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3. Copyright

Small ironies abound at the intersection of copyright law and digital technology. Consider how the digital network that makes it all too easy for millions of people to illegally swap copyrighted music files is the same technology that is used by journal publishers to further exploit and enforce their ownership of the scholarly literature; it is the same technology that is used by researchers to distribute their work through open eprint archives with the permission of journals that otherwise hold and protect the copyright for this work; and it is the same technology that is used by the United States government to build PubMed, an open access index to the life sciences, which then serves as a pay-per-view marketing device for corporate journal publishers, increasing the value of their copyright over publicly financed research.¹ These public-private overlaps in technology, financing, and ownership in scholarly publishing raise new possibilities for the digital future of the journal literature. Or as the American Association for the Advancement of Science pointedly notes, given how the information age “challenges the traditional balance between public and private rights,” scientists would do well to seek publishing arrangements that “actively foster the public interest in promoting access to and broad use of scientific information” (Frankel 2002).

¹ With PubMed, Harold Varmus, as director of the National Institutes of Health, during the late 1990s, had originally proposed “a system that would make results from the world’s life sciences research community freely available on the Internet” (Varmus 1999). The corporate journal publishers balked at giving away their principal assets, portraying his suggestion as a government threat to free enterprise, that would lead to a reduction in journals.

The defining legal feature of this digital future is certainly the state of copyright law. In the United States, recent amendments and extensions of the Copyright Act have become a point of concern for a number of legal scholars who see in these changes a worrisome erosion of public rights. These scholars have taken to portraying the current state of copyright as “the enclosure of the intangible commons of the mind,” in James Boyle’s elegant analogy with the historic enclosure and loss of shared grazing lands or commons (2003, 37).

The changes to copyright law, which are taking place amid greater corporate media concentration worldwide, have tended to further delimit the public domain, reducing creative possibilities, and ultimately restricting freedom of speech, according to the legal shepherds of the commons, Boyle, Lessig, and Benkler.² These legal scholars have challenged the recent copyright extensions before the Supreme Court and are part of organizations that would reassert the rights of the public domain and provide alternative formulations of intellectual property rights.³ The very spirit of their position is captured well by Justice Brandeis, in a dissenting opinion he delivered in a 1918 Supreme Court Case involving the press: “The general rule of law is, that the noblest of human productions – knowledge, truths ascertained, conceptions, and ideas – become, after voluntary communication to others, free as the air to common use.”⁴

No one in this revolt against enclosing the commons of ideas is opposed to the basic principle of copyright, which would protect and balance the rights of author and public. The issue, rather, is whether current developments of this legal concept are paying sufficient regard to

² James Boyle: “The expansion of intellectual property rights has been remarkable—from business method patents, to the Digital Millennium Copyright Act, to trademark antidilution rulings, to the European Database Protection Directive. The old limits to intellectual property rights—the antierosion walls around the public domain—are also under attack” (2003, 38). On the creative loss, see Lawrence Lessig (2002), and on the threat to the freedom of speech, see Yochai Benkler (1999).

³ See the Creative Commons (<http://www.creativecommons.org>), Center for the Public Domain (<http://publicdomain.org>), and Public Knowledge (<http://www.publicknowledge.org>).

⁴ Cited by Benkler (1999, 354). *International News Serv. v. Associated Press*, 248 U.S. 215, 250 (1918) (Brandeis, J., dissenting).

those public interests which are central to the idea of copyright. For my part, this interest in balancing the interests of both author and public is what makes copyright a strong and natural ally of open access for research and scholarship. Given the rise of an open access alternative in scholarly publishing, I think that researchers and scholars who simply reach for a pen to thoughtlessly turn over the copyright for an article of theirs to a journal publisher (as I have done countless times), need to pause over what they are signing away. Authors now have a new range of options for protecting their rights, not just out of concern for public interests, but out of unmitigated self-interest and vanity, as well.

This tug between public and private interests in university research is not, of course, unique to this digital era. With the great increase in federal funding for research after the Second World War, for example, universities were soon being called to account for their tendency to “turn the results of publicly funded research over to some private corporation on an exclusive, monopoly basis,” as Horace Gray, at the University of Illinois, put it at that time, while suggesting that corporate patents on university research amounted “to public taxation for private privilege” (cited by McSherry 2001, 148). You find economist Richard R. Nelson arguing at the end of the 1950s, after the first great increase in federal funding of basic research, for the effectiveness of having knowledge “administered as a common pool, with free access to all who can use the knowledge” (1959, 306).

Somewhat earlier in a 1942 essay on science and democratic social structure, sociologist Robert Merton bravely pointed out how “‘communism,’ in the non-technical and extended sense of common ownership of goods,” was integral to the scientific ethos, along with universalism, disinterestedness, and organized skepticism (1968, 610). Merton was to later remind us that “only by publishing their work can scientists make their *contribution* (as the telling word has it)

and only when it thus becomes part of the public domain of science can they truly lay claim to it as theirs” (1979, 10, original emphasis).⁵ Publishing research in a print journal or book was, until not so very long ago, the only way to enter scholarship into the public domain. Today, a two-tiered “public domain of science” has emerged – the one fee-restricted and the other open access – with a very small minority of articles existing in both realms, thanks to authors posting their published work in eprint archives. This divide radically affects “the status of scientific knowledge as common property,” to use another of Merton’s expressions from this earlier period (1968, 611).

More recently, legal scholar Melville B. Nimmer has argued that this public interest should be allowed, in special circumstances, to over-ride copyright claims or should at least be used to restrict such claims to the immediate and actual economic damage done by this free flow of such information, in a similar vein to Benkler placing freedom of speech over and above copyright restrictions on the use of certain materials (Nimmer 1970; Benkler 1999).

In 1981, the U.S. Fifth Circuit Court ruled, in *Miller v. University Studios*, against the ability of anyone to copyright research results: “The valuable distinction in copyright law between fact and expression cannot be maintained if research is held to be copyrightable... [T]o hold that research is copyrightable is no more or not less than to hold that the facts discovered as a result of research are entitled to copyright protection” (McSherry 2001, 204).⁶ If not the research, in the sense of the facts discovered or truths uncovered, then only their exact expression is what academic journals copyright. But you can see that it is a delicate point, as the substance of the research article, at some level, is already ruled part of the public domain, and

⁵ Merton also held that “an idea is not really yours until you give it away” (cited by Mahoney 1973, 7).

⁶ The content of databases is another area, extremely relevant to the research enterprise, which the U.S. Courts have held is not covered by copyright unless the database meets the originality claim (*Feist v. Rural Telephone*, 499 U.S. 340, 1991).

not entitled to copyright protection. This is partly why copyright does not bear on charges of plagiarism, which is about using, without attribution, the facts and truths that someone has discovered (and cannot copyright), as well as the words sometimes. Plagiarism represents a cultural ethos of respect for how the use of other's work should be credited.⁷

These distinctions between knowledge and expression tend to raise complex epistemological issues. What is the nature of knowledge beyond its expression; can the same knowledge be expressed in distinctly different ways, in different languages, etc.? In the case of the current journal economy, however, it might well seem that copyright is about something other than protecting the author's right to benefit from this creative and intellectual act. Rather, copyright is being used to so raise the cost of entry to the world of these ideas, within what is otherwise thought of as the public realm of knowledge. Copyright in the print era served to considerably limit the portion of the world that could participate in the circulation of this knowledge, and those limits are about to be transferred, unchecked, to the digital era. Or at least that would have happened without challenge, it appears, if it were not for the open access alternative that is causing many to rethink what is in the best interests of the authors and the public, whose rights are also protected under copyright law.

To better understand the role that copyright plays in the journal publishing program of the major corporate journal publishers, I contacted five professors who had served as journal editors with the leading corporate journal publishers, Elsevier, Springer, Kluwer, and Wiley, before resigning their editorial posts with these corporations in order to work in the non-profit sector of

⁷ Publishers have found copyright a useful device on such occasions, especially when elements of the wording are the same. For example, such non-copyright tempests arise when a study fails to sufficiently credit an earlier work that may covers the same ground, use similar methods, or gathers similar, if not identical, results; see, for example, Richard Monastersky (2003). Martin Blume, Editor-in-Chief of American Physical Society reports using the concept of copyright violation to prod editors into publishing retractions for plagiarized work they have published (2003).

academic publishing. The choice of a senior or chief editor is critical to the reputation and authority of a journal, and thus to the value of the copyright which the journal holds over its contents. While my five ex-editors hardly represent an unbiased sample, they did provide considerable insight not only into the relationship between editor and publisher, but into how copyright is being used to distort the relationship between the author, editor, and publisher.

In describing why they took on this editorial role for the publishers, the editors spoke of *honor* – “it is hard to refuse a board position with a prestigious journal,” as one put it – and *ignorance*, as another credited the Association of Research Libraries for eventually educating him, long after he had taken on the editorial role, on the consequences of increasing corporate control of journal publishing. Editors also received perks from the publishers, although there was certainly no standard editor reward-package. One editor received no more than a free subscription to the journal, while at the other extreme, another editor spoke of receiving “a nontrivial amount of \$9,500” in 1991, which was, to his initial surprise, paid to him annually. In terms of editorial services, again it varied. Where one publisher provided proofreading services for the journal and offered to support copy-editing costs, the editor actually opted to do it himself, as he felt he had the scientific background to do a better job. Another publisher provided neither copy-editing nor proofreading. In one case, the publisher would, in one editor’s opinion, “typically introduce typos rather than remove them,” with the result that some authors insisted on submitting their copy camera-ready in LaTeX rather than risk having it typeset. Still, when it came to leaving these well-respected publishers to start an alternative journal in their field, one editor noted “the huge cost of breaking away.” The costs include rebuilding subscription lists and having the new journal earn its way back into the ISI Web of Science citation index.

The terms of the copyright held by the publisher are set out in a contract with the editor. These contracts make apparent how important it is for the publisher to secure copyright control over the journal and its contents. For example, in providing one editor with \$16,000 per year for office expenses – as any payment directly to the editor or the reviewers, the publisher explained to the editor, would taint the process – the publisher made it clear that this was “in consideration for” his services, as well as for the transfer of copyright for all materials in the journal. The transfer of copyright from author and editor to the publisher is not to be misconstrued, these contracts make it clear, as a gift or otherwise considered potentially non-binding or contestable. More than that, one publisher’s contract went as far as to transform the journal’s contents, and the editor’s efforts, into “work-made-for-hire” or as the publisher’s legal department worded the contract:

The Journal and all material contained therein and the work product of the Editor and the Editor’s staff produced hereunder shall constitute a “work-made-for-hire” under the U.S. Copyright Act and all rights comprised therein shall automatically, upon creation, vest in and thereafter be solely owned by the Publisher. To the extent, if any, that the Journal and/or any Contribution or other material contained therein do not qualify as a “work-made-for-hire” or copyright or other proprietary rights thereto might otherwise vest in the Editor, the Editor hereby grants, assigns and transfers all such rights exclusively and in perpetuity to the Publisher, in all languages and formats, in all media of expression now known or later developed, throughout the world.

Even apart from the “in perpetuity” phrase – which mistakenly suggests that copyright has no temporal limits and that the public has no eventual claim on this work – this “work-made-for-hire” clause is a particularly troubling turn of legalese overkill in the publisher’s staking their claim to the contents of the journal. The first thing this contract does is reverse, in a binding legal contract, what would otherwise seem to be the case, namely that the academic community hires the publishers to provide a service necessary for the circulation of knowledge. Instead, the editor, and by implication the author, are positioned as working for the publisher. That is, it misrepresents what is going on. The contract situates the publisher as an employer, having received work-made-for-hire by virtue of seeing the manuscript through to publication, and thus has the right to sell, or rather rent (as the publisher retains ownership) the work back to the researcher’s actual employer, through the serials budget of the university library.

Now, the very fact that a researcher, whether as author or editor, is able to enter into such a contract as a free agent speaks to the public trust invested in academic work – perhaps most notably celebrated with the concept *academic freedom* – but a public trust which the contract voids by positioning the author as working for the publisher. An organization’s employees are typically considered to be engaged in just such “work-for-hire” – think of Microsoft programmers – which covers “a work prepared by an employee within the scope of his or her employment,” in U.S. copyright law – academics have long been entrusted with the copyright for their research articles. This is known in copyright law as the “teacher’s exception” or “academic exception,” and it has withstood challenges in the courts in recent times.⁸ It recognizes that a scholar’s research is self-directed, owing more to free inquiry and the public good than to the

⁸ 17 U.S.C. Section 101. Also, see Frankel (2002, 14) on the “teacher exception” upheld most recently by *Hays v. Sony Corp. of America*, 847 F.2d 412 (7th Cir. 1988); *Dolmage v. Erskine* [2003] OJ No. 161 (Ontario Superior Court of Justice - Small Claims Court) for a recent Canadian ruling.; and more generally, McSherry (2001, 101-143). On a Freedom of Speech interpretation of university assertion of research copyright ownership as placing an undue chill on faculty freedom to explore, discuss, and share ideas, see Meyer (1998, 13-14).

direct financial well-being of the institution employing the researcher. On the other hand, universities do have a recognized claim on patents resulting from faculty work and on distance education course content (in which they invest substantial amounts developing).⁹

Although the courts have upheld the author's right to control their scholarship, in the name of academic freedom, researchers and scholars have remained rather indifferent to this right. Or rather, they are all too happy, as a rule, to turn that ownership over to publishers, "in all media of expression now known or later developed, throughout the world," as the publisher's contract quoted earlier put it. The use of new technologies is only adding to the significance of the ownership transfer, what with digital rights-management, content repurposing, pay-per-view transactions, and licensing agreements increasing the research literature's commercial value. Still, this copyright protection cannot be signed over to the publisher in perpetuity, as even the Copyright Term Extension Act of 1998 limits corporate owners in the United States to a 95-year-hold on copyrighted material before it is turned over to the public domain.¹⁰

While authors routinely transfer copyright ownership to journal publishers, whether corporate or non-profit, this is not the case, interestingly enough for books, judging by those sitting on my desk. The authors hold the copyright for some of the books sitting here, while the publishers hold it for others. It suggests that journal publishers do not need to hold the copyright of materials they publish, much as they might protest otherwise. The publisher only needs *first*

⁹ American universities were given the right to own patents resulting from federally sponsored research (as long as federal government access is not restricted) by the Bayh-Dole Act of 1980. Patents cover human creations that are novel, useful, and non-obvious, and rather than being limited to the expression of an idea (McSherry 2001, 170). In 2001, U.S. universities received \$857 million in royalties and filed for 9,454 U.S. patents (Blumenstyk 2003). This "second academic revolution," as it has been called, is about moving from the advancement of knowledge to its capitalization (Etkowitz, Webster, and Healy 1998).

¹⁰ When this copyright extension was unsuccessfully challenged recently in the Supreme Court in *Eldred v. Ashcroft*, an editorial in the *New York Times* bemoaned that the "public domain has been a grand experiment, one that should not be allowed to die. The ability to draw freely on the entire creative output of humanity is one of the reasons we live in a time of such fruitful creative ferment" (Coming of Copyright Perpetuity 2002).

publications rights from an author to protect the journal's position in the marketplace of ideas.¹¹

Copyright and publication right are not different terms for the same principle. The author's retention of copyright asserts an ownership that includes, in many jurisdictions if not yet the United States, a moral claim over the work (intended to protect its integrity as a work).

Copyright also asserts the scholar's continuing interests in furthering and protecting this public good.

Even when authors transfer copyright to the publishers, they have never been completely cut off from their own work. Think of the off-print of yesteryear which publishers sent to authors in neat bundles, and which authors, in turn, sent off with a warm note to colleagues, students, and family, or in response to a pre-printed postcard received from abroad. In this digital era, close to 90 percent of publishers "permit" authors to post their published work to open access eprint archives, as I noted earlier, creating an offprint for the entirety of the wired world (Gadd, Oppenheim, and Proberts 2003). Yet the publishers, which continue to insist on having the copyright for an author's article in hand, are using these new technologies to further restrict and monitor access in ways that can pose a challenge to the public visiting academic libraries, as I mentioned earlier and for visiting scholars as I will come to in a later chapter.

Still, a final contradiction in this transfer of ownership from author to publisher remains to be considered. This one makes it clear how copyright law, at least in spirit, stands as an ally of the open access journal and archive. The relevant clause in the U.S. Constitution grants Congress the power "to promote the Progress of Science and useful Arts, by securing for limited Times to Authors and Inventors the exclusive Right to their respective Writings and Discoveries."¹² This

¹¹ I owe this point to Henry Hardy's letter to the *Times Literary Supplement* (2002). With the open access e-journal, *First Monday*, for example, the author retains copyright, granting the journal a publication right or license which "allows *First Monday* to publish a manuscript in a given issue," as its Web site puts it.

¹² U.S. CONST. art. I, § 8, cl. 8.

exclusive right to their work is intended, of course, to enable authors and inventors to profit sufficiently from this work so that they have an incentive to continue this creative contribution to society. Yet copyright is also intended to protect the public's interest in having such work made freely available, as copyright is only secured "for limited Times."¹³

The key point here is the right of authors to *profit* from their work. Journal publishers have not made their editors or authors financial partners in this publishing economy (whereas the same publishers pay royalties to the authors of the publishers' books). Authors turn their work over to publishers in exchange for their review and publication of it. Though they may not have come to recognize it yet, those authors who choose to publish with subscription-fee journals – rather than journals that offer some degree of open access – and do so without also submitting the article to an open access eprint archive, may be working against their own best interests. I mean *best interests* in three senses: in a financial sense (given the particular academic incentive system in which they work), a professional sense (as they wish to contribute to a greater public good), and a vanity sense (in the search for recognition). These authors, in failing to take advantage of the two routes to open access, are not only reducing public access to knowledge, they are undermining the level of career-enhancing recognition which they might otherwise receive for their work. By failing to pursue the means to the widest possible circulation, they are not taking the speediest road to salary increases, promotions, merit bonuses, paid speaking engagements, consulting contracts, more lucrative job offers (with prospects of counter-offer retention packages from one's home institution).

There's no question that to appear consistently in the leading journals in one's field does one's career a world of good, whether they be open access or, far more likely, subscription-

¹³ The first United States copyright statute in 1790 limited copyright protection to a period of 14 years and it has been repeatedly extended, to the point where the average copyright is in effect for 95 years, a length of time which some argue only serves to diminish creative and inventive cultural possibilities (Lessig 2004).

based. But when it comes to adding up the number of times one is cited, at the end of the day, self-archiving one's work in a repository or choosing an open access journal may make a critical difference, or so the preliminary studies strongly suggest. In a comparison of open-access conference papers and their print equivalent, Steven Lawrence (2001) analyzed some 120,000 peer-reviewed papers in computer science (with a typical acceptance rate below 10 percent). He compared which articles are cited more often, on the basis of whether they were open access or not: "When considering articles within each year, and averaging across all years from 1990 to 2000, we find that online articles are cited 4.5 times more often than offline articles." Although computer scientists are as likely as other researchers to have access through their libraries to a wide range of print and electronic versions of commercially available research, the very ease of access and what he calls "improved visibility" would seem to work to the author's advantage.¹⁴

Even choosing to publish in a journal with what I am calling *delayed open access* can make a difference. *Teachers College Record*, a journal from Teachers College, Columbia University, has been publishing for more than a century, and it has now begun to experiment with delayed open access which it provides through its own Web site, while continuing to publish with Blackwell. While Blackwell handles its print and electronic subscription editions, the *Teacher's College Record* Web site provides open access to the journal's contents six months after its initial publication. Gary Natriello, executive editor of *TCR*, reports that in 2001 one popular article which they tracked was downloaded 100 times from Blackwell subscription service and then, after it was six months old and placed on the *TCR* open access Web site, it was

¹⁴ In support of this initial finding, Brody *et al.* (2004) found that with a large sample of pre-2001 physics articles, the ratio of citations for open access articles compared to those that are not is 2.5-5.8 to one. Stevan Harnad, in collaboration with others, is also analyzing the relationship between an article's "hits" online and citations using arXiv.org Eprint Service: "The correlations [between hits and citations] are quite big, and range from .3 to .6 or higher, and seem to vary somewhat with field and subfield" (2003d). Still, Kent Anderson, *et al.* (2001) found that with the journal *Pediatrics* in 1997-99, "an [open access] online article could expect 2.16-4.02 fewer citations in the literature than if it had been printed," although the faculty surveyed felt these open access publications counted as much as other publications for tenure.

downloaded 4,000 times. But that shouldn't be surprising, given that *TCR*'s free notification service for its open access site goes to 65,000 people. As for how often articles are being cited, *Teacher College Record*'s impact factor doubled between 1998 and 2002, according to the ISI Web of Science. Also speaking to the increased presence of the journal, Natriello reports that submissions to *Teachers College Record* have gone up, since launching the open access site, from 75 submissions a year in 1995 to 600 submissions, leading to a greater frequency of publication for the journal.¹⁵

These very preliminary indications – which include my earlier reference to the open access *Education Policy Analysis Archives* being visited 2,500 times a day and having over 50,000 hits on its best articles – point to how open access papers are cited and consulted more often than toll-access work. And to have one's work read and cited more often than before, or more often than a neighbor's non-open access papers, is certainly in the best interests of one's career and financial standing. Open access journals and eprint archives also hold the promise of increasing the exposure and circulation of knowledge. In this way, open access is consistent with the copyright principle of protecting the interests of the author, while honoring the rights of the public. Of course, were everyone to publish in open access journals or place their work in open access archives, any career and remunerative advantages would disappear. (Would that all of my arguments were defeated in this manner, that is, through their own persuasive force to move an entire global community to act in concert.)

If open access takes care of the author's interests, what, then, of the other party to copyright law? The public's interests are served by open access by how, for example, it aids and

¹⁵ *Teachers College Record* has increased its frequency in publication to monthly, from quarterly, and it has increased subscriptions costs accordingly, without hurting the number of libraries that subscribe to the print edition (around 1,500), while an additional 2,300 libraries receive the digital edition alone through bundling deals. On the other hand, personal subscriptions are down to 300 (personal communication, Gary J. Natriello, July 31, August 1, 2003).

abets free speech. This is in contrast to many uses of copyright law today, which undermine, legal scholar Yochai Benkler argues, freedom of speech in the United States (1999).¹⁶ While the Supreme Court has repeatedly upheld the principle that “the widest possible dissemination of information from diverse and antagonistic sources is essential to the welfare of the public,” as Justice Black put it in a 1945 decision, this diversity is being curtailed by corporate concentration in media ownership, or in Benkler’s words, “A world dominated by Disney, News Corp., and Time Warner appears to be the expected and rational response to excessive enclosure of the public domain” (377, 359).¹⁷

The danger is not simply with an economy that favors corporate concentration – in academic publishing no less than with other media – it is in how this concentration reduces the opportunities (and increases the costs) of initiating new alternative sources of information. In the name of preserving freedom of speech, Benkler proposes that we restore an information commons that supports more open communication: “To secure this freedom, however, we must build a core common infrastructure that will allow commercial and noncommercial, professional and amateur, commodified and noncommodified, mainstream and fringe to interact in an environment that allows all to flourish and is biased in favor of none” (2001, 3).¹⁸ Benkler’s vision of an information commons is not all that removed from the “core common infrastructure” that underwrites open access eprint archives and journals, with their shared indexing systems and

¹⁶ While appeals to freedom of speech have traditionally been used as a check on government powers, Benkler points out, the issue is now one of economic powers so dominating the media that “information flow... will tend to prevent effective political challenge to the prevailing order,” as these powers control “the resources necessary to effective communication” (1999, 380-381).

¹⁷ Some years later, the American courts took a similar stand, by striking down the Communications Decency Act of 1996 by taking a First Amendment stand on the Web’s “vast democratic flora... [where] any person with a phone line can become a town crier” (Romano 2002).

¹⁸ Benkler proposes both a publicly financed fiber network, drawing on the model of the National Highway Act, and a National Software Foundation devoted to open source software. Network and software are critical to supporting freedom of information and speech in this digital age. The development of open systems is being supported by the National Libraries, National Science Foundation, Association of Research Libraries, Mellon Foundation, Free Software Foundation and others.

open source code, although its contribution to this larger commons is focused on one type of epistemological contribution. That is to say, public access to research provides its own support for freedom of speech. It not only enables greater participation in scholarly communication, it facilitates the informed deliberation on which democracies depend (which I treat in more detail in a later chapter).

A related legal issue for open access is Freedom of Information. In the United States, the Freedom of Information Act (FOIA) currently applies to “government agencies” alone, and does not include universities, even though researchers accept public money, through federally awarded grants and salaries, in the case of public institutions. Given the government’s multi-billion dollar research budget, it might be argued that the fruits of this public investment should be available, not necessarily for free, but on a reasonable cost-recovery basis. This freedom of information approach to research has found a new champion in Minnesota Representative Martin Sabo, who introduced a *Public Access to Science Act* (PASA) before the United States Congress. The Act would place federally financed research in the public domain, as is done with work prepared by government employees (Trosow 2003). “It defies logic” Sabo is quoted as saying, “to collectively pay for our medical research only to privatize its profitability and availability” (Wayt 2003).¹⁹ This Act would not prevent journals that publish such research from charging subscription fees, but it would ensure that the work could be placed in open access eprint archives, even after it has been published. This would mean, in the case of the life sciences, for example, that this research could be readily accessed through the federal government’s open

¹⁹ One premise of the Public Access to Science Act (PASA) is that “the Internet makes it possible for this information to be promptly available not only to every scientist and physician who could use it to further the public good, but to every person with access to the Internet at home, in school, or in a library” (Weitzman 2003). Some years before, the American Academy of Arts and Sciences proposed that authors retain the copyright for federally funded research: “Federal agencies that fund research should recommend (or even require) as a condition of funding that the copyrights of articles or other works describing research that has been supported by those agencies remain with the author” (Bachrach et al.1998).

access index, PubMed, which is currently divided in its coverage and linking between open access and pay-per-view articles, although the research behind both sources may well have been funded by taxpayers.

The introduction of an open-access alternative to subscription-based journals has created a dichotomy between the interests of authors and publishers. The principal interests of researchers is to ensure that their work is reproduced and cited as often as possible for as wide a readership as possible, and that it is properly credited when reproduced or cited. The economic interests of faculty are not, for example, hurt by the distribution of free copies of their published work, as are publishers. Just the opposite. Studies of “what authors want” within the academic community speak of authors’ over-riding interest in finding the widest possible audience through the journals they publish in, while also keeping an eye on their prestige and inclusion in the major indexes, which are also related to the size of readership (Swan and Brown 1999).

In a further survey conducted just a few years later, Alma P. Swan and Sheridan N. Brown were able to poll a sample comparing authors who had published in open access journals and those who had not (2004). What they found was that those who had gone open access overwhelmingly expressed “a belief in the principle of free access to research information,” while also thinking open access journals offered a higher readership and a greater number of citations; on the other hand those who did not publish in open access journals felt that they offered reduced readerships and citation.²⁰ The goals for both sets of authors are the same. And the distribution of open access journals is currently such that in a given field, the principal journals in a given field may not offer an open access option, outside of self-archiving.

²⁰ A counterpoint comes from Robert P. Parks, who contends that “although authors desire greater readership, that is not the major goal and in fact may be counter productive because more readers demand more time from authors to explain their writing” (Parks 2001). This was certainly the case with Isaac Newton, as I discuss in the final chapter.

From their side of the coin, publishers have a stake in restricting access to scholarship, all the more so with pay-per-view providing much greater financial control of journal contents than print permitted. When there was but one economic model for publishing research in a form that could be sent far and wide, there was little argument against readers and libraries bearing the publishing costs of delivering to them a print edition of the journal. Nor was there any reason, in the era of print, for researchers to be concerned about turning over the ownership of their work to the publishers. Yet over the last couple of decades, the journal economy has reached certain limits as a vehicle for the dissemination of research, even as the world of scholarly activity has continued to expand on a global scale. The corporate publishers have chosen to concentrate their efforts (and profits) on the high-end market of well-endowed research libraries that have no choice but to continue to subscribe to the journals which the publishers hold and continue to acquire. The resulting economic model does not maintain a balance of rights and interests between author and public, which lies at the heart of copyright law. It has given rise to its own antithesis, in the form of open access – whether one thinks of eprint archives, delayed or dual-mode open access, or author free forms of open access – which falls well within the spirit of copyright law.