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Triumphing Over Chance: The Case for CLOCKSS

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Not so many years ago when the digital world first beckoned, when we were working hard to encourage our academic communities to accept and start using electronic resources, one of their first demands was an assurance that such resources would not disappear, that they were not being offered attractive but insubstantial riches. They trusted print — all those journal backruns sitting on library shelves gave them the reassurance they sought. They saw no such reassurance in a digital environment, happy though they were to use electronic resources on a day-to-day basis.

Today, I think, that concern is not so widespread among our users. Most university libraries, in Australia at least, have electronic-only policies in the case of journals. Most, but not all. And our academic communities have not risen up in protest. The concern about continued access, about electronic archiving, lies now with the profession, with us. And it is a responsibility that I believe we cannot shirk or attempt to offload on to others.

The rapid transition from an exclusively physical collection environment to a largely digital equivalent has changed radically the way in which information resources are managed within academic libraries. Put simply, whereas we once owned all our collections, we now merely rent most of the digital resources we make available to our users. And what is more, whereas in a physical world we exercised sole responsibility for curating the books and journals we acquired and made available, in a digital world the resources we rent do not reside within our libraries but are largely served from and curated within remote facilities controlled by the content providers.

Such a situation implies real risk. The assurance of continuing access to key scholarly information resources that we could blithely give to our communities in a physical world no longer applies in a digital environment of this kind. Given that the digital resources we make available are not under our control, and certainly not subject to our stewardship, access may be cut at any time, not simply temporarily but conceivably forever. Clearly, one way or another, we must seek a mechanism to address this challenge, to mitigate this risk, and ensure continuing access to these resources over time, just as, at present, we do with conventional physical materials.

In seeking a way forward, it may be useful to look outside our usual frame of reference, to **Mencken** and **Derrida**:

... for there is always an easy solution to every human problem — neat, plausible, and wrong.¹

There is no archive without a place of consignment, without a technique of

repetition, and without a certain exteriority. No archive without outside.²

In quoting from **H.L. Mencken** and **Derrida**, I am not trying to add a spurious authority to dubious contentions. If that was my intention, I would seek different authorities, different authors. The **Mencken** essay is now quite dated, viewed from an early twenty-first century vantage point. It is the aphorism, taken out of its original context that is instructive. And the **Derrida** book is really a discussion of the tension between the personal, the private, and their public manifestation, viewed from a psychoanalytic, mostly **Freudian**, perspective. But the quotation is useful, I think, in the context of the **CLOCKSS (Controlled LOCKSS)** archiving option, in terms of aspiration, technique and method.

Mencken suggests that in addressing human problems we should not be looking for neat easy solutions. There is rarely a simple answer, let alone a solution. What we are usually left with is, rather, a variety of different approaches. And the advice is apposite in this case of electronic archiving. Offering and employing a range of options is not indicative of uncertainty or indecision. It is a perfectly acceptable risk mitigation strategy that we should welcome and applaud.

Derrida, on the other hand, reminds us that there is no archive, viewed broadly, without an act of gathering together, of iteration, and of making public. And this, of course, is the **CLOCKSS** (and **LOCKSS**) approach. The mantra, after all, is that “lots of copies keep stuff safe”.

Thomas Jefferson also provides wise counsel:

... Let us save what remains: not by vaults and locks which fence them from the public eye and use in consigning them to the waste of time, but by such a multiplication of copies, as shall place them beyond the reach of accident.³

This quotation, from a letter written by **Thomas Jefferson** to **Ebenezer Hazard**, appears as a banner on the **CLOCKSS** and **LOCKSS** Websites. In some ways, at this distance in time, it contains a nice irony. In the letter **Jefferson** congratulates **Hazard** on his intention to publish, to commit to print, the “valuable historical and State papers” he had long been collecting. For **Hazard** was not only the U.S. Postmaster General in the 1780s but also, more importantly in this context, an amateur historian. In the year following the **Jefferson** letter, in 1792, he edited and published two volumes of his *Historical Collections*. For **Jefferson**, publication in print of historical papers and records gave assurance of continued access, of protection against the ravages of such

disastrous events as the “late war”. For us, it is the movement beyond print, the migration to a digital environment that poses the challenge, the clear and present danger.

LOCKSS

LOCKSS provides the software platform for **CLOCKSS** and may be seen as a precursor system. It was designed to give institutions the capability to manage their digital resources in the same way as their physical collections by allowing libraries, easily and inexpensively, to collect, store, preserve and give access to their own local copy of licensed, authorised content. Although, perhaps inevitably, the emphasis has been on archiving subscribed proprietary content, the system may also be used locally to capture other Web content, such as Websites, electronic theses and dissertations, archival and image collections, and government documents.

Operated and controlled at the local level, the decision to open up the archive, to make content available, is taken by the individual institution when, for whatever reason, content is deemed no longer available from the publisher.

CLOCKSS

The **CLOCKSS** mission is simple and unsurprising:

Ensuring access to published scholarly content over time; a community-governed partnership of publishers and libraries working to achieve a sustainable and globally distributed archive.

In focusing on the criticality of ensuring access to published scholarly content, the mission addresses the identified primary risk. What is interesting is the emphasis on the “how,” the corporate mechanism, the community-governed partnership of publishers and libraries, and the establishment of a globally distributed archive. Sustainability in a very practical sense is achieved through the choice of host libraries or archive nodes on geopolitical grounds. It is clearly in the interest of the stability and sustainability of the network to place **CLOCKSS** servers strategically across the world in secure computing environments with uninterrupted power and network connectivity.

CLOCKSS is a private **LOCKSS** network. And in one sense, **CLOCKSS** may be seen as a publisher, rather than a library, initiative. The standard **LOCKSS** application is not really a dark archive. Given that the decision on when to open up content lies with individual institutions, it is more in the nature of a bright archive. Understandably some publishers became a little nervous about the highly distributed character of the **LOCKSS** system and the consequent lack of control over decisions on access. In short, they were concerned about content leakage.

A closed network was seen to provide the necessary level of security and reassurance, and accordingly a new small partnership of

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publishers and libraries was formed in 2006 to develop the concept. **LOCKSS** remains the software platform, at the core of the network, but the business model is quite different in several important respects.

CLOCKSS is indisputably a dark archive. Decisions on whether to provide access to archival content, to open up part of the archive, are taken not by individual institutions but by the **CLOCKSS Board** itself. Such decisions will be prompted by major trigger events such as the corporate failure of a publisher, the catastrophic and sustained failure of a publisher's delivery platform, the cessation of publication of a particular title, or a publisher's decision no longer to offer back issues. And when access is opened to endangered content, that access is not limited to **CLOCKSS** participants, or to current or former subscribers to that licensed content, but to everyone throughout the world. In effect, the content is made available under open-access conditions.

The first of two such trigger events occurred in late 2007. It arose from the intention of **SAGE Publications** to discontinue the provision of online access to the journal *Graft: Organ and Cell Transplantation*. Following a decision by the **CLOCKSS Board**, the three volumes of *Graft* published by **SAGE** were copied from the seven archive nodes or servers within the pilot system and in early 2008 made available to the world free of charge through two hosting platforms at **Stanford** and **Edinburgh Universities**. Although the hosting platforms are strategically positioned, in the United States and Europe, access is available worldwide to either platform. The *Graft* (and subsequent *Auto/Biography*) experience is a good example of what can happen in the world of proprietary digital resources and a timely demonstration of the ability of e-archiving systems like **CLOCKSS** to respond effectively.

It would be wrong to see **CLOCKSS** as a successor to **LOCKSS**, as somehow superseding a precursor system. In fact, they are complementary systems. It is a matter of focus, a concentration in the case of **LOCKSS** on the local community, and in the case of **CLOCKSS**, on the global community. A reliance on **CLOCKSS** as the global archive of last resort does not preclude working with **LOCKSS** to meet local community archiving needs.

Why CLOCKSS?

The question whether or not to choose **CLOCKSS** is in some ways redundant. You don't choose **CLOCKSS**. It chooses you. For whether you support the initiative or not, it will be there to support you, should a trigger event occur and access to subscribed (or unsubscribed) scholarly content be denied. That this is so is evidenced by the *Graft* example or experience.

Perhaps I should try to answer a different question — why is my university willing to act as a host library, to operate a **CLOCKSS** box and seek to attract Australian and New Zealand content into the **CLOCKSS** dark archive?

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The argument is philosophical and professional. In moving to a digital environment, libraries have largely outsourced the management and curation of electronic information resources to the content providers. The archiving of these same electronic resources offers us an opportunity to reclaim that role, not alone but in partnership with publishers. I for one am not willing to outsource that role again, to spurn the chance to exercise stewardship over critical information resources in the interests of our academic community. I didn't join the profession to be a retailer, a purveyor of commodities. And it does not appear to me to be in the interest of libraries in these professionally perilous times to abdicate the stewardship role when it lies there for the taking.

It seemed to me **CLOCKSS** offered us that rare chance, that unusual opportunity. It is a community-governed partnership in which libraries and publishers together determine strategy and policies within a transparent governance structure. We decide our own future — it is not decided for us.

The technology is proven. The risk management strategy is robust, and acceptable to both partner communities, libraries and publishers. And the geographical spread of host institutions ensures that the **CLOCKSS** archive will be representative of global scholarly output, not simply that of Europe and North America.

I can't resist adding that for someone like me, who after all these years remains uncomfortable with the idea that scholarly information should

be traded as a commodity, the **CLOCKSS** policy that after a trigger event endangered content should be released to everyone, not simply current or former subscribers, is a return to reason and sane public policy.

It is evident that the case for **CLOCKSS** is rapidly gaining acceptance. In addition to the decision of the **Australian National University** to act as a **CLOCKSS** archive node, seven university libraries in Australia and three in New Zealand have signed supporting library agreements with effect from 2009. Given that collaborative electronic archiving within a community-governed partnership remains novel to many, this is an encouraging result. **CLOCKSS** is just one approach to electronic archiving but it is the approach to which my university is committed. For us, the case is conclusive. 🌿

Endnotes

1. **H.L. Mencken**, "The Divine Afflatus," *A Mencken Chrestomathy* (New York: **Alfred A. Knopf**, 1953), p. 443.
2. **Jacques Derrida**, *Archive Fever: A Freudian Impression*, trans. **Eric Prenowitz** (Chicago, **University of Chicago Press**, 1996), p. 11.
3. **Thomas Jefferson** to **Ebenezer Hazard**, February 18, 1791 in *Thomas Jefferson, Writings: Autobiography, Notes on the State of Virginia, Public and Private Papers, Addresses, Letters*, edited by **Merrill D. Peterson** (New York: **Library of America**, 1984).

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At **ALA** in Denver, I also attended the **Technical Services Managers in Academic Libraries Interest Group** discussion early on Saturday morning. Most of the discussions focused on **budgeting**, **staffing**

and **cataloging** issues. Participants compared experiences with staffing cuts, reassigning staff as library priorities change or staffing is cut, the necessity for layoffs or furloughs and other budgeting and staffing issues.

serials.infomotions.com/ngc4lib/archive/2009/200901/0006.html

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