

The Cost and Value of Knowing: the right to open access

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Rare is it for an author to be able to join reviewers in discussing the book in question. Many an author has bitten back at mis-reading reviewers in letters to the editor, famously so in the case of the *Times Literary Supplement* and the *New York Review of Books*, where great battles are fought in narrow columns issue after issue. But typically reviewers get in the last bite, and authors are more bloodied than redeemed in their efforts to straighten reviewers out, much to the reader's bemusement.

This time, however, thanks to Michael Peters' editorial initiatives with *Policy Futures in Education*, something more helpful to author and reader alike is bound to be produced; fewer exploding fireworks perhaps, but more sustained light. It is the case that my book, *The Access Principle: The Case for Open Access to Research and Scholarship* (2006a), received more than a fair reading from Fides Datu Lawton, Cushla Kapitzke, and Garrett Gietzen. For that I am indebted and grateful. Each of them raises important critical points about this case that I would make for open access, and I welcome the chance to reconsider some of the book's ideas in light of their close reading.

The book is clearly a work of advocacy. While Cushla Kapitzke's comparison with Martin Luther nailing his 95 Theses to the door of the Castle Church in Wittenberg Germany in 1517 is a flattering historical analogy, I have but one thesis. My hope has been to see it open in browsers, after MIT Press generously created an open access PDF of it, and perched on nightstands. That single thesis? The current convergence of economic and technological factors in scholarly publishing makes possible a substantial increase in access to the journal literature, for scholars, in the first instance, but also professionals, policymakers and the public as well. And while this thesis is motivated by an educational interest in the right of access to knowledge, the likelihood of this increased access being realized has everything to do with the present politics of publishers' lobbies, mandated archiving, open source software, and citation counts.

By way of a recap and update on open access developments, the story has only grown more complicated and contorted. The move of scholarly journals online has taken place amid growing corporate concentration among publishers, resulting in the big four published offering some 6,000 titles.¹ This concentration is associated with subscription costs two to three times (on a per-article basis) that non-profit scholarly societies (Bergstrom, 2007).² At the same time, these corporate publishers and many other publishers permit their authors to self-archive their published articles in open access repositories, and yet only small percentage (perhaps 15-20 percent) take advantage of this opportunity. A number of society journals make their back issues freely available, And finally, a few thousand journals have done away with subscriptions, and in the name of open access, make their contents immediately and freely available to readers. The scholarly marketplace of ideas is further distorted by the corporate publishers' bundling of their titles, leading libraries to spend a lion's share of their budgets on large numbers of these

¹ From largest to still very large, the publishers are Elsevier, Springer, Wiley, Taylor and Francis (Glenn, 2006).

² The articles from the leading non-profit societies also turn out to be cited more often, suggesting greater impact for far less publishing costs. In education, according to Bergstrom, the non-profit average cost for an article is \$8 versus \$21 from a for-profit publisher, while the cost per citation is \$15 for an article versus \$90 for a for-profit publisher (Bergstrom 2007).

publishers' journals. Yet this is not a simple story of corporate greed. Many corporate and non-profit publishers grant developing countries free or close-to-free access.

In the face of authors' general indifference to this right to self-archive their work or otherwise make it open access, a number of government research funding agencies and foundations in various parts of the world have begun to adopt mandates that insist that researchers who have accepted funding must archive their final draft (not the published version) in open access repositories. At this point, ten European funding agencies have adopted archiving mandates, along with a small number of universities that require this from of archiving from faculty members.³ As well, there is legislation pending in some jurisdictions, most notably with the U.S. Federal Research Public Access Act of 2006 in the United States, which would mandate self-archiving for those who receive research support.

Many journal publishers actively opposing these mandates. As the publishers would have it, mandated self-archiving would end peer review and thus scholarly publishing as we know it: "Open deposit of accepted manuscripts risks destabilising subscription revenues," which will "therefore destroy the peer review system upon which researchers and society depend" (Brussels Declaration, 2007). Even the non-profit publishing community—through the pointedly named "Washington DC Principles for Free Access to Science" consortium—is taking a similar stance against mandated archiving, again using threats of mass destruction: "A coalition of 75 nonprofit publishers opposes any legislation that would abruptly end a publishing system that has nurtured independent scientific inquiry for generations" (Frank, 2007). In terms of summing up the present state of affairs, Stevan Harnad, self-archiving's sure-footed advocate, suggests it as a conflict of interests between the "hypothetical risk of future losses in publisher revenue" and the "actual daily losses in research usage and impact" (2007).

Suffice it to say that scholarly publishing forms a strange and unsettled knowledge economy at this point. Something new is bound to be born out of such turmoil. Scholarly publishing is not alone in experiencing this encouraging push toward greater access to knowledge. Yochai Benkler outlines in some detail the success of "networked information economies" in demonstrating how decidedly nonmarket and noncommercial phenomenon, which include open source software, open genome and other biology databases, open encyclopedia and wiki movements, are strengthening democratic quality of our lives (2006). Yet one expect scholarly publishing to be leading rather than lagging behind in this new spirit of the knowledge commons, supported as it is by publicly funded research arising from non-profit if not public institutions. The resistance by corporate and non-profit journal publishers to this new climate seems all the more perverse, as greater access to this knowledge is portrayed as threatening their lock on this lucrative publishing market, with its low acquisition costs, big deals and minute churn, spells the very end of independent scientific inquiry.

At this point, amid the struggle of such contradictory forces, much work has to be done patiently working out the details of current proposal and positions, adjusting the mix, experimenting with new forms, pressing to improve the quality of, as well as the access to, research and scholarship. These three reviewers, having carefully read the *Access Principle*, press on the particulars of these new practices, in the very practical sense of costs and with no-less-practical questions of archives and human rights.

The Cost of Open Access Journals

³ See the Registry of Open Access Repository Material Archiving Policies (<http://www.eprints.org/openaccess/policysignup/>).

In her generous review of the *Access Principle*, Fides Datu Lawton, at the University of Technology Sydney, is right to stop and wonder whether there is not more to be said about the actual costs associated with publishing online journals, outside of the limited sample of Canadian social science and humanities journals that I consider, based on data drawn from the research of Rowland, Lorimer, Adrienne Lindsay, and Gèard Boismenu (2003). To that study, I can add my further experiences in working with journals that use the open source software (Open Journal Systems) for managing and publishing online journals that forms another part of the advocacy work – beyond the research and rhetoric represented in the *Access Principle* – with the Public Knowledge Project at the University of British Columbia and Simon Fraser University.⁴

Two journals using Open Journal Systems that I have worked with closely speak, in particular, to the new economics of publishing. *Postcolonial Text* and *Open Medicine* have different stories to tell, to be sure, but these stories are related by the sense of a changed playing field for scholarly publishing. *Postcolonial Text* was started in 2003 by Ranjini Mendis, who was then president of the Canadian Association for Commonwealth Literature, a small scholarly society that had no journal. She create an international editorial board and recruited what turned out, to my surprise, to be a small volunteer army, virtually, of copyeditors, proofreaders, and layout editors, all willing to assist in getting this new journal underway. The literature background of those who participated in the journal certainly added to the quality of copyediting and proofreading they provided. The result is an open journal that is read around the world. The cash outlay to date for *Postcolonial Text*, with the free hosting of Open Journal Systems, initially at the University of British Columbia Library and some support for Ranjini from Kwantlen University College, has been the purchasing of a copy of Adobe Acrobat with which to layout the journal's articles (although that cost might have been avoided with an open source version of the software, such as PDF Writer).

Open Medicine took shape around issues of intellectual freedom and independence. It formed out of the aftermath of the firing in 2006 of two editors at the *Canadian Medical Association Journal* in a clear instance of editorial interference by the medical association that owned it. Most of the editorial team and editorial board resigned in support of the two editors, and almost immediately set out to establish a new kind of medical journal, one that was independent of pharmaceutical advertising and professional association support, as well as being open access and free to read. It meant going from a six million dollar annual budget to zero, at least in this initial period in which they have worked with Open Journal Systems, hosted by the University of Ottawa Library, to begin building this new journal that is currently preparing to launch its first issue.

These are but two of the many stories of editors finding an alternative path to peer-reviewed publication. These are stories of academic freedom and increased access to knowledge. They are about opening up places for new fields of inquiry, about developing journals outside of the academic centers and beyond the reach of the major scholarly associations, even as they provide immediate global access to a larger world for scholarship and research.

Among those stories, I should mention Fides Lawton's own efforts with the library at University of Technology Sydney, which now is able to offer an integrated range of publishing and archiving services to faculty and students, based on open source software systems, including Open Journal Systems, Open Conference Systems (also from the Public Knowledge Project), and

⁴ Open Journal Systems is now being used by over a thousand journals to manage and publish their content on line, the majority of which are from developing countries. It is available at no cost at the Public Knowledge Project along with documentation, demonstrations, and published papers on it (<http://pkp.sfu.ca>).

DSpace. It enables faculty and students to set up journals, manage conferences and deposit copies of published work, all of which can be searched across the institution through the open source Open Archives Harvester. I would hold this site up as a model for the library's new role and place in scholarly publishing, helping to reduce costs for those organizations involved, while improving its services to readers and the larger community.

Beyond the Archive

In the thoughtful approach to the very concept of an archive, which Cushla Kapitzke, from Queensland University of Technology brings to her review of *Access Principle*, she effectively brings me up short on a critical aspect of this open access advocacy. To do one's best to promote this cause can result in a narrowing of vision, a loss of critical dexterity that comes of relentless focus on singular thesis. To try to change people's minds about how knowledge can circulate one must appear to be changing, I learned some time ago, only one thing that is terribly askew. In the case of open access advocacy, this has meant leaving aside the inadequacies of peer review; it has meant accepting that online journals need to continue to bind disparate articles together for a quarterly release together; and it has meant virtually running away from the information-overload question (if working quietly on improving the precision of indexing as a counter-measure).

This commitment to affect change can also lead one to overlook "the indiscernible regularities and laws embedded in everyday practice," as Cushla describes the hold of the cultural archive on our lives, and more's the pity. To pause over the daily formation and policing, to observe the disciplining, in effect, of knowledge through the iron cage of the journal is to risk being distracted from finding the simplest, most straightforward logic which will propel the journal economy one step forward, toward a global and universal circulation of knowledge. There is little room, then, for ruminating on Derrida's notion of the *archive* which in its Greek origins "names at once the *commencement* and the *commandment*" (1995, p. 1, emphasis in the original). As I intimated, in response to Fides Lawton's review, the formation of new journals can be all about academic freedom and the formations of new knowledge economies. However, more often making the case for open access to research and scholarship calls for an unwavering focus on what can be done today and into next week to persuade a highly conservative funding agency to mandate open access, to stir an audience of mildly curious researchers to take up against their society's decision to turn its journals over to a commercial publisher.⁵

This is the value of Cushla's reminder that the archive is "constraining what may or may not be spoken." It is the source of those "lapses of criticality" she observes in the book which detract from its "political integrity." She is absolutely right to point out that my uncritical praise for MIT's OpenCourseWare project fails to recognize how it sustains the center-peripheral model for the distribution of knowledge, as MIT offers its course outlines and related materials to the rest of the world. It is the very model that I have critiqued elsewhere, as she notes. It is also the model that I have tried to otherwise address with the development of the open source software, Open Journal Systems, which has been designed to enable researchers and scholars working in the "periphery" to manage and publish universally accessible journals. The easily distributed software, with its low technical requirements for local support and for use by editors, has become my way of trying to redress the one-sided nature of the information flow. We have

⁵ The real lesson in focus here is in the success of Stevan Harnad's laser-like and unwavering precision, as he tirelessly provides the author self-archiving road to open access with new vocabulary, acronyms, statistical studies, declarations, slogans, inspirational poems, not to mention software (see <http://openaccess.eprints.org/>).

been working with the International Association for the Availability of Scientific Publications (INASP) to support the use of such journal systems in Africa, Southeast Asia, and Latin America. But even here, with a system for journals, in all of their traditional trappings of peer review, editorial decision-making, copy-editing, etc., there is a risked lapse of criticality that was less of an issue when I was working at being steadfastly critical of others' work at every turn.⁶

Yet even as I realize the restraints of the practicalities of this advocacy stance, Cushla also asks if there was not some ways, in concluding the book, to be more inviting of others to participate in making the case for open access through "future research collaborations." As Fides Lawton makes clear in her review, questions of costs abound when it comes to discussions of open access, but there is no less of a need to explore what open access to research will mean for the wider range of readers that will now be able sample this literature. The research that the Public Knowledge Project has been conducting, in attempting to foresee the impact of open access outside the academy, has involved school teachers (Twomey), massage therapists and chiropractors (Willinsky and Quint-Rapoport, 2007), as well as humanities scholars (Siemens, Willinsky, Blake, 2006) and information scientists (Kopak and Chiang, 2006).

The Pew Internet and American Life Project, which is exploring the degree to which Americans are using the Internet, tells us that already "fully 87% of online users have at one time used the internet to carry out research on a scientific topic or concept" (Horrigan, 2006). This high-level sense of engagement is also reflected in the level of use of *Wikipedia* which has placed this home-made encyclopedia the twelfth most popular website in the world. There is now the need to begin to research the educational implications of these new forms of extra-curricular learning and engagement with ideas (Willinsky, 2006b).

The Right to Know

One of the powerful points that Garrett Gietzen, at the University of Illinois, Urbana-Champaign, raises in his review of the *Access Principle* is that I could have done more to define and substantiate what I identify as *the right to know*. He points, fairly enough, to the weight I place on this right in making my case for open access. Have I made too much of the right to know by placing it in the company of what we far more commonly think of as human rights, such as life, liberty, justice, as well as food and shelter? There is something particularly educational about a right to know. And it may seem a little suspect for me to position my own stock-in-trade, as a teacher, as basic to life. It is a right that has also figured prominently in my Jewish background. In Genesis, it is the very source of Adam and Eve's defiance of God, following His commandment not to eat the fruit from the tree of knowledge of good and evil, while they were free to eat from all of the others. So begins the story of a right that has everything to do with morality and authority, in assuming a right to know. It has to, as well, with the satisfaction of knowing ("the tree *was* good for food"), even if it means learning that one is indeed naked in a world which can so easily "multiply thy sorrow," as the King James translation puts it.

The "right to know" has been recognized in the relative recent history of human rights as a right to an education, a right to learn what is known, "to share in scientific advancement and its benefits," as the Universal Declaration of Human Rights (1948) puts it. As I also point out in the book, in the United States, it takes specific political form in the Freedom of Information Act and the Data Protection Act, as well as various measures that ensure equal access to educational

⁶ It is worth noting that MIT's OpenCourseWare is now part of a consortium that has strong representations, and courses, from China, Mexico, Saudi Arabia, Thailand, Venezuela, and Vietnam, among others (<http://ocwconsortium.org/>).

opportunities. This right to know applies not only to what is already known but also applies to the spirit of inquiry itself. That is, what I failed to make clear in the book is that the right to know not only concerns learning what is already known, but is right to build on, contribute to, or challenge this existing body of knowledge.

Garett goes on to ask whether there are limits to this right to knowledge, suggesting that it is easy to imagine instances in which “completely free access might... threaten liberty and life itself.” He rightly points out that I am the product of a liberal democratic tradition, and that might explain why I find it difficult to imagine circumstances in which providing open access to published research (as opposed to, say, classified weapons research) could do such damage.⁷

Yet what I can readily do, at Garrett’s prompting, is to further qualify my sense of this right. I do not see this right, for example, as an absolute, even within the research context. That is, I am fully supportive of research ethics codes that limit how researchers work with human subjects. In this, I gladly side with James Griffin, who holds that such rights are “resistant to trade-offs, but not too resistant” (2001). The right to know, for me, is about ensuring that there are no arbitrary or otherwise unnecessary barriers to the particular body of knowledge to which I am a contributor. This is not because everyone needs completely free access to research and scholarship or would ever take full – or perhaps even any advantage – of such access. I invoke the human right to know when it comes to research and scholarship because, as a participant in this particular knowledge economy, and therefore feel some responsibility for it operates, it seems all too apparent that it is unduly restricting access to this knowledge. I say unduly because it continues to operate amid the huge discrepancies in pricing note above and in the face of clear evidence that other, far more open, methods of sharing this knowledge are possible.

There is another aspect to this rights question that Garret’s thoughtfully raises. At this point, open access to research depends on the goodwill and freely taken actions of researchers and journal editors. A small proportion of authors archive the work they publish in subscription journals, may, as well, submit their work to open access journals. Some editors and publishers permit their authors self-archiving or they make their journals’ content open access (perhaps some months after initial publication for subscribers). Authors and editors honor the human right to knowledge in this way presumably out of a recognition of the ethical responsibility and epistemological value of greater access. This is to assume, of course, that they do not go with open access simply to garner more citations than those who do not follow this route, as numerous studies have demonstrated happens with open access (Hitchcock, 2007). As I noted above, this voluntary action has led to open access for roughly 15-20 percent of the research literature today. In a couple of fields, however, it has become the norm, principally, in high-energy physics, largely due to the efforts of Paul Ginsparg (2004) and in economics, at least among those who publish in the leading journals, according to a recent study by Ted Bergstrom and Rosemarie Lavaty (2007). So this particular expression of the human right to know has taken hold over the last decade, if to a limited extent and without invoking the notion of a human right to know for the most part.

⁷ The importance of recognizing and fighting for this right, in relation to threats to liberty and life, is made all too apparent by works such as the *Index on Censorship*, a quarterly magazine that presents a litany of abuses of the right to know and the right to make known. Take the tragic instance of the Turkish-Armenian journalist Hrant Dink who was murdered on January 19, 2007 in Turkey by an extremist, after being convicted of insulting “Turkishness” for his journalism (Dink, 2007). Then there is the case of the U.S. Commerce Department, which was caught not long ago preventing a federal scientist from talking to the press after he published a paper on the connection between global warming and hurricane intensity (Sandell, 2006).

I would interpret the current initiatives, described above, to mandate open access, coming from among government agencies, foundations, and universities, as representing a further recognition of the human right to know. Yet the need for these mandates speaks very clearly to ongoing efforts in raising awareness among faculty members about the value of open access. This is where the questions raised by the reviewers in this symposium have been so helpful. After all, in little more than a decade, the journal literature has moved online, amid false starts and limited trials, mergers and acquisitions, new and old economic models. It has left the scholarly publishing business full of discrepancies, redundancies, and conflicting models; it has raised many questions about the best way forward. It is not yet clear how libraries, which are barely able cover subscription costs, are now to support institutional repositories that will hold the same material if in a lesser form with the “author’s final draft” rather than published PDF). But then why pay the same price for journals if they now only provide a six-month window of initial access, prior to the work being posted in an open access archive? Are publishers, in permitting self-archiving, counting on continuing author indifference to these open access options, which would explain their intense lobbying against mandates? Does prevailing researcher indifference to open access in most fields reflect the triumph of a publish-or-perish ethos that has made publication an end in itself? On the questions go, until they come around to Garrett’s no less pointed query about “who should subsidize the cost of providing open access to a largely apathetic public?”

What is frustratingly clear is that with several billion dollars spent today on scholarly journal publishing today, there is more than enough money to cover current levels of industry profits and considerable discrepancies in pricing, editor stipends, and other forms of support.⁸ Therein lies the answer to Garrett’s question. Given current expenditures, how much more would it cost to open up the current online databases of journal content to the rest of the world? What additional expenses would be involved in making research and scholarship available to libraries that have not been able to afford the journals they need? What further charges would be entailed in opening the door to professionals and policymakers concerned about recent developments, to curious students and keen teachers, as well as to members of what might be called an *interested* public (and could ease of access reduce apathy)?

Universal access may take some additional bandwidth. It would call for, as I suggest in the *Access Principle*, literacy researchers to rethink the reading environment so that it could support a wider range of readers. But no substantial subsidy, no Bill-Gates-size gift, is needed to afford the world universal access to this knowledge. And on top of that, the value of scholarly work will not go down, if everyone is allowed to access it. It will go up. And not just for authors. The value of the work will increase for the research funders, publishers, and readers (in knowing that it has been as widely read and reviewed as possible).

By the same token, open access does not need to take money out of the publishing system. It would be nice but not necessary for those in the publishing industry to demonstrate exactly why costs differ so significantly across journals of the same quality, and why the system could not be further rationalized to reduce those costs. What is needed, rather, is the continuing

⁸ This figure is very roughly based on a number of indications: the six million dollars spent, on average, by each of the 123 North American libraries that belong to the Association of Research Libraries (Kyrillidou and Young, 2007), Wiley’s purchase price of \$1.13 billion for Blackwell which publishes 825 journals, as well as scholarly books (Glenn, 2007); and on a Morgan Stanley report that \$4.5 billion was spent on scientific publishing in 2001 (Gooden, Owen, Simon, 2002). Also see Morrison (2007), who, using Elsevier revenues alone, shows how the entire literature could be made open access.

exploration of new economic models that would allow universities to invest in publishing, perhaps at the same rates, without having the publishers maintain an artificial restriction on access for the rest of the world. Already, journals have found ways of using author fees, subsidies and sheer volunteerism to prove the viability and value of open access. We also need to explore the possibilities of larger-scale collaborations and cooperatives that could form among universities and scholarly society publishers, with their shared interest in effective publishing models.⁹

Which is only to say that what is missing at this point is not a subsidy for public access to the research literature, but a greater sense of cause and possibility. Within the academic community, there is not yet a sufficient sense of the current opportunity at hand to greatly increase access. The educational opportunity of redressing considerable inequities in access to knowledge has yet to hit home for the majority of scholars and researchers. Which returns me to Garret's question of human rights and how such rights work, rhetorically speaking. People are moved by appeals to human rights because of what they suddenly see before them, when someone cannot afford the medicines they need or a child is forced into a form of servitude, is not only unjust, but is patently unnecessary. Things do not need to be this way; they cannot be justified. To name a *human right* is to attack, or rather to shame, what amounts to a traditional pattern of inequity, if not iniquity. It is to say that this pattern of behavior can no longer, if it ever could, be justified.

To evoke a *human right to know* in the context of scholarly publishing today is to challenge current inequalities in access to research and scholarship. It is a way of saying that the current degree of inequality is no longer necessary or tolerable, given the public money invested in research, the technologies available for disseminating it, the surplus and profits that publishing this work generates. The situation can be vastly improved. And at this point, nothing will bring about the needed change faster or more fully than research funding agencies and universities mandating deposit of published research in open access archives. It is unlikely, however, that this form of open access – which consists of being able to view the authors' final draft, some six months after the work has been published – is going to be the end of the access story. It seems more like a stop-gap measure, while we wait for the current prospects of advancing the human right to knowledge to catch on among the academic community. If that is going to happen, the obligation that falls to researchers and scholars with an interest in the educational value of access to knowledge. They will need to continue to experiment and inquire, providing evidence, responding to concerns, making arguments, proposing models, designing technologies, even as an awareness of this human right unnecessarily denied slowly spreads among the academic community and beyond.

The tipping point for a continued pursuit of open access, extending beyond mandated archiving, may not come from the academic community. The extra weight and pressure could well emerge from rising public expectations around this right to know. You can see it in the way people have turned to medical research, begun to scour star maps, marine mammal databases, history sites, and the work of many other fields. The public interest in what is known is finding expression in the blogosphere and Wikipedia. The next few years are full of promise and

⁹ In the *Access Principle*, I present this idea in the form of a publishing cooperative formed between scholarly societies and research libraries, as one way to rationalize scholarly publishing economics. On the question of how to prevent a research library being a free-rider (by not joining this cooperative when it could afford otherwise), if the pride of belonging to the scholarly community were not sufficient, then perhaps requiring its faculty members to pay fees to submit to the journals in questions might be necessary.

possibilities for the educational and democratic quality of the future. There are grounds for believing that a greater global exchange of knowledge can take place, and do so on more open, if no less critical, principles than have operated in the past. The starting point in all of this is that particular spirit of open mindedness in which inquiry begins, and it was very much in evidence in these three reviewers' reading of my book, and my hat's off to Fides Datu Lawton, Cushla Kapitzke, and Garrett Gietzen for that, as well as to Michael Peters for initiating this exchange.

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