unlikely that they will become the dominant mode of scholarly publication.[57] A more promising vehicle for open access may be the phenomenon of self-archiving, although it too faces serious obstacles.

B. Self-Archiving

In theory at least, open access to any scholarly work can be achieved by posting it on an Internet site accessible to the public without charge in a form capable of being retrieved by available search engines. Examples of such sites include an institutional repository

53. Lila Guterman, *Open-Access Journal Will Publish Results of Small Clinical Trials That Usually Go Unreported*, CHRON. HIGHER EDUC., Oct. 28, 2005, at 20; *see also* ASS'N OF LEARNED & PROF'L SOC'Y PUBLISHERS, *supra* note 39, add. 1–2.

54. Eighty-nine percent of authors who had published in open-access journals reported that peer review standards were the same or higher than traditional journals of similar quality. JISC/OSI JOURNAL AUTHORS SURVEY, *supra* note 22, at 55 (noting that seventy-six percent stated standards were the same and thirteen percent stated standards were higher).

55. *Id.* at 36.

56. "At universities, decisions about job offers, promotions, and tenure often rely heavily on whether researchers have published in prestigious journals like *Science*, *Nature*, and *Cell*. 'That's the goal of PLoS, to muscle into that top-three tier,' says one biologist, who requested anonymity. 'I'm skeptical.'" Guterman, *supra* note 4.

57. A 2004 estimate put the number of open-access journals at less than five percent of the number of traditional journals. *Id.*

maintained by a university or research facility where works by faculty or employees are posted, a discipline-specific site containing works produced by researchers in a designated field, or even the personal webpages of individual faculty members and researchers.

A number of major research universities now host institutional repositories, including the University of California, the California Institute of Technology, and, most notably, the Massachusetts Institute of Technology, which has developed an open-source software platform used by numerous universities and research institutes to make digital works available for retrieval over the Internet.[58] Stanford University, through its HighWire Press, hosts an extensive archive of full-text articles from hundreds of journals, but material becomes available only on a timetable set by the individual publishers.[59] Thus far, however, the promise of institutional repositories exceeds the reality. Even at MIT, participation by faculty and research units has been disappointing.[60] Many faculty are apparently unaware of their institution's repository, while others may fear that the process of depositing their work will be too time consuming. With little direct incentive to participate, many do not. There might also be a lack of enthusiasm among some university librarians or staff charged with overseeing a repository. In addition to frustration engendered by low participation, they must contend with a variety of electronic formats, ensure compatibility with search engines and other repositories, and perhaps most significantly, maneuver through a complex web of intellectual

58. Lila Guterman, *Two Routes to Open Access: Archives and Institutional Subscriptions*, CHRON. HIGHER EDUC., Jan. 20, 2004, at 11. For a description of MIT's DSpace repository and software platform, see DSpace: MIT Libraries, http://libraries.mit.edu/dspace-mit/index.html (last visited Sept. 23, 2006). A survey of U.S. research universities conducted in 2005 indicated that around forty percent were operating some form of institutional repository, with many more in planning. Clifford A. Lynch & Joan K. Lippincott, *Institutional Repository Deployment in the U.S. as of Early 2005*, D-LIB MAG., Sept. 2005, para. 11, http://www.dlib.org/dlib/september05/lynch/09lynch.html; *see also* University of Nebraska-Lincoln, Digital Commons @ UNL, http://digitalcommons.unl.edu (last visited Dec. 9, 2006).

59. *See* HighWire Press—Information for HighWire-Affiliated Publishers, http://highwire.stanford.edu/publishers/hosting.dtl (last visited Sept. 23, 2006).

60. *See* Andrea L. Foster, *Papers Wanted*, CHRON. HIGHER EDUC., June 25, 2004, at 37. MIT has resorted to promotional presentations to encourage faculty participation; the University of Rochester summoned anthropologists to examine faculty reluctance. *Id. See* Nancy Fried Foster & Susan Gibbons, *Understanding Faculty to Improve Content Recruitment for Institutional Repositories*, D-LIB MAG., Jan. 2005, para. 5–7, http://www.dlib.org/dlib/january05/foster/01foster.html.

property issues that may ultimately curtail the full-scale development of any form of self-archiving.[61]

There are also a growing number of open-access disciplinary archives containing materials produced by scholars working in specific fields. The most well known is probably arXiv, which began in 1991 and contains e-prints of articles in physics, mathematics, computer science, and quantitative biology.[62] Another successful example is CogPrints, a British archive devoted to papers from a variety of fields pertinent to the study of cognition.[63] In 2000, the National Institutes of Health established PubMed Central, an open-access archive that contains research articles in the life sciences published in journals that agree to deposit their content, typically several months after publication.[64] By some counts there are now hundreds of institutional and disciplinary archives.[65] Their potential for success rests on willing participation and the absence of legal impediments.

The growth of the World Wide Web during the 1990s led to the simplest form of self-archiving—works posted on the author's own webpage. In one large but self-selected sample, thirty-two percent of authors reported that they had posted scholarly works on their home page or other personal website.[66] Another study found that among authors who had self-archived, "[b]y far the most popular location for research papers was on the academic's own web pages."[67] Perhaps unsurprisingly, the study also found that researchers using articles that are freely available over the Internet most frequently located them on individual webpages.[68] Although relatively common and

61. *See infra* text accompanying notes 77–87. For a generally pessimistic view of institutional repositories by a prominent librarian, see Ann Okerson, *Open Access: Reflections from the United States*, 18 SERIALS 20 (2005).

62. *See* Cornell University Library, arXiv.org ePrint Archive, http://arxiv.org (last visited Sept. 23, 2006). Law faculty have grown accustomed to electronic access to legal scholarship through archives such as Westlaw and LexisNexis. However, a short conversation with the law school's librarian or dean will underscore the fact that the content of those archives is hardly free. On the push for genuine access to legal scholarship, see Michael Carroll, *The Movement for Open Access Law*, 10 LEWIS & CLARK L. REV. (forthcoming 2006) (part of a symposium issue on open access publishing and legal scholarship).

63. *See* http://cogprints.org (last visited Sept. 23, 2006).

64. *See* http://www.pubmedcentral.nih.gov/about/intro.html (last visited Sept. 23, 2006).

65. Many archives utilize the popular EPrints open source software platform. The EPrints website includes a comprehensive registry of over seven hundred digital archives. *See* Registry of Open Access Repositories (ROAR), http://archives.eprints.org (last visited Sept. 23, 2006).

66. Rowlands et al., *supra* note 33, at 267.

67. *RoMEO Studies 2*, *supra* note 23, at 341. *See also* AUTHOR STUDY, *supra* note 22, at 26 (reporting that personal webpages remain the most common method of self-archiving, although use of institutional depositories is not far behind).

68. *RoMEO Studies 3*, *supra* note 18, at 176.

easy, self-archiving on personal webpages can be a poor substitute for more formal repositories. Content on a personal webpage that is hosted by an institution will typically vanish if the faculty member moves, retires, or dies; personal webpages on commercial servers are likely to be even more unstable. Even while the content remains available, the format or location can leave it beyond the reach of many search engines. If the article is in reality available only to researchers already sufficiently familiar with the author's work to seek it out on her personal webpage, the posting is in effect merely the electronic equivalent of reprint distribution among colleagues.[69]

Despite the increasing availability of open-access repositories, the fact remains that most scholarly authors still do not archive their work, even on a personal website.[70] The limited participation may be attributable in large measure to a lack of information about institutional or disciplinary archives. One survey showed that among authors who had not archived their work, more than seventy percent were unaware of the possibility of providing open access through self-archiving.[71] Simple inertia on the part of authors is also a likely factor.[72] There can also be practical barriers to archiving such as the technical expertise necessary to submit a work in the required format, or unclear or complicated submission procedures. Two other concerns also represent significant obstacles to self-archiving. Dissemination of an electronic "pre-print" may preclude acceptance of the work by some traditional journals, and archiving of "post-prints" may infringe the publisher's copyright in the work.

69. *Id.* at 183. A self-archiving system resulting in works scattered across hundreds of separate institutional, disciplinary, and personal repositories need not be hopelessly inefficient. Largely through the efforts of the Open Archives Initiative (OAI), a set of interoperability standards has been developed to facilitate access to digital works. *See* Open Archinves Initiative, Mission Statement, http://www.openarchives.org/organization/index.html (last visited Sept. 23, 2006). The OAI's Protocol for Metadata Harvesting provides a means for repositories to disclose identifying metadata such as author names, titles, and keywords to service providers like Google that can retrieve and aggregate it into searchable databases. *See generally* Elizabeth Gadd, Charles Oppenheim & Steve Probets, *RoMEO Studies 5: IPR Issues Facing OAI Data and Service Providers*, 22 ELECTRONIC LIBR. 121 (2004) [hereinafter *RoMEO Studies 5*], *available at* http://www.lboro.ac.uk/departments/ls/disresearch/romeo/Romeo%20Studies%205.pdf. The University of Michigan's OAIster service harvests OAI metadata from over 680 repositories to enable unified searching. *See* http://oaister.umdl.umich.edu/o/oaister/ (last visited Sept. 23, 2006). Even individual archivers can make their work available to OAI harvesters by using personal OAI-compliant software. Elizabeth Gadd, Charles Oppenheim & Steve Probets, *RoMEO Studies 4: An Analysis of Journal Publishers' Copyright Agreements*, 16 LEARNED PUB. 293, 304 (2003) [hereinafter *RoMEO Studies 4*], *available at* http://www.lboro.ac.uk/departments/ls/disresearch/romeo/Romeo%20Studies%205.pdf.

70. *See* AUTHOR STUDY, *supra* note 22, at 71.

71. *Id.* at 43.

72. JISC/OSI JOURNAL AUTHORS SURVEY, *supra* note 22, at 69.

Most traditional journals will not accept a work for publication if it has been previously published elsewhere.[73] This is the so-called Ingelfinger Rule, named after an editor of the *New England Journal of Medicine* who articulated the policy in 1969;[74] it soon spread to other journals. Most publishing agreements do not specify whether placing a pre-print of a work on a website or electronic archive will be deemed a prior "publication."[75] It may be that only a minority of journals actually refuse to accept papers that have already appeared on a website.[76] However, uncertainty regarding the persistence and interpretation of the rule can be a substantial disincentive to self-archiving by an author prior to formal publication.

As for self-archiving after publication, copyright law is a major obstacle. A 2002 survey of eighty journal publishers located primarily in the United States and Great Britain indicated that ninety percent required authors to assign their copyright to the journal; an additional five percent demanded that the author grant the journal an exclusive license.[77] Self-archiving by an author who has assigned the copyright or granted an exclusive license to a publisher may be copyright infringement. The owner of a copyright, whether through authorship or assignment, has the exclusive right under federal copyright law "to reproduce the copyrighted work in copies or phonorecords."[78] A digital version of a work stored in a computer memory is a "copy" for purposes of the Copyright Act.[79] Making a work available to others over a computer network can also infringe other rights of the copyright

73. One study of the agreements used by journal publishers found that seventy-two percent required the submitting author to warrant that the work had not been previously published. *RoMEO Studies 4*, *supra* note 69, at 300.

74. *See* Arnold Relman, *The Ingelfinger Rule*, 305 NEW ENG. J. MED. 824 (1981) (arguing that the rule is necessary to preserve the "newsworthiness" of the *Journal* and to insure that medical research has been subjected to appropriate peer review before it is publicized); Marcia Angell & Jerome P. Kassirer, *The Ingelfinger Rule Revisited*, 325 NEW ENG. J. MED. 1371 (1991) (same).

75. *RoMEO Studies 4*, *supra* note 69 at 300.

76. *See* Foster, *supra* note 60; *see also* AUTHOR STUDY, *supra* note 22, at 57 (nine percent of authors reported rejection by a publisher based on a self-archived preprint).

77. *RoMEO Studies 4*, *supra* note 69, at 295. According to a recent survey, the number of publishers requiring a transfer of copyright may be declining. "[I]n 2003, 83 per cent of publishers required authors to transfer copyright in their articles to the publisher. This figure is now 61 per cent, with 21 per cent initially requesting copyright transfer but accepting a license to publish should this be declined." JOHN COX & LAURA COX, ASS'N OF LEARNED & PROF'L SOC'Y PUBLISHERS, SCHOLARLY PUBLISHING PRACTICE 3–4 (2005), http://www.alpsp.org/publications/SPP2summary.pdf.

78. 17 U.S.C. § 106(1) (2000).

79. *See, e.g.*, MAI Sys. Corp. v. Peak Computer, Inc., 991 F.2d 511 (9th Cir. 1993), *cert. dismissed*, 510 U.S. 1033 (1994); Playboy Enter., Inc. v. Webbworld, Inc., 991 F. Supp. 543 (N.D. Tex. 1997), *aff'd*, 168 F.3d 486 (5th Cir. 1999); Religious Tech. Ctr. v. Netcom On-Line Comm'n Serv., Inc., 907 F. Supp. 1361 (N.D. Cal. 1995).

owner, including the right to distribute copies of the work to the public[80] and the right to display the work publicly.[81] As a general matter, making a work accessible to others over the Internet without permission is an infringement of copyright.[82] An author intent on depositing a work in a digital archive or posting it on a personal website despite a prior assignment of the copyright can, of course, invoke the fair-use defense,[83] but success seems uncertain at best. The author could stress that the use is noncommercial and done for the purpose of furthering the dissemination of knowledge, and that the scope of fair use is generally greater for nonfiction works. However, several factors weigh heavily against a claim of fair use. The use is not transformative, in that it does not result in the creation of a new work; the copyrighted work is reproduced in its entirety; and the resulting public availability of the work appears to threaten the copyright owner's potential markets for journal subscriptions, paper reprint sales, and photocopying and e-print licenses.[84] Although there are no judicial decisions directly on point, fair-use arguments raised in defense of the distribution of entertainment works over the Internet have been swiftly rejected.[85] The case for distribution of scholarly research is stronger, but in other contexts claims to fair use of these works have also been rejected, at least when there is a commercial motive for the use.[86] Although self-archiving is noncommercial, the traditional em-

80. 17 U.S.C. § 106(3) (2000); *see also, e.g.*, A & M Records, Inc. v. Napster, Inc., 239 F.3d 1004 (9th Cir. 2001); Marobie-FL, Inc. v. Nat'l Ass'n of Fire & Equip. Distrib., 983 F. Supp. 1167 (N.D. Ill. 1997).

81. 17 U.S.C. § 106(5) (2000); *see also, e.g.*, Playboy Enter., Inc. v. Frena, 839 F. Supp. 1552 (M.D. Fla. 1993).

82. *See* Metro-Goldwyn-Mayer Studios Inc. v. Grokster, Ltd., 545 U.S. 913 (2005) (analyzing the potential secondary liability of file-sharing networks for the direct copyright infringements committed by their customers); *In re* Aimster Copyright Litig., 334 F.3d 643 (7th Cir. 2003) (same), *cert. denied*, 540 U.S. 1107 (2004); A & M Records, Inc. v. Napster, Inc., 239 F.3d 1004 (9th Cir. 2001) (same).

83. 17 U.S.C. § 107 (2000).

84. For some publications, the availability of their content in an open-access archive may also reduce advertising revenue. Editors, Science's *Response: Is a Government Archive the Best Option?*, 291 SCIENCE 2318 (2001).

85. *See, e.g.*, BMG Music v. Gonzalez, 430 F.3d 888 (7th Cir. 2005); *A & M Records*, 239 F.3d 1004; UMG Recordings, Inc. v. MP3.Com, Inc., 92 F. Supp. 2d 349 (S.D.N.Y. 2000); *cf.* Kelly v. Arriba Soft Corp., 336 F.3d 811 (9th Cir. 2003) (accepting a fair-use defense with respect to the creation of an indexed online database consisting of thumbnail versions of images gathered from websites, emphasizing that the low-resolution thumbnails would not harm the market for the original images).

86. *See, e.g.*, Princeton Univ. Press v. Mich. Document Serv., 99 F.3d 1381 (6th Cir. 1996); Am. Geophysical Union v. Texaco Inc., 60 F.3d 913 (2d Cir. 1994); Lowry's Reports, Inc. v. Legg Mason, Inc., 271 F. Supp. 2d 737 (D. Md. 2003) (rejecting a fair-use defense to a company's systematic posting of the plaintiff's stock reports on its company-wide intranet). The court in the *Texaco* case distinguished *Williams & Wilkins Co. v. United States*, 487 F.2d 1345 (Ct. Cl. 1973), *aff'd mem.*,

phasis in fair-use analysis on adverse market effects seems likely to tip the balance in favor of an assignee publisher.[87]

Some publishers do permit self-archiving, usually with restrictions. For example, a 2003 study found that forty-two percent of publishing agreements allowed some form of self-archiving,[88] and the number is increasing.[89] Typical restrictions limit post-publication archiving to personal or institutional websites and bar use of the publisher's PDF or HTML version of the work.[90] The practical effect of some of these restrictions can be minimized. If the personal or institu-

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420 U.S. 376 (1975), which had accepted a fair-use defense by the National Institutes of Health and the National Medical Library in connection with their massive photocopying of journal articles. According to the court in *Texaco*,

> Whatever the situation may have been previously, before the development of a market for institutional users to obtain licenses to photocopy articles, *see Williams & Wilkins*, 487 F.2d at 1357–59, it is now appropriate to consider the loss of licensing revenues in evaluating "the effect of the use upon the potential market for or value of" journal articles.

Texaco, 60 F.3d at 931 (citing Williams & Williams, 487 F.2d at 1357–59 (citation omitted). *See also* N.Y. Times Co. v. Tasini, 533 U.S. 483 (2001) (holding that the unauthorized posting of freelance articles from the *New York Times* on the LexisNexis database was an infringement of the authors' reproduction and distribution rights).

87. In a related noncommercial context, § 110(2) of the Copyright Act, 17 U.S.C. § 110(2) (2000), which authorizes certain digital transmissions of works to students as part of the instructional activities of nonprofit educational institutions, requires the use of technological measures designed to prevent further dissemination of the work to the public. The digital repositories themselves seem largely oblivious to the risk of liability for copyright infringement. A survey of twenty open-access archives revealed that at least half did not ask the author to warrant that she had the right to deposit the work. *RoMEO Studies 5*, *supra* note 69, at 123–24.

88. *RoMEO Studies 4*, *supra* note 69, at 302. In a 2004 survey of authors, fifty-four percent said their publishing agreement did not allow self-archiving in any form. JISC/OSI JOURNAL AUTHORS SURVEY, *supra* note 22, at 50. Some authors apparently ignore restrictions on post-publication archiving. *See* AUTHOR STUDY, *supra* note 22, at 56; Steven Pinfield, *How Do Physicists Use an E-Print Archive?: Implications for Institutional E-Print Services*, D-LIB MAG., Dec. 2001, para. 26, *available at* http://www.dlib.org/dlib/december01/pinfield/12pinfield.html; Kristen Antelman, *Self-Archiving and the Sufficiency of Publisher Policies in the Social Sciences*, 19 LEARNED PUB. 85, 90 (2006) (finding "no relationship between publisher policy and self-archiving behavior").

89. Most publishers now apparently allow self-archiving in some form. *See* SHERPA RoMEO, Publisher Copyright Policies & Self-Archiving, http://www.sherpa.ac.uk/romeo.php?all=yes (last visited Sept. 23, 2006). "75 per cent of large publishers, but just under 50 per cent of small publishers, allow authors to post *published* articles [on] websites or institutional repositories." Cox & Cox, *supra* note 77, at 4.

90. *RoMEO Studies 4*, *supra* note 69, at 302–05. Many authors archive the publisher's PDF version despite a restriction. Antelman, *supra* note 88, at 89. Some publishers allow the author to pay to have the work freely accessible on the journal's website. Susan Brown, *Coalition Works to Secure Open Access to Publisher Research*, CHRON. HIGHER ED., Sept. 22, 2006, at 19.

tional website is compatible with open archive protocols, for example, searchers will still be able to locate the work,[91] although citation problems may arise in the absence of access to the published version. Other restrictions are more serious. In particular, some publishers require that archiving be delayed for a specified time after publication, often six to twelve months or longer.[92]

Concern over access to scientific publications has prompted several proposals for government intervention, especially with respect to federally funded research. An ambitious bill introduced in 2003 by Representative Martin Sabo declared that "United States Government funded research belongs to, and should be freely available to, every person in the United States."[93] It would have required federal agencies that fund scientific research to include in their funding agreements a provision denying copyright to works produced pursuant to "scientific research substantially funded" by the federal agency. The bill made no headway against the opposition of publishing interests. The following year, the House of Representatives Appropriations Committee made a more modest proposal, recommending that the National Institutes of Health require that NIH-funded researchers deposit a copy of their publications with NIH's PubMed Central open-access repository when the work has been accepted for publication; the deposited works were to be freely accessible six months after publication.[94] Caught by surprise, the Association of American Publishers immediately began a lobbying effort against the proposal.[95] As an apparent result, the subsequent House Conference Report directed the NIH to "give full and fair consideration to all comments" on its proposed policy and to "work with the publishers of scientific journals to maintain the integrity of the peer review system."[96] The final NIH policy announced in the spring of 2005 states merely that "NIH-funded investigators are *requested*" to submit their manuscripts to PubMed Central upon acceptance for publication.[97] A bill introduced by Senators John Cornyn and Joseph Lieberman in 2006 would re-

91. See *supra* note 69 for a description of the Open Archives Initiative Protocol.
92. See the summary of publisher policies complied by SHERPA RoMEO, *supra* note 89 (e.g., Nature Publishing—six months; Oxford University Press—twelve to twenty-four months; Modern Humanities Research Association—twenty-four months).
93. Public Access to Science Act, H.R. 2613, 108th Cong. (2003).
94. H.R. REP. NO. 108-636, at 104 (2004).
95. Andrea Foster & Lila Guterman, *American and British Lawmakers Endorse Open-Access Publishing*, CHRON. HIGHER ED., July 30, 2004, at A13.
96. H.R. REP. NO. 108-792, at 1177 (2004).
97. Policy on Enhancing Public Access to Archived Publications Resulting from NIH-Funded Research, 70 Fed. Reg. 6891, 6899 (Feb. 9, 2005) (emphasis added). Authors can specify the timing of public access to submitted papers. It is "strongly encouraged" that this occur within twelve months of publication (up from the six-month delay specified in the NIH's initial proposal). *Id.* at 6892. The voluntary

quire that federal agencies funding research in excess of $100 million per year mandate that their researchers deposit electronic copies of the peer-reviewed version of their manuscripts; the works would be made available for free public access in a repository maintained or designated by the federal agency not later than six months after publication.[98]

Although open-access journals and self-archiving of scholarly works can appreciably enhance access to research, neither system seems capable of fully realizing the goal of open access. Open-access journals remain hampered by the opposition of commercial publishers and some professional societies and by the disincentives associated with an author-financed business model. More significantly, most open-access journals will probably never overcome their relative lack of prestige among academics anxious about promotion, career advancement, and competition for research funding. Self-archiving has its own disincentives created by technical procedures and concern that pre-publication archiving may compromise publication opportunities

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policy has so far failed. A 2006 National Institutes of Health report on the NIH Public Access Policy states,

> The rate of submission to the NIH [Manuscript Submission] system in the first 8 months has been less than 4 percent of the total number of articles estimated to be eligible to have been added to PMC as a direct result of instituting the Policy. Lack of awareness does not appear to be the primary reason for the low submission rate.

NAT'L INST. OF HEALTH, DEP'T OF HEALTH & HUMAN SERV., REPORT ON THE NIH PUBLIC ACCESS POLICY 6 (2006), http://publicaccess.nih.gov/Final_Report_20060201.pdf. A bill introduced late in 2005 by Senator Lieberman made another try at mandating deposit in PubMed Central of publications resulting from NIH-funded research; failure to make the required deposit could result in loss of public funding, and articles would become accessible on PubMed Central six months after publication. American Center for Cures Act of 2005, S. 2104, 109th Cong, § 499H-1 (2005).

98. Federal Research Public Access Act of 2006, S. 2695, 109th Cong. (2006). A similar pattern of proposals and opposition has emerged in the United Kingdom. A 2004 report from the House of Commons, SCIENCE AND TECHNOLOGY COMMITTEE, SCIENTIFIC PUBLICATIONS: FREE FOR ALL?, 2003-04, H.C. 399-I at 102 [hereinafter SCIENTIFIC PUBLICATIONS: FREE FOR ALL?], *available at* http://www.publications.parliament.uk/pa/cm200304/cmselect/cmsctech/399/399.pdf, recommended that research councils require that their funded researchers deposit a copy of their work in an accessible institutional repository. The response to the report from the British Government was not encouraging. "However the Government has no present intention to mandate Research Council funded researchers to deposit a copy of their published material in institutional repositories." SCIENCE AND TECHNOLOGY COMMITTEE, RESPONSES TO THE COMMITTEE'S TENTH REPORT, SESSION 2003-04, SCIENTIFIC PUBLICATIONS: FREE FOR ALL?, 2003-4, H.C. 1200, at 28, *available at* http://www.publications.parliament.uk/pa/cm200304/cmselect/cmsctech/1200/1200.pdf. The Chair of the House of Commons committee commented, "They're obviously kowtowing to the industry." Daniel Engber, *British Government Rejects Call to Support Open-Access Publishing*, CHRON. HIGHER ED., Nov. 26, 2004, at A15 (quoting Ian Gibson, Chair, Science and Technology Committee).

and post-publication archiving may violate copyright. Both forms of open access also face the problem of authors who are largely uninformed about either system and insufficiently motivated to make the personal commitment crucial to both.

III. UNIVERSITY OWNERSHIP OF RESEARCH

Critics of scholarly publishing typically espouse alternatives based on author ownership of copyright.[99] If authors retain the copyright in their research, granting journals only a nonexclusive license to publish, open access can be easily realized. However, relying on academic authors to drive hard bargains with journal publishers over copyright ownership seems unrealistic. In one survey, forty-six percent of authors reported that they "took no interest" in the copyright aspects of their publishing agreements with journals.[100] Indeed, according to the RoMEO Project survey, one-third of authors didn't know who owned the copyright in their research articles in the first place, and another seven percent believed that the copyright was owned by their institution, although probably none of those institutions actually claimed such ownership.[101] It is not at all clear that faculty members struggling to advance frontiers in genetics, quantum theory, or econometrics *ought* to allocate some of their time and energy to the interstices of copyright or the legalese in their publishing agreements. Even for faculty who might be so inclined, the concerns with professional reputation, career advancement, and grant opportunities that have hindered the development of open-access journals also counsel against tough bargaining with a prestigious journal. Universities, on the other hand, could bring to the table copyright in the scholarly output of an entire research faculty, as well as the financial clout of a major paying customer. In fact, some journals already offer more liberal publishing terms when the copyright is owned by the researcher's employer.[102] This Article suggests that it would be better if university

99. *See, e.g.*, Bachrach et al., *supra* note 10; Guernsey, *supra* note 5; ASS'N OF RESEARCH LIBRARIES, *supra* note 10 (Scenarios for Change 1 and 2); *see also* SCIENTIFIC PUBLICATIONS: FREE FOR ALL?, *supra* note 98, at 103. Some proposals envision joint ownership in the author and the institution. *See* Guernsey, *supra* note 5; ASS'N OF RESEARCH LIBRARIES, *supra* note 10 (Scenarios for Change 3 and 4).

100. Rowlands et al., *supra* note 33, at 265. Only thirteen percent of authors reported taking "a detailed interest" in the copyright implications of their publishing agreements. *Id.*

101. Elizabeth Gadd, Charles Oppenheim & Steve Probets, *RoMEO Studies 1—The Impact of Copyright Ownership on Academic Author Self-Archiving*, 59 J. DOCUMENTATION 243, 256 (2003), http://www.lboro.ac.uk/departments/ls/disresearch/romeo/RoMEO%20Studies%201.pdf [hereinafter *RoMEO Studies 1*].

102. *RoMEO Studies 4*, *supra* note 69, at 297.

ownership of copyright in scholarly research was the rule rather than the exception.

A. Work Made for Hire

Can universities assert copyright ownership in the research articles written by their faculty? The legal rules governing copyright ownership are deceptively simple. The general principle is that ownership vests in the author of the work.[103] However, in the case of a "work made for hire," the employer is considered to be the "author" of the work, and hence the owner of the copyright.[104] A "work made for hire" is defined in the Copyright Act as "a work prepared by an employee within the scope of his or her employment."[105] The statute offers no definition of "employee" or "scope of . . . employment." The Supreme Court in *Community for Creative Non-Violence v. Reid*[106] concluded that the statutory reference to "employee" should be understood in light of the general common law of agency and adopted the factors recited in section 220 of the *Restatement (Second) of Agency*.[107] Although the definition of "scope of employment" was not directly before the Supreme Court in *Reid*, its unanimous opinion also cited the *Restatement*'s treatment of that term in section 228, and lower courts have expressly adopted section 228's inquiry into whether the servant's conduct "is of the kind he is employed to perform"; "it occurs substantially within the authorized time and space limits; [and] it is actuated, at least in part, by a purpose to serve the master."[108]

A literal application of the analysis in *Reid* yields a strong case for university ownership of copyright in faculty research. There seems little question that faculty members are employees of their university

103. 17 U.S.C. § 201(a) (2000).

104. *Id.* § 201(b).

105. *Id.* § 101. Certain specially commissioned works can also be works made for hire under the statute if the parties agree in a signed writing to treat the work as a work for hire. *Id.* The commissioned-work category is not generally relevant to faculty research.

106. 490 U.S. 730 (1989).

107. *Id.* at 751 (citing RESTATEMENT (SECOND) OF AGENCY § 220 (1958)).

108. *See, e.g.*, Shaul v. Cherry Valley-Springfield Cent. Sch. Dist., 363 F.3d 177 (2d Cir. 2004); Avtec Sys., Inc. v. Peiffer, 21 F.3d 568 (4th Cir. 1994); Genzmer v. Pub. Health Trust of Miami-Dade County, 219 F. Supp. 2d 1275 (S.D. Fla. 2002); Quinn v. City of Detroit, 988 F. Supp. 1044 (E.D. Mich. 1997); Roeslin v. Dist. of Columbia, 921 F. Supp. 793 (D.D.C. 1995); City of Newark v. Beasley, 883 F. Supp. 3 (D.N.J. 1995); Miller v. CP Chems., Inc., 808 F. Supp. 1238 (D.S.C. 1992). The cases treat the *Restatement* factors in the conjunctive, holding that a work is prepared within the scope of employment only if all three factors are satisfied. (The *Restatement* section includes a fourth factor relating to the intentional use of force by the servant, reflecting the origin of the scope of employment doctrine as a limitation on the liability of the master for the torts of a servant. *See* RESTATEMENT (SECOND) OF AGENCY § 219 (1958)).

or research institution.[109] Copyright ownership under the work-for-hire rule thus depends on a faculty member's "scope of employment." The inquiry into whether research is the kind of conduct that the faculty member has been hired to perform under the first of the *Restatement* factors turns essentially on the job description.[110] For most university faculty, research is at least an implicit—often explicit—component of their position. The second *Restatement* inquiry into whether the work was performed within the time and space limits of the employment has carried little weight in the case of salaried employees.[111] Both the university and the faculty member typically ex-

109. Among the factors listed in *Reid* that determine whether a person is an "employee" are the source of the instrumentalities used for the work; the location of the work; the duration of the relationship; the right to assign additional projects; the method of payment; whether the work is part of the regular business of the hiring party; the provision of employee benefits; and the tax treatment of the hired party. *Reid*, 490 U.S. at 751. All appear to favor the obvious conclusion that faculty are employees. The only factors weighing against that conclusion are the hiring party's right to control the manner and means of the work, and the extent of the hired party's discretion over when and how long to work. *Id.*

110. *See Beasley*, 883 F. Supp. at 8 ("Courts deciding whether an employee's project was the 'kind of work' the employee was hired to perform rely heavily on the employee's job description."); Marshall v. Miles Lab., Inc., 647 F. Supp. 1326, 1330 (N.D. Ind. 1986) ("To determine the scope of employment the court may look at the employment contract and job description." (footnote omitted)). Even "incidental" acts related to the ultimate objective of the employer are within the scope of employment. *Genzmer*, 219 F. Supp. 2d at 1280 (citing RESTATEMENT (SECOND) OF AGENCY § 229 cmt. b (1958)). James Wadley and JoLynn Brown make the interesting argument that "scope of employment" for purposes of the work-for-hire doctrine should be determined not only by understandings regarding the work to be done by the employee, but also by any understandings about copyright ownership. James Wadley & JoLynn Brown, *Working Between the Lines of* Reid*: Teachers, Copyrights, Work-For-Hire and a New Washburn University Policy*, 38 WASHBURN L.J. 385, 403 (1999). Even this perspective, however, would not significantly strengthen a claim of faculty ownership in the face of a university policy that explicitly asserts an ownership interest in faculty research.

111. *See, e.g.*, Cramer v. Crestar Fin. Corp., 67 F.3d 294 (4th Cir. 1995) (unpublished table decision) (holding that for a salaried employee, it is irrelevant that he was not separately compensated for hours worked at home as long as the work was done during the time period of the employment); *Genzmer*, 219 F. Supp. 2d at 1282 ("Genzmer was a salaried employee involved in a research project . . . . What matters is that Genzmer performed the work during the time period in which he was employed by the Trust to complete the research project."); *cf. Miller*, 808 F. Supp. at 1244 n.7 ("[N]ormally work done by an hourly employee outside of the workplace and for which he is not compensated would not be within the scope of employment."); Williams v. Weisser, 273 Cal. App. 2d 726, 740 (1969) ("Whatever distinctions between 'on' and 'off-duty' hours might be appropriate in the case of an hourly employee who punches a clock, they are quite out of place in cases such as . . . the one at bar [involving ownership of common law copyright in lectures given by a university professor]."); *see also* Avtec Sys., Inc. v. Peiffer, 21 F.3d 568, 571 (4th Cir. 1994) (noting that when the kind-of-work factor is met, "courts have tended not to grant employees authorship rights solely on the basis that the work was done at home on off-hours").

pect that considerable portions of the anticipated work may be accomplished outside "normal" working hours, often at home and sometimes in libraries or other facilities outside the control of the university.[112] The third *Restatement* requirement of a purpose to serve the interests of the employer is also unlikely to interfere with an assertion of ownership by the university. Although faculty research may be motivated primarily by a personal desire for knowledge, career advancement, or prestige, or by an altruistic desire to benefit others, it is sufficient under the *Restatement* if the purpose of serving the employer's interests "actuates the servant to any appreciable extent."[113] When faculty engage research, they think of themselves as doing their "job."

Only a handful of cases discuss the ownership of works created by teachers and faculty, perhaps because the economic stakes are typically small, and by tradition schools and universities have acquiesced in faculty ownership. A few cases simply apply standard agency principles, usually concluding that the work is for hire.[114] The case law and commentary, however, reflect a greater diversity than a straightforward application of the work-for-hire criteria might suggest. The only clear-cut holding that academic works are not works for hire under federal copyright law came in a 1929 case decided under the 1909 Copyright Act, with its unadorned statement that "the word 'author' shall include an employer in the case of works made for hire."[115]

112. *See Shaul*, 363 F.3d at 186 ("Here, the very nature of a teacher's duties involves a substantial amount of time outside of class devoted to preparing lessons, problem sets, and quizzes and tests—which is clearly within the scope of his employment."); *cf. Williams*, 273 Cal. App. 2d. at 739 ("Since it is not customary for a college to prescribe the hours of the day when a teacher is to prepare for class, it follows that the time when he does so automatically ceases to be leisure time.").

113. RESTATEMENT (SECOND) OF AGENCY § 236 cmt. b (1958). *See also Peiffer*, 21 F.3d at 572 (sufficient if the employee "was at least 'appreciabl[y]' motivated by a desire to further" the corporate goals of the employer); *Beasley*, 883 F. Supp. at 9 (same); *Genzmer*, 219 F. Supp. 2d at 1282 (must be motivated "at least in part" by a purpose to serve the employer). The *Restatement* creates a rebuttable inference that if work is of the expected kind and done within the authorized time, the requirement of an intent to serve is satisfied. RESTATEMENT (SECOND) OF AGENCY § 235 cmt. a (1958).

114. *See Shaul*, 363 F.3d at 186 (applying the *Restatement* rules on scope of employment to conclude that tests, quizzes, and homework problems created by a high school teacher were owned by the school district, although failing to distinguish ownership of the copyright from ownership of the physical papers seized by the school district, despite 17 U.S.C. § 202 (2002)); Vanderhurst v. Colo. Mountain Coll. Dist., 16 F. Supp. 2d 1297 (D. Colo. 1998) (applying the *Restatement* rules to find that a course outline written by a junior college professor was a work for hire); Pittsburg State Univ. v. Kan. Bd. of Regents, 122 P.3d 336 (Kan. 2005) (holding in a collective bargaining dispute that the *Restatement* rules on scope of employment determine the ownership of faculty works).

115. Act of Mar. 4, 1909, ch. 320, § 62, 35 Stat. 1075, 1088 (1909) (codified at 17 U.S.C. § 26) (repealed 1978).

In an infringement action against a defendant who had copied from a course text written by an instructor at a U.S. Army school, the court in *Sherrill v. Grieves*[116] held that the instructor was under no obligation to reduce his lectures to writing, and if he chose to do so, they did not become the property of the school. In 1969, a California court in *Williams v. Weisser*[117] upheld a professor's claim to ownership of state common law copyright in lectures that had been copied by a student and offered for sale by the defendant. The court noted that the university, which supported the professor's efforts to enjoin the sale, had no right to prescribe the content of the lectures. Since the lectures were based on extensive notes, charts, and diagrams prepared by the professor, the 1976 Copyright Act would now preempt state common law rights, leaving ownership to be determined under the federal work-for-hire rules.[118]

Based on this scanty case law, references to a "teacher exception" to the work-for-hire rules have emerged. The fullest articulation came from Judge (and former professor) Richard Posner in *Hays v. Sony Corp.*[119] In dicta, Judge Posner justified the "universal assumption and practice that (in the absence of an explicit agreement as to who had the right to the copyright) the right to copyright" belonged to the teacher by arguing that "[a] college or university does not supervise its faculty in the preparation of academic books and articles, and is poorly equipped to exploit their writings."[120] Admitting that "[t]o a literalist of statutory interpretation, the conclusion that the [1976] Act abolished the exception may seem inescapable," he persevered, insisting that

> considering the havoc that such a conclusion would wreak in the settled practices of academic institutions, the lack of fit between the policy of the work-for-hire doctrine and the conditions of academic production, and the absence of any indication that Congress meant to abolish the teacher exception, we might, if forced to decide the issue, conclude that the exception had survived the enactment of the 1976 Act.[121]

One of the rationales invoked in both *Hays* and *Williams*—the absence of supervision or control by a university over the writings and

116. 57 Wash. L.R. 286, 20 Copyright Office Bull. 675, 687 (D.C. Sup. 1929).

117. 273 Cal. App. 2d 726 (1969).

118. 17 U.S.C. § 301(a) (2000) (preempting state copyright in works fixed in a tangible medium of expression). The *Williams* court was particularly concerned that recognizing university ownership of lectures would inhibit professors from teaching the same course at a different school. "University lectures are *sui generis*." *Williams*, 273 Cal. App. 2d at 735.

119. 847 F.2d 412, 416–17 (7th Cir. 1988) (holding that a claim by two high school teachers to ownership of copyright in a computer manual written for their students was not frivolous).

120. *Id.* at 416.

121. *Id.* at 416–17.

lectures of its faculty[122]—was subsequently undermined by the Supreme Court's decision in *Reid*. That case specifically rejected work-for-hire tests based either on a right to control or actual control over the production of the work.[123] Judge Posner notwithstanding, the 1976 Act also leaves little room for appeals to custom. Although the 1909 Copyright Act permitted recognition of implied agreements on ownership between employers and employees, § 201(b) of the 1976 Act requires a writing signed by both parties in order to alter ownership rights in works for hire.[124] Some courts have ascribed a tight grip to the work-for-hire rules of the 1976 Act. Judge Easterbrook—another former professor—concluded in *Weinstein v. University of Illinois* that "[t]he statute is general enough to make every academic article a 'work for hire' and therefore vest exclusive control in universities rather than scholars," although he interpreted the university's copyright policy to concede ownership to the professor.[125] Like the case

122. *See also* Town of Clarkstown v. Reeder, 566 F. Supp. 137, 143 n.3 (S.D.N.Y. 1983) (attributing the teacher exception to the fact that a teacher's ideas are not controlled by the employer).

123. 490 U.S. 730, 741–43; *see also, e.g.*, Russ VerSteeg, *Copyright and the Educational Process: The Right of Teacher Inception*, 75 IOWA L. REV. 381, 394 (1990) ("Universities ordinarily do not supervise their faculty's preparation of lecture notes. That is irrelevant. . . . [I]f they create lecture notes incident to their teaching, obviously those lecture notes are prepared pursuant to their duties as employees.").

124. 17 U.S.C. § 201(b) (2000); Manning v. Bd. of Trs. of Cmty. Coll. Dist. No. 505, 109 F. Supp. 2d 976, 980–81 (C.D. Ill. 2000) ("Unwritten understandings or writings not containing the signatures of both parties are insufficient to rebut the presumption [that the employer retains ownership of a work for hire]. . . . An agreement altering the statutory presumption must be *express*."); Miller v. CP Chems., Inc., 808 F. Supp. 1238, 1245 (D.S.C. 1992) ("Although section 201 may sometimes create harsh results, it clearly places the burden on the employee to obtain a written agreement, and not merely an oral understanding, that the employee will retain the copyright interests in the works he creates while within the scope of his employment."); *see* MELVILLE B. NIMMER & DAVID NIMMER, NIMMER ON COPYRIGHT § 5.03[D]; *see also, e.g.*, Ashley Packard, *Copyright or Copy Wrong: An Analysis of University Claims to Faculty Work*, 7 COMM. L. & POLICY 275, 285 (2002) ("However, the legislative history of the Copyright Act suggests that Congress did not intend custom to be considered in cases interpreting the work-for-hire doctrine." (footnote omitted)); Todd F. Simon, *Faculty Writings: Are They "Works Made for Hire" Under the 1976 Copyright Act?*, 9 J. COLL. & UNIV. L. 485, 493 (1983) ("Congress was clearly disturbed by the uncertainty resulting from courts' discussions of custom, intent, assumptions made by the parties, and other contract principles." (footnote omitted)); Leonard D. DuBoff, *An Academic's Copyright: Publish and Perish*, 32 J. COPYRIGHT SOC'Y 17, 33–34 (1984) ("Indeed, on its face, the new law does not provide for the admission of any particular evidence that it is the custom to have the copyright vest in the employee."). *But see* Wadley & Brown, *supra* note 110 (arguing that the scope of an employee's employment should be determined not only by the anticipated responsibilities but also by understandings as to copyright ownership).

125. 811 F.2d 1091, 1094 (7th Cir. 1987). *See also* Pittsburgh State Univ. v. Kan. Bd. of Regents, 122 P.3d 336, 345 (Kan. 2005) ("However, a teacher exception to the

law, the commentators are not unanimous, but there seems to be a clear, if reluctant, consensus that the work-for-hire rules sweep in most of the traditional output of teachers and university faculty.[126]

B. Faculty Research as Work for Hire

There are good reasons why some courts and commentators have made heroic efforts to preserve copyright for faculty, and why universities have not asserted general claims of ownership.[127] Foremost is the desire to safeguard academic freedom. The canonical articulation of that concept remains the *1940 Statement of Principles on Academic Freedom and Tenure* by the American Association of University Professors.[128] With respect to research, the *Statement* proclaims:

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work-for-hire doctrine was not incorporated into the Copyright Act when it was revised in 1976.").

126. *See, e.g.*, Packard, *supra* note 124, at 314 ("Under the Copyright Act's work-for-hire provision, faculty works appear to belong to the universities that employ the faculty."); Margaret Smith & Perry Zirkel, *Implications of* CCNV v. Reid *for the Educator-Author: Who Owns the Copyright?*, 63 EDUC. L. REP. 703, 711 (1991) ("The conclusion that scholarly writings and other faculty work products . . . meet the scope of employment test of the Act's made for hire provision is virtually unanimous among legal commentators. Congress failed to incorporate the 'teacher exception' in the 1976 Act or its legislative history." (footnotes omitted)); DuBoff, *supra* note 124, at 25–26 ("This means that when a university professor publishes in his academic field, the university probably owns the copyright. . . . This result is unfortunate."); Simon, *supra* note 124, at 505 ("Colleges and universities appear to have a strong argument, should they want to use it, that scholarly writings fit the course of employment tests used to determine if a work as [sic] made for hire." (footnote omitted)). *But see* Wadley & Brown, *supra* note 110 (arguing against an all-or-nothing interpretation of the work-for-hire rules in the academic context); Laura Lape, *Ownership of Copyrightable Works of University Professors: The Interplay Between the Copyright Act and University Copyright Policies*, 37 VILL. L. REV. 223, 246 (1992) ("[T]he 1976 Act did not disturb the professors' exception from the work-for-hire doctrine; to the extent that such an exception ever existed, it continues to exist."); VerSteeg, *supra* note 123, at 412 (advocating a "teacher exception," but calling the issue "an open question."); Rochelle Dreyfuss, *The Creative Employee and the Copyright Act of 1976*, 54 U. CHI. L. REV. 590, 593 (1987) (declining to "personally endorse" the commentators' conclusion that universities can claim ownership of faculty output).

127. Traditionally, universities have not made broad claims of ownership in works produced by their faculty. *See* ASS'N OF RESEARCH LIBRARIES, *supra* note 10 ("Most universities assert no ownership claim on the copyrights faculty create."); Packard, *supra* note 124, at 293–94 ("Although universities have long claimed ownership over faculty inventions that are patentable, they have traditionally allowed faculty to retain ownership over copyrightable works, particularly scholarly writings."); Lape, *supra* note 126, at 251 ("Universities have long claimed ownership of the patentable inventions of faculty members, but traditionally have not claimed their copyrightable works."). The same is true in the United Kingdom. *RoMEO Studies 1*, *supra* note 101, at 251–52.

128. AM. ASS'N OF UNIV. PROFESSORS, 1940 STATEMENT OF PRINCIPLES ON ACADEMIC FREEDOM AND TENURE, *available at* http://www.aaup.org/AAUP/pubsres/policydocs/1940statement.htm.

"Teachers are entitled to full freedom in research and in the publication of the results, subject to the adequate performance of their other academic duties; but research for pecuniary return should be based upon an understanding with the authorities of the institution."[129] The implications for copyright ownership are clear—a point forcefully articulated by the AAUP in its subsequent 1999 *Statement on Copyright*:

> In the case of traditional academic works, however, the faculty member rather than the institution determines the subject matter, the intellectual approach and direction, and the conclusions. This is the very essence of academic freedom. Were the institution to own the copyright in such works, under a work-made-for-hire theory, it would have the powers, for example, to decide where the work is to be published, to edit and otherwise revise it, to prepare derivative works based thereon . . . , and indeed to censor and forbid dissemination of the work altogether. Such powers, so deeply inconsistent with fundamental principles of academic freedom, cannot rest with the institution.[130]

Concern with the potential suppression of unwelcome ideas is a common theme in the academic commentary on university copyright ownership.[131] There are additional reasons to be wary of university ownership. Some academic works such as textbooks, treatises, and a few monographs actually have monetary value. University ownership may thus dampen the economic incentive that is the founding rationale of the constitutional power to grant copyright.[132] There are also substantial nonmonetary interests at stake, articulated most compre-

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129. *Id.*

130. AM. ASS'N OF UNIV. PROFESSORS, STATEMENT ON COPYRIGHT (1999), *available at* www.aaup2.org/statements/Redbook/Spccopyr.htm.

131. *See, e.g.*, Packard, *supra* note 124, at 287–89 ("Of all the arguments against the notion of university ownership of faculty work, none is more persuasive than the notion of academic freedom."); Gregory Laughlin, *Who Owns the Copyright to Faculty-Created Web Sites*, 41 B.C. L. REV. 549, 578 (2000) ("First, the same policy that underlies tenure—academic freedom—supports faculty ownership of their intellectual work product."); Wadley & Brown, *supra* note 110, at 420 ("Copyright law should not become a way to easily suppress such works simply through the guise of exercising copyright ownership rights."). Similar concern with academic freedom and the ability of a university to control through copyright when and where a work can be published has also arisen in the United Kingdom. *See RoMEO Studies 1*, *supra* note 101, at 252–53.

132. U.S. CONST. art. I, § 8, cl. 8. "The economic philosophy behind the clause empowering Congress to grant patents and copyrights is the conviction that encouragement of individual effort by personal gain is the best way to advance public welfare through the talents of authors and inventors in 'Science and useful Arts.'" Mazer v. Stein, 347 U.S. 201, 219 (1954). The economic implications of university copyright ownership are noted in, for example, Laughlin, *supra* note 131, at 578–79; VerSteeg, *supra* note 123, at 407; and Lape, *supra* note 126, at 264–66. For teaching materials, university copyright ownership can also burden the ability of faculty to teach at a different school. *See* Williams v. Weisser, 273 Cal. App. 2d 726, 734 (1969); Laughlin, *supra* note 131, at 579–81; VerSteeg, *supra* note 123, at 407–08.

hensively by Professor Rochelle Dreyfus.[133] University ownership could distort the nature and character of the material produced by faculty and also threaten reputational interests by removing from authors decisions about the timing and form of publication, the manner of attribution, and the creation of revised versions and adaptations.[134] In addition, universities themselves may be wary of the administrative burdens of copyright ownership.[135]

These are powerful concerns. Fortunately, open access to scholarly research does not require university ownership in a form that threatens such ominous consequences. All that is necessary to insure open access is a nonexclusive right in the university to disseminate or authorize the dissemination of articles in electronic form following an authorized publication by the author. Such a right would permit universities to place research articles in institutional or disciplinary archives.[136] Some publishers might object or threaten to reject manu-

133. "[C]reators have three central nonpecuniary interests in their works: first, a possessory interest, which is fulfilled by composing a work that satisfies the creator's initial vision; second, an interest in the integrity of the work, which is endangered by the process of compromising that vision with commercial demands; and third, a reputational interest, which turns on how the work is presented to the public." Dreyfuss, *supra* note 126, at 605.

134. *Id.* at 605–26; *see also, e.g.*, VerSteeg, *supra* note 123, at 407 (emphasizing a teacher's interest in recognition); Lape, *supra* note 126, at 265–66 ("Faculty members have . . . in addition to monetary interests in their works, an interest in controlling their dissemination, such as the manner of distribution, the making of revisions, and the production of later works based on their works.").

135. "[I]f universities own (or license) rights, they may be obliged to do something with them (i.e., license them to third parties etc.) and this takes extra resources." *ROMEO Studies 1*, *supra* note 101, at 255; *cf.* Hays v. Sony Corp., 847 F.2d 412, 416 (7th Cir. 1988) ("A college or university . . . is poorly equipped to exploit [faculty] writings, whether through publication or otherwise.").

136. Although in theory the university's right would extend only to pre-print versions, as a practical matter even the posting of post-print versions is unlikely to infringe any right of a licensed publisher. Small editorial changes made by the publisher or others during the peer review and editorial process are unlikely to be copyrightable. *See, e.g.*, Matthew Bender & Co. v. West Pub. Co., 158 F.3d 674 (2d Cir. 1998) (no copyright in a publisher's editorial revisions to judicial opinions), *cert. denied*, 526 U.S. 1154 (1999). Ideas suggested by peer reviewers are similarly uncopyrightable. 17 U.S.C. § 102(b) (2000). Substantial revisions in language contributed by peer reviewers could be copyrightable, but unless the reviewers are employees of the journal publisher, their work is not for hire and copyright in those contributions would not belong to the publisher. There is also no copyright in typography or layout elements such as page breaks. *See* Matthew Bender & West Pub. Co., 158 F.3d 693 (2d Cir. 1998) (no copyright in the location of page breaks within a work), *cert. denied*, 526 U.S. 1154 (1999). For example, the National Institutes of Health voluntary archiving policy for NIH-funded research, *see supra* text accompanying notes 94–97, specifically requests an electronic version of the final manuscript "after all changes resulting from the peer review process have been incorporated." Policy on Enhancing Public Access to Archived Publications Resulting from NIH-Funded Research, 70 Fed. Reg. 6891, 6894 (Feb. 9, 2005).

scripts encumbered by an electronic distribution right. If they have legitimate concerns, they can bargain with universities for waivers or delays in posting, but they would face bargaining leverage arising from a university's control over thousands of research manuscripts rather than an individual author eager to place a work.[137] A nonexclusive electronic distribution right held by the university would not threaten academic freedom—it could not prevent publication by the faculty member nor force unwanted alterations. An Association of American Universities task force "found no *inherent* incompatibility between 'full freedom . . . in the publication of results' and greater university involvement in the management of copyright."[138] Adverse monetary effects and any resulting distortion of incentives could be easily avoided by insuring that the university's right does not extend to works such as treatises, textbooks, and monographs, or to fictional and other creative works. Faculty interests in personal reputation and in the integrity of their work would not be threatened by a university right to redistribute the work over the Internet since all decisions regarding creation, revision, attribution, and first publication would remain in the hands of the author.[139] In general, universities and their faculty have shared interests in reputation, academic integrity, and in the dissemination of research, and there is no evidence that faculty members would oppose electronic republication of their research by the university.[140]

C. Implementation

Almost every major research university has adopted a policy dealing with the ownership of copyright in faculty-created works.[141] The

137. The reasons typically given by publishers for the proposition that they require an assignment of all rights—protection against infringements, permissions management, wide dissemination, legal requirements—are largely self-serving. *See RoMEO Studies 4*, *supra* note 69, at 269–97. In fact, journals already publish works made for hire without obtaining all rights and also publish U.S. Government works that are by definition in the public domain. *Id.* at 297; *see also* 17 U.S.C. § 105 (2002).

138. ASS'N OF RESEARCH LIBRARIES, *supra* note 10. Even the AM. ASS'N OF UNIV. PROFESSORS, STATEMENT ON COPYRIGHT, *supra* note 130, recognizes that universities "should interpret and apply the law of copyright so as to encourage the discovery of new knowledge and its dissemination to students, to the profession, and to the public."

139. *See* Dreyfuss, *supra* note 126, at 609, 618, 620 (noting that the nonpecuniary interests of authors could be protected if the employer left these decisions to the author); *see also id.* at 639 (if the university held only limited rights, "the concerns voiced in the article would substantially diminish").

140. *See supra* text accompanying note 22.

141. A 2002 survey of seventy major research universities revealed that all but one had a policy on copyright ownership. Packard, *supra* note 124, at 296. The study is an update of an analysis of university copyright policies published a decade earlier by Professor Laura Lape. *See* Lape, *supra* note 126; *see also* Weinstein v.

policies typically disclaim university ownership of traditional scholarship, limiting claims to works produced with substantial university resources (often applied to distance education courses), works produced at the specific direction of the university, and computer software.[142] These policies offer a vehicle for universities to assert a narrow ownership interest sufficient to facilitate open access to faculty research. Rather than completely disclaiming all interest in scholarly works, the policies could retain in the university as employer a modest right to authorize distribution of scholarly works in electronic form. The retained right could be carefully circumscribed. It could be limited to depositing works in electronic repositories, and the right could be conditioned on prior publication in a print or online journal with the permission of the author. The right could expressly exclude treatises, textbooks, monographs, and works of fiction. The university could renounce any right to revise or alter the work, requiring that the deposited copy correspond as closely as possible to the work in its published form. The policy could also relinquish any claim to monetary compensation attributable to the right. The policy could—and should—explicitly assign and acknowledge ownership in the author of all other rights of copyright beyond the limited right retained by the university.[143]

University copyright policies that merely disclaim all ownership of scholarly works may actually leave the university with greater rights than under the model suggested here. Section 201(b) of the Copyright Act automatically places copyright ownership in the employer in the case of a work made for hire "unless the parties have expressly agreed otherwise in a written instrument signed by them."[144] University copyright policies do not ordinarily satisfy this formality, thus leaving the statutory presumption of employer ownership fully intact.[145]

Univ. of Ill., 811 F.2d 1091 (7th Cir. 1987) (describing the policy adopted by the University of Illinois).

142. Packard, *supra* note 124, at 295–305.

143. The various rights of copyright, and any of their subdivisions, can be separately transferred and owned. 17 U.S.C. § 201(d)(2) (2000). The university could also provide a description of its retained right on a website to which publishers could be referred by faculty submitting manuscripts for publication. A university's right to deposit the work in an electronic repository would be effective even when the work is coauthored by faculty at another institution. The university as employer under the work-for-hire rules would be a joint author and coowner of the copyright with the other faculty authors or their employers. 17 U.S.C. § 201(a)–(b) (2000). "[C]oowners of a copyright would be treated generally as tenants in common, with each coowner having an independent right to use of [sic] license the use of the work, subject to a duty of accounting to the other coowners for any profits." H.R. REP. NO. 94-1476, at 121 (1976).

144. 17 U.S.C. § 201(b) (2000).

145. *See* Foraste v. Brown Univ., 248 F. Supp. 2d 71, 81 (D.R.I. 2003) (holding that Brown University's copyright policy "is patently inadequate to overcome the presumption of Brown's ownership under the work made for hire doctrine" in a case

However, the requirements of § 201(b) are irrelevant to a copyright policy that embraces rather than rebuts the presumption of employer ownership; the subsequent transfer of rights from the university to the faculty employee presumably must satisfy only the less onerous requirements of § 204(a) governing transfers of copyright ownership. That section can be satisfied by a written note or memorandum of the transfer signed by the assignor, a requirement arguably satisfied by a formally-adopted copyright policy.[146] Indeed, the cases generally hold that since the purpose of the writing requirement in § 204(a) is to settle disputes between the assignor and assignee, third parties (such as a journal publisher) cannot invoke the section if there is no dispute as to ownership between the parties to the assignment.[147]

Would the retention of a university right to authorize electronic access to faculty research represent a dramatic step? Such a right would be similar in effect to the familiar "shop right" of patent law.

> The classic "shop right" doctrine provides that an employee who uses his employer's resources to conceive an invention or to reduce it to practice must afford to his employer a nonexclusive, royalty-free, nontransferable license to make use of the invention, even though the employer subsequently obtains a patent thereon.[148]

If the dissemination of knowledge is indeed the business of universities, depositing a faculty research paper in an electronic repository is a use for university business that would fall squarely within the scope of an analogous copyright "shop right."[149] The proposal is also not dis-

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involving copyright in photographs taken by a photographer employed by the university); Bd. of Trs. of Cmty. Coll. Dist. No. 505, 109 F. Supp. 2d 976, 981 (C.D. Ill. 2000) (college copyright policy did not rebut the statutory presumption that the college owned copyrights in photographs taken by a staff photographer). *But see Weinstein*, 811 F.2d 1091 (assuming, in dicta, that a university copyright policy could leave the ownership of works for hire in the faculty member); *see also* Dreyfuss, *supra* note 126, at 600 ("[W]hile many faculty handbooks announce policies favoring faculty retention of copyright, handbooks are unlikely to be considered signed writings within the meaning of the Act."); Wadley & Brown, *supra* note 110, at 423 ("It is unlikely that these policies can satisfy the requirements of the writing envisioned by section 201(b)."). *But see* Lape, *supra* note 126, at 248 ("If the copyright policy is expressly incorporated by reference into a written employment contract signed by the professor and the university, the policy appears to satisfy both the section 204(a) and the section 201(b) writing requirements.").

146. 17 U.S.C. § 204(a) (2000). *But see Foraste*, 290 F. Supp. 2d 234 (holding, in a dispute between a staff photographer and the university, that a copyright policy was not sufficiently specific to satisfy the writing requirement in § 204(a)).

147. Billy-Bob Teeth, Inc. v. Novelty, Inc., 329 F.3d 586 (7th Cir. 2003); Imperial Residential Design, Inc. v. Palms Dev. Group, Inc., 70 F.3d 96 (11th Cir. 1995); Eden Toys, Inc. v. Florelee Undergarments Co., 697 F.2d 27 (2d Cir. 1982).

148. 8 DONALD S. CHISUM, CHISUM ON PATENTS § 22.03[3] (2003).

149. Dreyfuss, *supra* note 126, notes that recognition of a copyright "shop right" for faculty works would not significantly threaten the interests that support faculty ownership. *Id.* at 638–39. A similar proposal has been made in the United Kingdom. "The ultimate goal would be the retention of a nonexclusive right to utilise

similar to the so-called government-purpose license that can be invoked to allow use for government purposes of copyrighted works developed under certain federal grants.[150]

IV. CONCLUSIONS

Timely access to research can be critical both to researchers and to professionals who can put the results into practice. Unfortunately, access is increasingly threatened by rising subscription costs, the proliferation of journals, and the resulting burdens on library budgets. Open-access journals offering content without charge represent a significant advance, but for the foreseeable future most important research is still likely to appear in more traditional publications. Electronic repositories holding research materials that are accessible for free to any interested reader are more promising, but their development is hindered by publishers with copyrights that they have wrested from authors. It is unrealistic to expect authors to solve the problem by bargaining harder with publishers over copyrights. The benefits of retaining copyright are too abstract to prompt individual authors to risk a good placement, and the bargaining leverage in any event is with the publishers. However, universities could claim what they probably already own by invoking their rights under the work-made-for-hire doctrine, and they could do it in a manner that poses no threat to the interests of their faculty. Armed with a right to authorize electronic access to the entire research output of their faculties, universities could facilitate the development of comprehensive open-access repositories, or at least extract significant concessions from publishers.

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the work for university purposes—including archiving on an institutional repository." *RoMEO Studies 1*, *supra* note 101, at 270.

150. *See, e.g.*, 45 C.F.R. § 74.36 (2005) ("The [Health and Human Services] awarding agency reserves a royalty-free, nonexclusive and irrevocable right to reproduce, publish, or otherwise use the work for Federal purposes, and to authorize others to do so.").