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Open Access Consensus

It is the way of the world that during the final decades of the twentieth century, when the US Department of Defense directed its Advanced Research Projects Agency (ARPA) to design a fail-safe telecommunications network that would survive a nuclear holocaust, it came up with a system that through various twists and turns ended up providing nearly two-thirds of the earth's inhabitants with the means to share and “like” photos, birthday greetings, and smiley emojis. That system also opened the world to a new era of scholarly communication. In the 1970s, during ARPA Network's (ARPANET) earliest days, researchers found it useful for sending files and data to colleagues at other institutions. From there and through no end of experiments and pilots, the World Wide Web became the principal medium for the global circulation of research. At this point, roughly five decades into this networked world, those who are most closely involved in scholarly publishing—be they researchers, librarians, funders, academic institutions generally, or large corporate publishers and small scholarly societies—have reached a rare point of agreement on the internet's significant contribution to the circulation of research. They concur that *open access* to research promotes the progress of science.

This will strike some as too obvious, while others are quick to doubt such a consensus exists, especially when it comes to the large corporate publishers of scholarly journals and books. I, on the other hand, think we can and should take Kumsal Bayazit, CEO of the publishing giant Elsevier, at her word when she declared, shortly after assuming the leadership of the company in 2019, “I want to be very clear: Elsevier fully supports open access.”¹ Yet the widespread embrace of open access among

1. Kumsal Bayazit, “Kumsal Bayazit, Elsevier CEO, Shares Her Vision for Building a Better Future in Research” (Charleston Conference, November 7, 2019), OA. See Judy Verses, executive vice president, Wiley Research, John Wiley & Sons (second only to Elsevier in size as a scholarly publisher): “Our mission is

scholarly publishing's stakeholders has been anything but obvious. This chapter also makes clear how much change is reflected in Bayazit's claim, made during that same speech, that "no one can dispute the beauty of the vision of freely-accessible, immediately-available research content, whether peer-reviewed published articles or other scholarly work."

The origins of open access can be said to begin with six "global village pioneers," to use a term that one of these pioneers, Paul Ginsparg, coined with a nod to Marshall McLuhan's prescient concept from the 1960s.² Each of the six gave a particular shape to early forms of open access. The first pioneer on my list is the Université du Québec à Montréal psychologist Stevan Harnad, who in the early internet days of the late 1980s, while still a graduate student at Yale, launched the online journal *Psychology*. It was free, at least to those able to log in at that point, but then commercial transactions were not yet a thing on the internet. Although the journal ceased publishing in 2002, Harnad continues to be a tireless and forceful—if often frustrated—advocate of open access. Open access could be achieved, he argued, by authors simply depositing copies of their articles in an open database. In a 2001 piece in *Nature*, Harnad explained how, with a few keystrokes, authors could self-archive their final drafts before publication and avoided the "copyright restrictions" that otherwise might be an "obstacle" to sharing their work in ways that were good for research.³

The concept of self-archiving had been successfully introduced in 1991 by my second pioneer, the physicist Paul Ginsparg, now at Cornell. Ginsparg adeptly built on the cultural tradition in particle physics of sharing photocopies of research papers through the mail as early as possible, which meant prior to publication. While working at Los Alamos National Laboratory, Ginsparg built an online platform for circulating digital copies of papers in their early stages before they were published.

to advance open research principles"; Ann Michael, "Wiley Acquires Hindawi: An Interview with Judy Verses and Liz Ferguson," *Scholarly Kitchen* (blog), January 11, 2021, OA. See also Frank Vrancken Peeters, Springer Nature chief commercial officer: "Springer Nature is committed to speeding up the transition to Open Access as having early and rapid access to research findings is fundamental to the advancement of science and discovery"; Susie Winter, "Springer Nature Accelerates Its Transformative Journey with the Signing of Landmark Pure OA Deal," Springer Nature, London, June 27, 2019, OA.

2. Paul Ginsparg, "The Global Village Pioneers," *Learned Publishing* 22, no. 2 (2009): 95–100, OA.

3. Stevan Harnad, "The Self-Archiving Initiative: Freeing the Refereed Research Literature Online," *Nature* 410, no. 6832 (2001): 1024–1025, OA.

With Ginsparg's system, physicists could submit their research papers as electronic files as well as freely retrieve those of others. He saw it as a means to "democratize the exchange of information, levelling the . . . research playing field, both internally within institutions and globally for all with network access."⁴ Within a few years, some 20,000 physicists were sharing their work on what he ended up calling arXiv.org, vastly expanding the mail-to-colleagues tradition, while today it hosts 1.6 million "e-prints" in physics, mathematics, and computer science, including both preprints and published versions.⁵ A consortium of more than two hundred libraries and other institutions currently support arXiv.org at Cornell University, having recognized how this rapid, unimpeded access to research benefits science.

My third pioneer is the publisher Vitek Tracz, who in 1999 launched BioMed Central in London, the first large-scale commercial open access publishing venture. To finance BioMed Central's journals, Tracz turned to the common practice of asking authors of research papers to pay "page charges" to keep journal subscription prices down. To have a peer-reviewed study published in a BioMed Central journal, authors paid article processing charges (APCs), as they became known, resulting in an open access journal. The authors of biomedical studies, at least in the Global North, typically had research grants that could cover APCs, much as they did page charges. In 2008, Tracz sold BioMed Central—which was by then publishing more than 180 open access journals with close to \$17 million in revenue—to Springer.⁶ It was the first academic publishing giant to move into open access on such a scale, even as it added to the media concentration then taking hold within scholarly publishing.

The turning of a century being no small thing, two more of my pioneers took significant steps in 1999. It was the year that microbiologist and Nobel laureate Harold E. Varmus, then the director of the National Institutes of Health (NIH), took hold of "the democratizing force" of the web, as he put it, by recommending that the NIH create an "E-biomed,"

4. Paul Ginsparg, "It Was Twenty Years Ago Today . . .," Internet Archive, September 13, 2011, OA.

5. Paul Ginsparg, email, June 27, 1994, quoted in James J. O'Donnell and Ann Okerson, eds., *Scholarly Journals at the Crossroads: A Subversive Proposal for Electronic Publishing* (Washington, DC: Office of Scientific & Academic Publishing, Association of Research Libraries, 1995), 14, OA.

6. Eric Merkel-Sobotta, "Springer to Acquire BioMed Central Group," Springer, New York, October 7, 2008.

which would offer nothing less than “free, fast, and full access to the entire biomedical research literature.”⁷ Following the predictable push-back from both academic publishers and learned societies, Varmus regrouped and announced that the NIH would pursue a far more modest open access plan involving a voluntary open access repository to be known as PubMed Central. Researchers and publishers were invited to submit a copy of their publications for online public access and preservation. After getting off to a slow start, PubMed Central has grown into a significant site of biomedical research, offering open access to well over five million articles today.

As well in 1999, Eric Eldred and others involved in publishing online editions of public domain literary works filed a complaint against the Sonny Bono Copyright Term Extension Act of 1998 in the US District Court for the District of Columbia. They were represented in court by my fifth pioneer, Lawrence Lessig, then at Stanford University, who charged in the complaint that the act violated the Constitution’s intellectual property clause by retroactively applying a twenty-year extension to copyright. This overreach, Lessig argued, could hardly be said to be “securing for *limited Times* to Authors and Inventors the exclusive Right to their respective Writings.”⁸ This clear disregard of the prescribed “limited Times” was said to hamper First Amendment rights and limited the intended public benefits of copyright.⁹ Judge June Green, however, ruled against Eldred. When the case was heard in the US Court of Appeals for

7. Robert Pear, “N.I.H. Plan for Journal on the Web Draws Fire,” *New York Times*, June 8, 1999, OA; Harold Varmus, *E-BIOMED: A Proposal for Electronic Publications in the Biomedical Sciences* (Bethesda, MD: National Institutes of Health, 1999), OA.

8. U.S. Const. art. I, § 8, cl. 8 (emphasis added).

9. Others sounding the alarm over curtailed public benefits include Samuelson, “Copyright Grab” (on threats to “traditional user rights to browse, share, or make private noncommercial copies of copyrighted works”); Yochai Benkler, “Free as the Air to Common Use: First Amendment Constraints on Enclosure of the Public Domain,” *New York University Law Review* 74, no. 2 (1999): 356, OA (on threats that follow from “expecting information to be owned, and to be controlled by its owner”); Jessica Litman, “The Public Domain,” *Emory Law Journal* 39, no. 4 (1990): 967, OA (on threats in “failing to appreciate that the public domain is the law’s primary safeguard of the raw material that makes authorship possible”); and James Boyle, “Cruel, Mean, or Lavish—Economic Analysis, Price Discrimination and Digital Intellectual Property,” *Vanderbilt Law Review* 53, no. 6 (2000): 2010, OA (on threats of “a far-ranging enclosure movement over the public domain, paralleling the eighteenth century’s enclosure of common lands”).

the District of Columbia, Lessig bolstered his charge against the government by noting that the retroactive extension did nothing “to promote the Progress of Science and useful Arts” (bringing it that much closer to my concerns).

In 2001, just prior to losing the appeal (after which the case was heard by the Supreme Court in 2003, where it lost in a 7–2 decision), Lessig, along with computer scientist Hal Abelson and legal scholar James Boyle, decided on another course of legal action by forming an organization they entitled Creative Commons. It fashioned legal licenses that copyright holders could apply to their work, making clear their intent to share the work while retaining limited rights such as authorship attribution. The application of a Creative Commons license to a work extended, as Lessig explains, “the ability of people to build on the past without apology.”¹⁰ It is an effective legal work-around of copyright law’s increasingly restrictive measures during the digital era, resulting from the intellectual property industries successfully lobbying Congress to address the dangers posed by new technologies.

Yet Creative Commons licenses also shine a light on Lessig’s original questioning of the law’s continuing ability to serve its constitutional intent. What has developed within scholarly publishing over the last decade is a change in copyright practices among publishers, including the leading commercial enterprises. With open access publications, publishers do not generally require authors to transfer their naturally held copyright to the publisher as a necessary step of the transaction with subscription journals. Rather, they allow authors to retain their copyright while placing the work under a Creative Commons license.¹¹ This change in ownership points to how copyright, although still key to subscription economics, is not nearly as relevant to open access publishing in promoting scientific progress. Creative Commons licenses, in effect, fill in for copyright’s digital-era shortcomings by facilitating redistribution, data mining, and other open access uses while protecting an author’s right to

10. Lawrence Lessig, “The Creative Commons,” *Florida Law Review* 55, no. 3 (2003): 777, OA.

11. The publisher Elsevier demonstrates the complexity of licensing around open access publications by offering authors a choice in some cases between using a basic Creative Commons attribution license (CC BY), in which they retain copyright, and a more restrictive Creative Commons license (CC BY-NC-ND), involving no commercial use and no derivatives, in which copyright is transferred to Elsevier; “User Licenses Offered by Elsevier,” Elsevier, September 25, 2021, OA.

attribution. What such licensing does not do is encourage fair market pricing for open access research publications (see chapter 4), which I attempt to address through copyright reform (see chapter 6).

My sixth and final global village pioneer is Melissa Hagemann, program manager with the Open Society Foundations, a visionary among foundation officers. In December 2001, Hagemann convened a gathering of sixteen researchers, funders, and publishers interested in open access. This Budapest meeting aired the “impassioned (and often divergent) analyses and critiques of various dysfunctional aspects of scientific communication,” according to participant and historian of science Jean-Claude Guédon, including “the slowness of the editorial process, the high price of journals, and the failure to take advantage of the internet.”¹² Despite the divergence, a jointly crafted statement announcing the Budapest Open Access Initiative was released on February 14, 2002. The declaration gave “open access” its name and offered a statement on its historical place, as it began, “An old tradition and a new technology have converged to make possible an unprecedented public good. . . . The public good they make possible is the world-wide electronic distribution of the peer-reviewed journal literature and completely free and unrestricted access to it by all scientists, scholars, teachers, students, and other curious minds.”¹³

These six pioneers were early open access activists and advocates. They launched journals, set up archives, opened publishing houses, and made declarations. What followed in the twenty-first century, at least in the Global North, was a wide variety of efforts to support and resist this upending of scholarly publishing for gains in promoting the progress of science, marked by legislative initiatives, policy initiatives, and

12. Jean-Claude Guédon, “Open Access: Toward the Internet of the Mind,” Budapest Open Access Initiative, 2017, OA.

13. See the Budapest Open Access Initiative, February 14, 2002, OA, for the full statement and the distinguished set of signatories. On copyright, the statement holds, “The only constraint on reproduction and distribution, and the only role for copyright in this domain, should be to give authors control over the integrity of their work and the right to be properly acknowledged and cited”; “Read the Budapest Open Access Initiative,” Budapest Open Access Initiative, Budapest, February 14, 2002. As Samuel E. Troschow points out, the moral rights of proper attribution are not part of US copyright law; Samuel E. Troschow, “Copyright Protection for Federally Funded Research: Necessary Incentive or Double Subsidy?,” *Cardozo Arts & Entertainment Law Journal* 22, no. 2 (2004): 674, OA.

new publishing ventures.¹⁴ Over the remainder of the chapter, I review the twisted path to this current consensus, organized by the actions and concerns of researchers, federal agencies and related initiatives, university libraries, scholarly publishers, and learned societies.

Researcher Responses

Faculty members' support for open access has long tended to be stronger in principle and stymied in practice. For example, faculty members in over eight hundred academic institutions around the world have endorsed various open access policies that call for the depositing of what is typically the final draft of their papers accepted for publication in publicly available repositories.¹⁵ That's the principle. In practice, roughly 25 percent of the physics literature is available in this way, thanks in good part to Paul Ginsparg's pioneering efforts, compared to only 10 percent for all the disciplines taken together.¹⁶ What can be off-putting for faculty is not only the extra effort of filing the final draft of an accepted paper in the repository—which has still to be copyedited and thus is not quotable—but also how the publishers have extended the embargo periods (up to thirty-six months) before the paper can be shared following publication.¹⁷

14. It is worth noting that in Latin America, the transition was from print to open access online publishing from the outset. With print, the universities had mailed out locally developed journals in Spanish, Portuguese, and English in an exchange system that involved few subscriptions or commercial publishers, and the natural transition to open access was accompanied by the emergence of two strong online journal platforms, SciELO and Radylc, and a continental research index Latindex; Juan Pablo Alperin, Gustavo Fischman, and John Willinsky, "Acesso livre e publicação acadêmica na América Latina: dez sabores e algumas reflexões" [Open access and scholarly publishing in Latin America: Ten flavors and a few reflections], *Liinc em Revista* 4, no. 2 (2008), OA.

15. The Registry of Open Access Repository Mandates and Policies, University of Southampton, OA.

16. Piwowar et al., "State of OA," e4375.

17. For publisher policies, see SHERPA/RoMEO, Jisc, OA; for institutional policies, see ROARMAP, University of Southampton, OA. On increased restrictions, see Elizabeth Gadd and Denise Troll Covey, "What Does 'Green' Open Access Mean? Tracking Twelve Years of Changes to Journal Publisher Self-Archiving Policies," *Journal of Librarianship and Information Science* 51, no. 1 (2019): 106–122.

Still, faculty in some fields beyond physics are increasingly making their work open prior to acceptance for publication. Biomedical researchers, spurred on by the urgency of the pandemic, have been actively posting to the open access preprint servers bioRxiv.org and medRxiv.org, which have together attracted well over 150,000 papers at this point. Social scientists and legal scholars have been drawn to making their early drafts and preprints openly available through the Social Sciences Research Network (SSRN), which dates back to 1994 and now holds over 50,000 papers. Elsevier was drawn into the preprint business when it acquired SSRN in 2016. But then faculty have also turned to more controversial open access instances with Academia.edu and ResearchGate, to which millions of scholars worldwide have posted drafts and published papers in an effort to share their work more widely.¹⁸ These two companies have managed to attract equity capital as well as publisher lawsuits, with the most recent round of orders from Elsevier and American Chemical Society resulting in takedown notices affecting two hundred thousand papers.¹⁹

If those are rough and ready indicators of researcher interest in open access, more measured assessments have been offered by the National Academies in the United States, to which the leading scholars in their fields are admitted. In 2013, academicians endorsed “open access” as having “the potential to expand the dissemination and impact of the scientific literature, benefiting scientists and society.”²⁰ They also note that “early studies of this question [of open access] showed large positive benefits” while diligently calling for further studies. A number of surveys reflect faculty and researcher support for open access: a 2015 study found that 72 percent of 822 North American faculty and graduate students are “pro-open access”; a 2019 study by the publisher Taylor & Francis had 88 percent of 2,611 researchers agreeing on the “value in anyone being able to access [their] research”; and another 2019 study noted that 3,112 participants from twenty countries ranked open access as the most important thing that

18. According to their respective websites, as of October 26, 2019, SSRN has 890,000 papers from 400,000 researchers; Academia claims 102+ million research “members”; ResearchGate has 130+ million “publications” and 20+ million researchers.

19. See Diana Kwon, “Major Publishers File Second Lawsuit against ResearchGate,” *Scientist*, October 9, 2018, OA; “A Note on Recent Content Takedowns,” ResearchGate, September 23, 2021, OA.

20. National Research Council, *Copyright in the Digital Era: Building Evidence for Policy* (Washington, DC: National Academies Press, 2013), 28.

a scholarly society can do at this point (having ranked it sixth the year before).²¹ The support for open access is beginning to impact university operations. In 2021, senior administrators at the University of Utrecht announced that contributions to “open science,” including through open access, would count in hiring and promotion decisions, while journal “impact factors,” a measure largely associated with subscription journals, would no longer be taken into consideration.²² Researcher support for open access appears to be increasing, if unsystematically and inconsistently by discipline, with remaining pockets of indifference and distrust toward change.

The Federal Agencies and Related Initiatives

The first open access legislative initiative in the United States came in 2003 with the Public Access to Science Act sponsored by Representative Martin Olav Sabo, a Democrat from Minnesota. The Public Access to Science Act was the first of a number of bills that sought to either increase or decrease access to NIH and other federally funded research.²³ Although it failed to win congressional support, the Sabo bill offers a few lessons on how the eventual consensus on open access was to take shape. The act had strong support from the new open access publisher Public Library of Science (PLOS), founded by Harold E. Varmus, along with his colleagues, Michael B. Eisen and Patrick O. Brown, in 2000, following his fight for open access at the NIH and not without further controversy

21. Elizabeth D. Dalton, Carol Tenopir, and Bo-Christer Björk, “Attitudes of North American Academics toward Open Access Scholarly Journals,” *portal: Libraries and the Academy* 20, no. 1 (2020): 73–100. Taylor & Francis Group, *Taylor & Francis Researcher Survey* (London: Taylor & Francis, 2019), OA. The support for sharing doesn’t mean that respondents favor “open access” journals (62 percent consider it very important and important) over a journal’s “good reputation” (91 percent very important/important), but then they also favored publishing where there is no charge (74 percent very important/important), but then I am not suggesting that open access is the only thing that matters for researchers; Jonathan Roscoe, “Building New Societies: Insights and Predictions from the 5th Wiley Society Member Survey,” *Learned Publishing* 33, no. 1 (2020): 29–36.

22. Chris Woolston, “Impact Factor Abandoned by Dutch University in Hiring and Promotion Decisions,” *Nature*, June 25, 2021, OA.

23. For further examples, see Jessica Meindersma, “Public Access Policies (Part 1): FASTR, PAPS, and the OSTP Directive,” University Libraries, Ohio State University, October 25, 2013, OA.

among publishers.²⁴ The Public Access to Science Act sought to make research sponsored by the federal government exempt from copyright. The act represented an extension of an existing law dating back to the Printing Act of 1895, which ensured that “copyright protection is not available for any work of the United States Government” (Copyright Act § 105).²⁵ That is, insofar as taxpayers underwrite a substantial portion of research costs through their government’s research agencies, the reasoning went, taxpayers deserve free and immediate rights to this work. While the 1894 act only applied to publications by government employees, the Sabo bill would extend that rule to “any work produced pursuant to scientific research substantially funded by the Federal Government.”²⁶ It would have made tens of thousands of life science articles freely available annually from research that was sponsored by the National Institutes of Health.

Here was an example of an effort to update the Copyright Act’s treatment of “scientific research” (also referred to in the Public Access to Science Act as “basic research” and “medical research”), recognizing it as a distinct category of works that were federally sponsored.²⁷ There is an admirable simplicity, in a legal and administrative sense, to extending the scope of a long-standing copyright exemption for government employees to those who receive federal research grants. The government, after all, can be said to indirectly subsidize the employment of researchers at public and private universities and institutes through transfer payments, tax concessions, and research grants. The research covered would be largely biomedical and to a lesser degree would cover the sciences and social sciences, with a very small proportion dedicated to the humanities.

24. Michael J. Held, editor at Rockefeller University Press, writes, “It appears to me that this is a thinly veiled attempt by Harold Varmus and the other founders of the Public Library of Science (PLoS) to eventually force all publishers into their open access publishing model [utilizing article processing charges]. As this publishing model is unproven and may well be unsustainable, this is an irresponsible act”; Michael J. Held, “Proposed Legislation Supports an Untested Publishing Model,” *Journal of Cell Biology* 162, no. 2 (2003): 171, OA.

25. See Troscow, “Copyright Protection,” 616.

26. Public Access to Science Act, H.R. 2613, 108th Cong. (2003), OA. Samuel E. Troscow argues on behalf of the bill that “to provide [federally funded research] the same copyright protections that apply to works made without this grant constitutes a double subsidy,” while “the limitations on open public access that result from copyrights being held by private publishers are an unreasonable loss to expect the public to continue to bear”; Troscow, “Copyright Protection,” 680.

27. Public Access to Science Act, H.R. 2613, 108th Cong. (2003).

But in those “early” days for open access, the aim of advocates was to make just this sort of inroad so that this form of publication could begin to demonstrate its scientific value.

While the Sabo bill’s incremental approach to extending a copyright exemption has a certain attractiveness to it, taxpayer support for research sells the Constitution short.²⁸ The Constitution’s intellectual property clause is not about realizing or promoting the value of taxpayer investment in research.²⁹ It is about promoting the progress of science as a source of human benefit writ large. The Sabo bill would not, for example, cover “review articles,” which go largely unfunded by government agencies, even though their critical evaluation and synthesis of the relevant literature can be invaluable in determining what is known and not known in a given field. But beyond the limits in the application of open access, it would surely be an odd constitutional twist to promote the progress of science by removing it from copyright. But admittedly that has already happened for the more than one thousand researchers employed by the NIH who have published work without copyright protection for more than a century.

Although the Sabo bill failed to win support in Congress, this approach of exempting research from copyright is worth pausing over. The copyright license I develop here both parallels and stands in direct contrast to this exemption. Some years before the Sabo bill, in 1997,

28. While the American Association of Universities was troubled by how removing copyright from research would affect integrity and quality, Troschow points out that copyright provides no guarantees in that regard; Troschow, “Copyright Protection,” 657–665. What copyright does do is provide a means for publishers to gain a return on their investment in integrity and quality, as this can drive up demand from libraries.

29. Margaret Reich, director of publications for the American Physiological Society, asked, “Why should any of us, scientist and patient alike, have to pay again to read the results of that research?” before quipping, “That sounds good, but some of my tax dollars also go to wheat and other farm subsidies, and I don’t see anyone handing me free loaves of Wonder Bread”; Margaret Reich, “Peace, Love and PLoS,” *Psychologist* 46, no. 4 (2003): 139–141, quoted in Troschow, “Copyright Protection,” 647–648. In his defense of the act, PLOS cofounder Michael B. Eisen mixed both taxpayer rights to NIH research and the value of a broader access to science: “It’s a scandal that anyone is denied free access to the results of research paid for by their tax dollars [and that] the scientific community is denied the free and unfettered sharing of research discoveries upon which scientific and medical progress is built”; PLOS, “Public Library of Science Acts to Increase Public Access to Scientific Research,” press release, June 26, 2003, quoted in Troschow, “Copyright Protection,” 647.

Bert R. Boyce, then dean of Louisiana State University's library school, published "Does Faculty Assignment of Copyright Violate the Constitutional Mandate?"³⁰ Boyce responded yes to the question. The faculty's ready transfer of their copyright to a new generation of commercial journal publishers was contributing to monopoly pricing practices that forced libraries to cancel journals (not exactly promoting scientific progress). The results of this faculty practice were running directly counter, Boyce noted, to Justice Sandra Day O'Connor's point, in *Feist Publications, Inc. v. Rural Telephone Service Co.* (1991), that "the primary objective of copyright is not to reward the labor of authors [or publishers] but to promote the Progress of Science and useful Arts."³¹ Boyce concluded that copyright does "absolutely nothing" for research, so research should be copyright exempt.³²

A decade later, Harvard legal scholar Steven Shavell similarly proposed exempting scholarly work from copyright.³³ This exemption would, Shavell believed, "augment incentives to publish articles" so that "readership of articles would grow . . . and thus the esteem that authors would derive from publication would tend to increase."³⁴ As well, in a copyright-free academic world, "universities and grantors would have a motive to subsidize publication . . . to prevent a dilution in the incentives of faculty members and of grantees to write and publish works" while being further inspired by the end of a copyright-enabled monopoly pricing of this work.³⁵ Shavell's reliance on the invisible hand of the market working its magic over time may seem to place scholarly publishing unduly at risk, given the market's troubled record with open access to date (see chapter 4). This is in contrast to a tightly structured statutory

30. Bert R. Boyce, "Does Faculty Assignment of Copyright Violate the Constitutional Mandate?," in *Growing Pains: Adapting Copyright for Libraries, Education, and Society*, ed. Laura N. Gasaway (Littleton, CO: F. B. Rothman, 1997), 441–455.

31. Boyce, "Does Faculty Assignment?," 450.

32. Boyce, "Does Faculty Assignment?," 445, 450. Boyce also supports academics doing their "own publishing," which is what I and colleagues have been doing since 1998 through the Public Knowledge Project by developing the open-source (free) journal publishing platform Open Journal Systems; Public Knowledge Project, Vancouver, December 13, 2019, OA.

33. Steven Shavell, "Should Copyright of Academic Works Be Abolished?," *Journal of Legal Analysis* 2, no. 1 (2010), OA.

34. Shavell, "Should Copyright?," 303, 340.

35. Shavell, "Should Copyright?," 303, 323.

licensing model for delivering open access in a timely and orderly way.³⁶ And while copyright exemption offers simplicity and reduced transaction costs (certainly compared to statutory licensing), removing science from copyright also poses a constitutional challenge, as noted above.³⁷

Now, the absence of copyright works just fine with government scientists' research, and it is worth recalling that the original Copyright Act of 1790 did not cover periodicals or newspapers (which were not introduced into the act until 1909). This did not deter the nineteenth-century publication of medical journals in New York, Baltimore, and Philadelphia. In 1812, the *New England Journal of Medicine and Surgery and the Collateral Branches of Science* was launched, growing, with its title somewhat abbreviated, into one of today's most highly respected journals.³⁸ So it is not that copyright is necessary to science, much as such "useful arts" as cooking, sports, comedy, and fashion, as well as basic databases, generally thrive without the application of copyright.³⁹ Yet the role that I see copyright playing in research is closer to that of regulating a public utility rather than dressing up a fashion runway.⁴⁰ As well, the way in which the copyright-free economy of

36. My proposal overlaps with Shavell's on the need to institute "an expert extra-judicial body" with "a right of appeal to the courts" in deciding which research publications qualify for—in his case, academic copyright freedom, and in mine, open access statutory licensing (Shavell, "Should Copyright?," 337n80). See chapter 6 for the details of my plan, while his criteria are as follows: "To determine whether a journal is academic, four indicia could be employed: whether its authors are usually academics; whether its readers are mainly academics; the degree to which its content is academic in character (displays sophistication and knowledge of prior learning); and, most important, the magnitude of any royalties received by authors (low or no royalties would favor classification as academic)"; Shavell, "Should Copyright?," 337.

37. Shavell notes, for example, "Abolishing copyright for works already in existence may offend constitutional protections of property and thus could be subject to constitutional restraint"; Shavell, "Should Copyright?," 340n83.

38. Scott H. Podolsky, Jeremy A. Greene, and David S. Jones, "The Evolving Roles of the Medical Journal," *New England Journal of Medicine* 366, no. 16 (2012): 1457–1461.

39. Kal Raustiala and Christophe Sprigman discuss this alternative to "the monopoly theory of innovation" in *The Knockoff Economy: How Imitation Sparks Innovation* (New York: Oxford University Press, 2012), 6.

40. As for the legal requirements of public utilities, David Yost, attorney general of Ohio, offers this summary, as he would see it applied to Google: "As a common-law public utility, Google would then have a legal duty to act with consideration of the public interest, to provide equal access to all users and all information providers and to act without unreasonable bias against

fashion knock-offs tends to thrive on a certain caginess around attribution and plagiarism hardly recommends it for the world of research.

In 2004, a year after the Sabo bill floundered, the NIH was asked by the Appropriations Committee of the US House of Representatives to explore whether there might be another way to provide free and timely online access to funded research publications. The NIH came up with a public-access policy that *requested* all the recipients of its then \$15 billion research grant program to deposit any resulting publications in PubMed Central within six months of publication: “It is essential,” the NIH explained, “to ensure that scientific information arising from NIH-funded research is available in a timely fashion to other scientists, health care providers, students, teachers, and the many millions of Americans searching the web to obtain credible health-related information.”⁴¹ Four years later, with less than 4 percent of researchers complying with the “request” to deposit a copy of their work, the NIH changed its position to make it *required by law* that funding recipients deposit a copy in PubMed Central of their “final, peer reviewed manuscripts upon acceptance for publication, to be made publicly available no later than 12 months after the official date of publication: Provided, That the NIH shall implement the public access policy in a manner consistent with copyright law.”⁴²

The NIH provision calling for this public-access policy to be “consistent with copyright” adds considerable complexity to this measure, as made clear by the analysis of Michael W. Carroll, Washington College of Law faculty member. Carroll points to the NIH request that researchers grant it two copyright licenses: the first license is a requisite of accepting the NIH grant, and the second is signed on submitting a research paper to PubMed Central, with both offering NIH “copyright permission to make the manuscript publicly accessible.”⁴³ Then the multiple authors

information providers, particularly Google’s competitors in other business lines. That’s it”; David Yost, “Let’s Make Google a Public Good,” *New York Times*, July 7, 2021, OA.

41. National Institutes of Health, “Notice: Enhanced Public Access to NIH Research Information” (notice no. NOT-OD-04-064, Bethesda, MD, September 3, 2004), OA.

42. National Institute of Health, “Request for Information: NIH Public Access Policy,” *Federal Register* 73, no. 62 (2008): 16881, OA.

43. Michael W. Carroll, *Complying with the National Institutes of Health Public Access Policy: Copyright Considerations and Options*, *Science Commons* (Washington, DC: SPARC; Cambridge: Science Commons; Washington, DC: Association of Research Libraries, 2008), 4, OA.

typical of an NIH paper will have to take steps to ensure that “the person submitting the manuscript has the authority to grant NIH the Public Access License” on behalf of coauthors.⁴⁴ And finally, Carroll sets out the six options that authors face in achieving NIH compliance, all of them involving time, study, and risks and none of them “foolproof.”⁴⁵ Copyright work-arounds like this can only achieve a measure of open access through such intricacies. The final draft, combined with a twelve-month embargo period (to prop up the publishers’ subscription monopolies), amounts to a temporary and transitional measure on the road to universal open access. Such work-arounds also tend to involve additional public investment, with PubMed Central operating at an estimated cost of \$4.5 million in 2012 as an open access alternative to the closed copyright world of the publishers’ websites.⁴⁶

Still, the policy was sufficiently groundbreaking in the first decade of the century to raise the ire of publishers. When the NIH asked in 2008 for public comment on moving the public-access policy from voluntary to required of grant recipients, both profit and nonprofit publishers lined up, with their copyright in hand, to denounce such a measure. Elias Zerhouni, NIH director at the time, offered a rather tepid defense to the principal attack: “We never intend[ed] this to violate copyright laws.”⁴⁷

44. Carroll, *Complying with the National Institutes*, 7.

45. Carroll, *Complying with the National Institutes*, 15.

46. PubMed Central cost \$4.45 million to operate in 2012; Kent Anderson, “The Price of Posting—Pubmed Central Spends Most of Its Budget Handling Author Manuscripts,” *Scholarly Kitchen* (blog), July 16, 2013, OA. As an alternative to such work-arounds for government-funded research, consider M. P. Taverne’s amendment to Dutch law (Article 25fa, Copyright Act): “The maker of a short scientific work, the research for which has been paid for in whole or in part by Dutch public funds, shall be entitled to make that work available to the public for no consideration following a reasonable period of time after the work was first published, provided that clear reference is made to the source of the first publication of the work”; “Amendment to Copyright Act,” Open Access.nl, OA.

47. National Institutes of Health, *Seeking Comments on Implementation of the NIH Public Access Policy* (Bethesda, MD: National Institutes of Health, 2008), 3, OA. As for other elements of NIH’s rationale, Michael Carroll finds its claim that PubMed Central papers qualify for the “fair use” exception lacks merit: “In the case of public access to full text articles on PMC, NIH would be exercising the rights of reproduction or distribution and public display by sending copies of copyrighted manuscripts to members of the public who request them. Systematically distributing copies of another’s copyrighted work over the Internet generally will not qualify as a fair use or under any of the other statutory limitations and exceptions to copyright”; Carroll, *Complying with the National*

Youngsuk Chi, vice chairman of Elsevier, did not hesitate to challenge the legality of the policy while highlighting its threat to the future of science: “The NIH’s current implementation of the public access policy deviates sharply from the principles embodied in copyright. Implementing the public access policy in a manner not consistent with copyright law, contradicts the direction by Congress, and could have serious unintended and undesirable consequences on scientific communication.”⁴⁸

Elsevier’s stance—that sharing research with physicians and patients places the future of science at risk—might seem an ill-advised public relations step, standing in sharp contrast to the stance of Kumsal Bayazit, current Elsevier CEO, cited at the opening of this chapter. Yet I have to say that on one level, the publisher’s comment on copyright is not entirely off the mark. The NIH’s requirement that the public have access to publicly funded research within twelve months of publication is hardly consistent with the general tenor of copyright. The law protects the publisher’s right to charge for access to the work for ninety years following publication. On the other hand, while the NIH policy is not consistent with copyright, it manages to advance copyright’s constitutional imperative—namely, to promote the progress of science.

Christopher Fox, CEO of the International Association of Dental Research, took advantage of the public comment period to speak directly to the bind in which the current structure of copyright placed such scholarly associations: “The only way for the association to recoup this investment—not make a profit, just recoup this investment—is [to] retain the copyrighted materials and to offer individual and institutional subscriptions.”⁴⁹ And while Ellen Garrison, of the American Psychological Association, was prepared to affirm that “APA strongly supports efforts to enhance public access to scientific publications,” she was clearly appalled that “publishers for the first time ever are essentially

Institutes, 4. On the other hand, Carroll agrees with the NIH position that authors have the right to grant NIH a license: “So long as the person submitting the manuscript has the authority to grant NIH the Public Access License, NIH’s subsequent distribution of copies of manuscripts to the public will comply with copyright law”; Carroll, *Complying with the National Institutes*, 7.

48. Youngsuk Chi, letter to National Institutes of Health re: Comment on Public Access Policy, Bethesda, MD, May 30, 2008. As to Elsevier’s size, Justin Fox points out that its parent company, RELX, “has a market capitalization of about \$50 billion, almost six times that of, just to name one example, Rupert Murdoch’s News Corp”; Justin Fox, “Scholarly Publishers Are Happy to Give Stuff Away If Someone Pays Them,” *Bloomberg*, January 16, 2020, OA.

49. National Institutes of Health, *Seeking Comments*, 13.

being made to forego their copyright interests without just compensation for their investment.”⁵⁰ Today, a dozen years later, with scholarly publishers increasingly onboard with “efforts to enhance public access,” it is time to explore how those copyright interests can be aligned with open access.

The publishers’ pushback during the public-access policy comment period did not prevent the NIH policy from becoming law on January 11, 2008. That did not, however, end their resistance to it. On February 3, 2009, House Judiciary Chairman John Conyers (D-MI) sponsored the Fair Copyright in Research Works Act, which would prevent the government from acting in any way that might “restrain or limit the acquisition or exercise of rights” by a publisher over a work funded by a federal agency such as the NIH.⁵¹ The bill was supported by the American Association of Publishers, which gathered signatures from scholarly society representatives and researchers.⁵² Their case for stopping the NIH was that the policy “diminishes one of our most basic rights under copyright—namely, the right to control the distribution of the works we publish,” as Martin Frank, executive director of the American Physiological Society, put it.⁵³ Still, limiting access to medical research was not seen as a popular move in Congress, and the bill died. And when the White House Office of Science and Technology Policy issued an order in 2013 requiring other federal departments with research budgets over \$100 million to develop public-access plans, the Trump administration allowed the process to stall in 2017.⁵⁴ In 2019, the NIH was able to appeal to the urgency of two of its programs to eliminate the twelve-month embargo for public access to research: the \$1.8 billion Cancer Moonshot program and its

50. National Institutes of Health, *Seeking Comments*, 22–23.

51. Fair Copyright in Research Works Act (introduced in House), H.R. 6845, 110th Cong. (2008), OA.

52. Peter Suber, “Publishing Lobby Appeals to Obama Transition Team to Stop NIH Policy,” *Open Access News*, January 7, 2009, OA. Suber judges the bill’s reference to copyright to be “a dishonest pretext for bad legislation”; Suber, “Open Access and Copyright.”

53. Richard M. Jones, “House Hearing on ‘Fair Copyright in Research Works Act,’” *FYI Bulletin*, American Institute of Physics, September 19, 2008, OA.

54. John P. Holdren, “Memorandum for the Heads of Executive Departments and Agencies: Increasing Access to the Results of Federally Funded Scientific Research,” Office of Science and Technology Policy, Washington, DC, February 22, 2013, OA; “Implementation of Public Access Programs in Federal Agencies,” *Science.gov*, Washington, DC, March 17, 2017, OA.

Helping to End Addiction Long-Term (HEAL) Initiative directed toward opioid misuse and addiction.⁵⁵

During this period, several of the major private foundations involved in funding research, including Ford, Hewlett, Gates, MacArthur, and Sloane, introduced their own versions of the NIH's public-access policy. In 2017, the Bill & Melinda Gates Foundation, for example, took the radical step of no longer allowing publishers an embargo period by requiring the immediate public release of both the published articles and the underlying data for all work sponsored by the foundation while also offering to pay publishers directly for the costs involved in such publications.⁵⁶

In 2018, a European collection of national and philanthropic research-funding agencies formed cOAlition S, issuing a “Plan S,” which was expressly committed to coordinating efforts and setting standards for “making full and immediate open access a reality.”⁵⁷ In setting out its principles for open access publishing, including what sort of publications it supported (no hybrid mixes of open and closed content), it has been accused by some academics of violating academic freedom—namely, “the freedom to publish research results in venues of the researcher’s choosing.”⁵⁸ But others have countered that reducing others’ freedom of access seems ultimately contrary to the intent of academic freedom.⁵⁹ The cOAlition S group has since been joined by three American agencies—the Bill & Melinda Gates Foundation, Howard Hughes Medical Institute, and Templeton World

55. Joselyn Kaiser, “In Departure for NIH, Cancer Moonshot Requires Grantees to Make Papers Immediately Free,” *Science*, August 14, 2019; “HEAL Public Access and Data Sharing,” National Institute of Health, Bethesda, October 25, 2019, OA. It is also worth noting that the Netherlands has created a stronger version of this public-access policy for all of its publicly funded research—with only a six-month embargo and the sharing of the final, published version (rather than the final manuscript)—as part of it is copyright law of 2020, known as the Taverne Amendment, if the research is funded by the Dutch with at least one Dutch author; “You Share, We Take Care!,” openaccess.nl, July 25, 2020, OA. In contrast, NIH did not reduce embargo periods for COVID-19 research during the 2020 pandemic, presumably because publishers had already granted immediate open access to this literature.

56. Carl Straumsheim, “Openness by Default,” *Inside Higher Ed*, January 16, 2017, OA.

57. “Why Plan S?,” Plan S, European Science Council, July 12, 2021, OA.

58. Leonid Schneider, “Response to Plan S from Academic Researchers: Unethical, Too Risky!,” *For Better Science* (blog), September 11, 2018, OA.

59. Samuel A. Moore, “Open Access, Plan S and ‘Radically Liberatory’ Forms of Academic Freedom,” *Development and Change*, January 29, 2021, OA.

Charity Foundation—that have signed on to the coalition’s declaration that 2021 is year one of open access’s new reality.⁶⁰

University Libraries

Early in the 1990s, the Association of Research Libraries (ARL) began issuing the *Directory of Electronic Journals, Newsletters, and Academic Discussion*, which foreshadowed the world following the turn of the century. In 1995, the ARL published one of the more unusual books of the time, consisting of emails devoted to discussing Stevan Harnad’s “subversive proposal” that would have researchers place all their work online before and after peer review and publication “for the optimal way for the unimpeded flow of esoteric knowledge to all.”⁶¹ The book’s editors, James J. O’Donnell, a classicist and now university librarian at Arizona State University, and Ann Shumelda Okerson, of the Association of the Research Libraries, conclude that “the responsible course for universities and research institutions concerned about the future is to press the claims of that sector; to experiment responsibly and venture bravely, to see if those lines can be drawn in a way that favors the widest and freest flow of information of a scholarly and scientific nature.”⁶²

The interest of university librarians in this inchoate, not-yet-named concept of open access during the 1990s was as much about “the widest and freest flow of information” as it was about the extraordinary price increases they were facing with journal subscriptions. From 1986 to 1996, journal prices had risen 148 percent, reflecting what now seems to have been the publishers’ final revenue run-up as the print era came to an end for journals, even as they faced many unknowns with the onset of the digital era.⁶³ As the Information Access Alliance summed up the

60. Plan S: “With effect from 2021, all scholarly publications on the results from research funded by public or private grants provided by national, regional and international research councils and funding bodies, must be published in Open Access Journals, on Open Access Platforms, or made immediately available through Open Access Repositories without embargo”; “Principles and Implementation,” Plan S, European Science Council, July 12, 2021, OA.

61. Stevan Harnad, “Overture: Subversive Proposal,” in Okerson and O’Donnell, *Scholarly Journals at the Crossroads*, 12.

62. Okerson and O’Donnell, *Scholarly Journals at the Crossroads*, 229.

63. Association of Research Libraries, Association of American Universities, and the Pew Higher Education Roundtable, “To Publish and Perish,” special issue, *Policy Perspectives* 7, no. 4 (1998): 1–13, OA.

situation at the time, “While publishers continue to reap the benefits of higher prices (despite fewer subscriptions), the body of academic research is reaching an ever diminishing audience.”⁶⁴

By 2002, the Scholarly Publishing and Academic Resources Coalition (SPARC), which ARL formed in 1998 to explore new publication models, was guiding libraries on creating repositories for hosting their faculty members’ open access articles. These open collections would “demonstrate,” in the words of SPARC’s senior consultant Raym Crow, “the scientific, societal, and economic relevance of its research activities, thus increasing the institution’s visibility, status, and public value.”⁶⁵ In 2003, the philosopher Peter Suber, who had been part of the historic Budapest Open Access Initiative (as had SPARC director Rick Johnson), provided readers of *College & Research Libraries News* with an early introduction to open access that concluded, “The Internet has given scholars and librarians an unprecedented opportunity to save money and advance their interests at the same time.”⁶⁶ About this time, ARL was noting how recent copyright reforms for this new age, such as the copyright term extension, anticircumvention provisions, and increased infringement penalties, “have resulted in more limited access and more restrictive uses for copyrighted material.”⁶⁷

In 2005, Heather Joseph took over SPARC, leading it in a tireless open access campaign that included organizing the Alliance for Taxpayer Access, which brought together university libraries, patient advocacy groups, consumer groups, and student organizations. By 2007, academic libraries were celebrating an annual Open Access Day, which grew into Open Access Week, involving hundreds of events held across the country that celebrated the promise of this new model of scholarly communication for the libraries’ mission of supporting the circulation and use of research.

64. Thomas M. Susman, David J. Carter, and the Information Access Alliance, *Publisher Mergers: A Consumer-Based Approach to Antitrust Analysis* (Washington, DC: Association of Research Libraries, 2003), 32, OA.

65. Raym Crow, *The Case for Institutional Repositories: A SPARC Position Paper* (Washington, DC: SPARC, 2002), OA.

66. Peter Suber, “Removing Barriers to Research: An Introduction to Open Access for Librarians,” *College & Research Libraries News* 64, no. 2 (2003): 92–113, OA.

67. Association of Research Libraries, “Issues in Scholarly Communications: Open Access,” quoted in Troschow, “Copyright Protection,” 627.

Between 2008 and 2012, the great Swiss nuclear research center CERN undertook the laborious but radical step of organizing the support of some three thousand libraries in forty-four countries along with several research funding agencies in bringing open access to physics. The resulting Sponsoring Consortium for Open Access Publishing in Particle Physics (SCOAP³) would collect the necessary fees from libraries and agencies to pay publishers for open access to the greater part of the particle physics literature involving eleven commercial and society journals. Under this new arrangement, physicists from ninety countries took advantage of this open access publishing opportunity (without having to pay the APCs common to open access science publications).⁶⁸ In 2015, the Open Library of Humanities (OLH), led by Martin Paul Eve and Caroline Edwards, supported close to thirty open access journals in the humanities that also charge neither readers nor authors, as they are supported by over three hundred libraries from around the world. Then, in a third instance of library-sponsored open access, since 2020, thousands of libraries have been participating in the subscribe-to-open programs operated by a dozen publishers. With subscribe-to-open programs, libraries simply continue their subscriptions to the participating journal, even as that journal is from that point forward open access.⁶⁹ The libraries pay no more (and receive no less) in “subscribing” to open access, even as the publishers and their subscription agencies continue to receive similar revenue levels, while authors can publish in the journal without paying an APC.

The libraries themselves have also become more directly involved in open access publishing by hosting open access journals in which their faculty are involved. The Public Knowledge Project (PKP), which I initiated in 1998 at the University of British Columbia and now operates as a core facility of Simon Fraser University, represents something of a metaverse of this faculty and library publishing collaboration. PKP develops open-source (free) publishing software for managing journals, monographs, and preprints. Through Simon Fraser University Library’s commitment and expertise, PKP has been able to develop the software into what is arguably the world’s most widely used publishing platform, with over thirty thousand journals in 2021, largely in the Global South, actively deploying

68. Alexander Köhls and Salvatore Mele, “Converting the Literature of a Scientific Field to Open Access through Global Collaboration: The Experience of SCOAP³ in Particle Physics,” *Publications* 6, no. 15 (2018), OA.

69. Crow, Gallagher, and Naim, “Subscribe to Open,” 182–183.

Open Journal Systems. In the United States, more than a thousand journals use the software, principally hosted by university libraries, many of which belong to the Library Publishing Coalition, which was formed in 2013.⁷⁰ The willingness of university libraries to host open access journals associated with their faculty makes these institutions incubators of intellectual innovation and academic freedom. This might involve the launching of a new title, such as the *Indiana Working Papers in Speech Sound Articulation*, hosted by Indiana University Libraries, or the twenty-seven-year-old *National Black Law Journal* at the California Digital Library.

Scholarly Publishers

It was well after the funding agencies and academic librarians were fully on board with open access that the big corporate publishers, first with Springer Nature and then with Elsevier, Wiley, Taylor & Francis, and SAGE, became part of the consensus on the value of open access for research. As I suggested earlier, the larger publishers gradually came to accept that asking authors to pay APCs, which BioMed Central and PLOS pioneered early into the new century, was a financially viable path to open access. The large publishers' interest had certainly been piqued by the striking success of PLOS's innovative open access megajournal, *PLOS One*, which had been launched in 2006 with a lower APC than PLOS's other journals. What made it a megajournal was its innovative "competency" approach to peer review. It involves a commitment, on the part of the journal, to publishing all of the research, whatever the field, judged by peer reviewers to be competently conducted and presented. By 2014, *PLOS One* had grown to a staggering thirty-one thousand APC-financed articles a year.⁷¹ It was not long before other publishers realized that if the APC model could run on this scale, bringing in over forty million dollars annually, then open access was indeed viable (which is to say, profitable). Other publishers were not long in jumping in with megajournals of their own. In 2011, the Nature Publishing Group offered *Scientific Reports*, and three years later, *Royal Society Open Science* appeared. Today, approximately twenty open access megajournals are available from profit and nonprofit publishers.

70. See the *2021 Library Publishing Directory* (Atlanta, GA: Library Publishing Coalition, 2021), OA.

71. *PLOS One* offers rigorous peer review—it's rejected my work as well as published it in other instances—with a much higher acceptance rate (70 percent) than other journals; on the numbers for 2014, see Kayla Graham, "Thanking Our Peer Reviewers," *EveryONE* (blog), *PLOS*, January 6, 2014, OA.

The year 2006 also saw the formation of the Open Access Scholarly Publishers Association (OASPA), making it clear that this approach was now part of the scholarly publishing trade. Since 2006, OASPA has grown to a membership of more than a hundred publishers, including almost all of the large (not exclusively open access) publishers: Springer Nature, Wiley, Taylor & Francis, and SAGE, as well as Oxford University Press and Cambridge University Press, with the notable absence of Elsevier.

As late as 2012, Elsevier was still directing a good portion of its million-dollar lobbying campaign in Washington to dismantling NIH's public-access policy and similar initiatives, even as the publisher was beginning to market a few open access titles to authors. In 2011, for example, Elsevier lent support to the Research Works Act, which sought "to ensure the continued publication and integrity of peer-reviewed research work by the private sector" by putting to end NIH's public-access policy.⁷² After thirteen thousand researchers signed a petition promising to boycott Elsevier over the matter, the company withdrew its support from the Research Works Act. While it affirmed that it would continue "to oppose government mandates in this area," the bill's congressional sponsors pulled out on the same day.⁷³ Elsevier's position was that publishing initiatives such as open access should be left to the market to sort out, even as their customers were turning to open access because they had been poorly served by that market for decades by that point.⁷⁴

Around 2017, Elsevier started to change its public stance on open access. It launched a new campaign: "5 Surprising Facts about Elsevier and Open Access."⁷⁵ The first surprise? "Elsevier publishes open access." The reference to *surprise* speaks candidly to the company's past opposition to open

72. Andrea Peterson, "How Corporations Score Big Profits by Limiting Access to Publicly Funded Academic Research," ThinkProgress, March 3, 2013, OA.

73. Elsevier has taken down its statement, but a portion can be found in Cory Doctorow, "Elsevier Withdraws Support from Research Works Act, Bill Collapses," Boing Boing, February 12, 2012, OA.

74. Although unrelated to Elsevier's lobbying moves, the tragic and well-publicized suicide of the internet activist Aaron Swartz ("Guerilla Open Access Manifesto," Internet Archive, July 2008, OA) on January 11, 2013, made it harder for publishers to openly oppose open access. Swartz's death followed his arrest in 2011 for downloading 3.5 million articles from JSTOR, leading to federal charges of wire and computer fraud, for which he faced up to fifty years and a million-dollar fine; Noam Cohen, "How M.I.T. Ensnared a Hacker, Bucking a Freewheeling Culture," *New York Times*, January 20, 2013, OA.

75. Gemma Hersch, "5 Surprising Facts about Elsevier and Open Access," *Elsevier Connect*, June 13, 2017, OA.

access initiatives, although Elsevier had been experimenting with open access over the course of the decade.⁷⁶ In this campaign, the company spoke of its “commitment to open access” and the “ten ways” in which it supports it, all while charging an APC for open access in its journals that ranges today from \$150 to \$9,900.⁷⁷ By 2019, Elsevier’s vice president of communication, Tom Reller, identified the company as “the fastest growing gold open access publisher in the world and one of the leading open access publishers globally,” while noting, seemingly without irony, that “not everyone is moving in the same direction or at the same speed.”⁷⁸

In contrast, Springer Nature, second only to Elsevier in size, took its initial step toward open access in 2008 with its purchase of BioMed Central, as noted above. It was not long before open access was an integral part of its corporate identity. Consider the virtual brochure *Open Access—Broad Readership, High Impact*, which appeared on the Springer Nature website in 2012: “Digital delivery [is] reducing or removing many of the limitations and costs inherent in a physical distribution model. . . . Open access (OA) publishing has emerged as a leading alternative to traditional publishing models thereby expanding access to literally anyone with an internet connection and an interest in a given topic. . . . OA is no longer a new or experimental model.”⁷⁹

Today, Springer Nature offers its authors a free tutorial on the “benefits of gold open access,” with *gold*, in this case, involving authors paying an APC to make their work open. The tutorial’s final bullet, while raising questions about the publishers’ editorial standards, sums up well the advantages that open access can provide: “Greater public engagement as those without intuitional [*sic*] subscriptions can access latest research. Especially valuable for especially when content affects the general public (e.g., patient groups).”⁸⁰

And then there’s Wiley, a publisher that puts out thousands of journals whose website declares that open access is “helping researchers share their work with the world.”⁸¹ Why? Well, because, the website continues,

76. Peterson, “How Corporations Score.”

77. OpenAPC, INTACT Project, October 25, 2019, OA.

78. Benjamin Purper, “University of California Moves toward Open Access Research,” *KVCR News*, December 4, 2019, OA.

79. *Open Access—Broad Readership, High Impact* (London: Springer, 2012), OA.

80. “Benefits of Gold Open Access,” Author and Reviewer Tutorials: Open Access, Springer Nature, October 10, 2019.

81. “Open Access,” John Wiley & Sons, Hoboken, NJ, October 10, 2019, OA.

“research needs to be available to the public to drive innovation and invention, and so people can find the information they need to make decisions in their lives.” At the same time, Wiley ran a blog by Chris Graf, director of research integrity and publishing ethics, that further affirmed its commitment to open access and open science more broadly, positioning the company as a potential leader in such initiatives: “There is increasing recognition that we need to innovate both technologically and socially in order to enable (and incentivize) people to adopt open research practices.”⁸² It is just such “increasing recognition” on the part of Wiley that researchers value sharing their work with the world and that inspires this effort, on my part, to see if copyright law can do more to enable open access.

I am also inspired by how complicated the publishers’ path to open access is proving. The “transformative” read-and-publish agreements exemplify this complexity, with publishers pursuing these arrangements with European countries and, in the United States, with large universities. Their intricate cost structures for subscriptions (read) and APCs (publish) take considerable time to negotiate. Under these agreements, the country or library pays the publisher a subscription fee for a bundle of their journals, with a portion of that fee put toward the country’s or the institution’s authors’ APCs to enable their articles to appear in the publisher’s open access or hybrid journals. While publishers control prices for both subscription and open access publishing in this transformation, some universities are realizing savings in the process. Still, it leads to a patchwork of open access articles with lead authors from the countries or institutions that have entered into these agreements rather than moving entire journals to open access (compared to, for example, the subscribe-to-open model). It uses the copyright lock of subscriptions to continue securing considerable revenue for closed content. At the time of writing, Sweden has twenty-one such transformative agreements in place with publishers, while the University of California systems has ten.⁸³

One segment of scholarly publishing that has played a less conspicuous part in open access is the more than one hundred university presses in the United States. While the country’s first university press, at Johns Hopkins University, began in 1878 with journals in mathematics and chemistry,

82. Chris Graf, “Open Research and Data Sharing: Are We Hearing What Researchers Are Telling Us?,” *Researcher Blog*, John Wiley & Sons, Hoboken NJ, November 4, 2019, OA.

83. See ESAC’s Registry of Transformative Agreements, September 28, 2021, OA.

university presses have largely relinquished science periodicals to commercial publishers in favor of humanities and social science monographs. Still, in 2007, the Association of American University Presses issued the “AAUP Statement on Open Access” that affirmed its commitment “to disseminate knowledge to the widest possible audience” by pointing to university press experiments with open access monographs.⁸⁴ Some were employing a “form of market-based cost-recovery with free access for users a certain length of time after initial publication, or that offer free access to one form of publication and paid access to others.”⁸⁵

Today, the University of California Press offers almost one hundred books in its open access Luminos series as well as a couple of open access journals, while the University of Michigan Press has forty-four open access books in media studies. Libraries have supported the publication of fifteen hundred open access monographs by twenty-five university presses through the successful Knowledge Unlatched program. These promising developments need to be set against the prospects for scholarly monographs more generally, which Sandy Thatcher, former director of Pennsylvania State University Press and a force for open access among the presses, puts rather bleakly: “I gave up on the market decades ago as a viable model for university press publishing as I watched library sales shrink from 3,000 on average when I began my career in the late 1960s . . . to 300 in the 2000s, to the virtual vanishing point since then.”⁸⁶ The declining circulation of such works among libraries is met by a stalling in the growth—if not a decline—in the number of scholarly books published.⁸⁷

Open access is also about making learned books not just free to read but possible to publish. Open access models that rely on distributing

84. “AAUP Statement on Open Access,” American Association of University Presses, New York, February 27, 2007, OA.

85. “AAUP Statement on Open Access.”

86. Sanford G. Thatcher, personal correspondence, April 7, 2020. Katherine Daniel, Joseph J. Esposito, and Roger C. Schonfeld report that “one-time expenditures for university press print books fell by 17.7 percent between 2014 and 2017”; Katherine Daniel, Joseph J. Esposito, and Roger C. Schonfeld, *Library Acquisition Patterns*, Ithaca S+R, January 2019, OA.

87. “We don’t think the evidence (only five years of history) supports the idea that monograph publishing for this group is declining [seventy-two titles a year down to fifty-five], but it is clear that it is not growing”; Joseph J. Esposito and Karen Barch, *Monograph Output of American University Presses, 2009–2013*, Andrew W. Mellon Foundation, February 2017, 22, OA. In this regard, Mellon has also funded, among other related initiatives, the Sustainable History Monograph Pilot, 2018–2020, OA.

the costs among libraries, such as MIT Press's Direct to Open program, through which this book is published, speak to ways of reestablishing a broader readership for these works that may extend well beyond the reach of the narrowly specialized journal article. At issue is the persistence of a unit of thought that is particularly apt at upholding the "intellectual freedom" that the Association of University Presses (which dropped "American" from its name in 2017) admirably values among the books it publishes.⁸⁸ In 2019, the association continued to hold that "the promise of open access to scholarly works" aligns with its original mission "to advance knowledge . . . far and wide" while referring to the ongoing "experiments," "developments," and "conversations" around open access publishing models.⁸⁹

Learned Societies

The scholarly societies that researchers form to advance their professional interests have a long-standing record of publishing the leading journals in their field. This could be said to date back to the Royal Society of London granting its secretary Henry Oldenburg permission in 1665 to publish the *Philosophical Transactions*, one of the first scholarly journals. The Royal Society continues to be an accomplished publisher, with an open access megajournal, as noted above. The American Chemical Society (ACS), another leader among society publishers, with eighty or so journals (and 157,000 members), states that it "is committed to supporting sustainable models of open access," having "sponsored over \$25 million in open access" through its various publications.⁹⁰ In 2020, ACS launched an open access edition of its flagship journal, *Journal of the American Chemical Society*, placing itself "at the forefront of this exciting era." It cleverly entitled the journal *JACS Au*, given it was offering "gold" (Au) open access to authors asked to pay APCs.⁹¹

The American Psychological Association (APA), which was among the publishing organizations that testified in the 2008 hearings against the NIH

88. "AUPresses on Open Access," American Association of University Presses, New York, October 30, 2019, OA.

89. "AUPresses."

90. "Easy Open," ACS Publications, American Chemical Society, Washington, DC, October 13, 2019.

91. "American Chemical Society Announces the Launch of JACS Au, a New Fully Open Access Journal," American Chemical Society, Washington, January 16, 2020, OA.

public-access policy, remains more reserved on the question: “We are committed,” its website declares, “to helping you comply with your funder and institutional requirements and support both green and gold open access options.”⁹² The APA adds that “all APA authors have the option of green open access archiving” and a gold open access option for which authors are asked to pay a \$3,000 APC. As I was working on this section, a tweet was forwarded to me from Will Cunningham at the University of Toronto complaining that APA has sent him a takedown notice for violating their copyright by posting online his paper from one of their journals: “They really want to threaten about sharing the articles that I write for free for them.”⁹³ The law can help the American Psychological Association, I believe, serve its members and society as a whole better than this.

Finally, the Modern Languages Association (MLA), among the largest of the humanities societies, came to the realization in 2012 that its members were interested in sharing their work more widely: “We see that publishing needs are changing,” Rosemary G. Feal, its executive director, states, “and our members are telling us that they want to place their scholarship in repositories, and to disseminate work on blogs.”⁹⁴ Feal appreciates that scholars writing for MLA journals want their work to “circulate freely” and hopes that the MLA’s new policy would be a model for other societies assisting their members “to disseminate their scholarship broadly.”⁹⁵ The next year, the MLA Commons was launched, which grew into the broader Humanities Commons, under the inspired leadership of Kathleen Fitzpatrick, English professor at the University of Michigan, another of the pioneers in exploring open scholarship. By the close of 2019, the Humanities Commons had close to twenty thousand participants posting papers, sharing syllabi, and setting up scholarly interest groups, from African history to visual anthropology.

Yet for smaller societies, this widespread move to open access can feel like a “push to adopt Open Access as the new standard for academic

92. “Open Access for APA Journals Authors,” American Psychological Association, Washington, November 5, 2019, OA.

93. Will Cunningham, “I just got my takedown notice from @apa,” Twitter, October 9, 2019, OA. These “notice and takedown” orders are a result of the Digital Millennium Copyright Act of 1998 and the Electronic Commerce Directive of 2000.

94. Scott Jaschik, “MLA Shift on Copyright,” *Inside Higher Ed*, June 6, 2012, OA.

95. Jaschik, “MLA Shift.”

research dissemination,” as a Canadian Political Science Society committee on the topic reported.⁹⁶ This “is creating very real pressures on academic journals” on how to continue generating society-sustaining revenue. It is not that the committee fails to see the value in opening political science to the public, given the discipline’s concerns with how human life is organized and governed. Rather, it is that this society needs a copyright law that will support its ability to maintain the organization behind its journal and its move to open access scholarly publishing.

The Iron Law of Consensus

While some will continue to doubt the depth of sincerity and commitment—as well as the motives—behind some of the attestations of support for open access, I think it is still fair to say that we have a consensus in principle on the value of open access for the progress of science from among the principal stakeholders in scholarly publishing. In this regard, intellectual property attorney Thomas P. Olson has identified what he believes is the “iron law of consensus” that governs successful amendments to copyright, dating back to the Copyright Act of 1909.⁹⁷ Not only is a majority vote needed, but prior to that, a minimal level of consensus among those affected by the changes appears to be necessary for Congress to move such reforms forward. The current open access consensus also fits well with “the legal fiction of congressional intent,” which University of Michigan legal scholar Jessica Litman explains is based on the naive belief that the legislators write laws that “embody specific, substantive choices that members of Congress have made.”⁹⁸ Litman would replace that myth, based on her scrutiny of the passage of the 1976 Copyright Act, with the truth that Congress acts “by encouraging negotiations between interests affected by copyright, by trusting those negotiations to produce substantive compromises, and by ultimately enacting those compromises into law.”⁹⁹ Her analysis offers further reassurance

96. Martin Papillon et al., “Open Access and Academic Journals in Canada: A Political Science Perspective,” *Canadian Journal of Political Science / Revue Canadienne de Science Politique* 52, no. 4 (2019): 903.

97. Thomas P. Olson, “The Iron Law of Consensus: Congressional Responses to Proposed Copyright Reforms since the 1909 Act,” *Journal of the Copyright Society of the U.S.A.* 36, no. 2 (1989): 109–137.

98. Jessica Litman, “Copyright Compromise and Legislative History,” *Cornell Law Review* 72, no. 5 (1986–1987): 903.

99. Litman, “Copyright Compromise.”

that the emergence of the current consensus may be just the thing to bring about the necessary negotiation and compromise to enact an amendment to copyright law that will best serve research and scholarship in the public interest.

That a consensus on the promise of open access has taken hold among such a diverse set of scholarly and commercial interests makes one point apparent: a copyright law that rewards publishers only for restricting access to their publications is not doing enough for science in the digital era. It is not doing enough for the University of California, as it “is committed to disseminating its research and scholarship as widely as possible,” nor the Bill & Melinda Gates Foundation, which holds “that published research resulting from our funding should be promptly and broadly disseminated.” It is also not serving Gino Ussi, vice president of research solutions sales at Elsevier, who states, “We at Elsevier continue to drive for full immediate open access across all titles.”¹⁰⁰ A law that served science well enough in the age of print is now making it harder and more expensive than necessary to practice what the scholarly publishing community has come to agree should be the guiding principle for the circulation of research publications. It is as if the digital-era promise of open access for science has pulled the constitutional rug out from under the Copyright Act. The nature of that rug and how it lends support to this appeal for copyright reform are the subject of the next chapter.

100. “UC Presidential Open Access Policy,” Office of Scholarly Communication, University of California, 2015, OA; “Bill & Melinda Gates Foundation Open Access Policy,” Bill & Melinda Gates Foundation, 2021, OA; Ian Evans, “A First-of-Its-Kind Partnership to Drive the Future of Open Science in the Netherlands,” *Elsevier Connect*, Amsterdam, May 19, 2020, OA.

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How to Restore the Law's Ability to Promote the Progress of Science

By: John Willinsky

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