Canadian Universities and Sustainable Publishing (CUSP)

A White Paper

Prepared on behalf of the Canadian Association of Research Libraries (CARL)
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Introduction

The scholarly communications landscape in Canada is on the cusp of transformative change. Many factors are converging: the continuing impact of digital technology on teaching and research, the growing expertise of academic libraries in utilizing and supporting technology-based initiatives, the move towards policies of open access, the oligopoly of international academic publishers and the financial constraints of university budgets.

In Canada and worldwide, universities need to decide how best to invest in scholarly communications to support research today. The purpose of this paper is to outline the issues and potential paths forward, for discussion and planning with researchers and administrators of Canadian universities, in the international context. Our common goal is to enable research results to be as widely distributed and accessible as possible, internationally, in high quality publishing venues at the lowest possible costs.

Developments in scholarly communication in Canada

Twenty years ago this year, the Association of Universities and Colleges of Canada (now Universities Canada) and the Canadian Association of Research Libraries (CARL) issued a report titled “The Changing World of Scholarly Communication: Challenges and Choices for Canada.”¹ The report was the work of a joint Task Force on Academic Libraries and Scholarly Communication, formed in 1994 to address the impacts of technology, the economy and other factors on the scholarly landscape. In 2002, CARL issued another paper² analyzing the situation at the time and making the case for further research into scholarly communication in Canada, and this led to a full and still pertinent study and 2005 report titled “Towards an Integrated Knowledge Ecosystem: A Canadian Research Strategy.”³

There have been many developments in Canada since these calls for action, including:

National consortium purchasing: Canadian Research Knowledge Network

In 1999, CARL led in the development of a successful proposal to the Canada Foundation for Innovation for the Canadian National Site Licensing Project (CNSLP), which then became the Canadian Research Knowledge Network (CRKN) in 2004. A critical aspect of CNSLP/CRKN

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² Kathleen Shearer and Bill Birdsall, “The Transition of Scholarly Communications in Canada” (discussion paper, 2002).
was the strategy to collaborate across jurisdictions, bringing together universities in Canada across ten provinces, two official languages and diverse degree and program offerings. The objectives were: to increase the quantity, breadth and depth of scholarly content available to academic researchers throughout Canada; to speed the transition from print-based to digital and value-added forms of scholarly content; and to leverage Canadian universities’ buying power and influence in the international scholarly publishing marketplace, achieving advantageous terms and conditions for usage and developing new business and service models.\(^4\) CRKN has had many successes, for example greater control of license agreements through creation of a model license. The consortium now has 75 Canadian university members and manages 54 licenses with key academic publishers.

### National advocacy initiatives

CARL and CRKN have undertaken a wide range of advocacy, consultation, and support activities to inform key stakeholders on scholarly communication topics, especially open access and its implications for scholarly publishing. In addition to reports\(^5\) and position statements,\(^6\) CARL has assembled resource kits\(^7\) and other supports\(^8\) to assist members of both organizations in advancing awareness at the institutional level on these topics. CRKN has also undertaken projects such as the Integrated Digital Scholarship Ecosystem (IDSE)\(^9\) initiative to address the ongoing transformative changes in this sector. In January 2016 CRKN released an Institutional Mobilization Toolkit to assist libraries in moving forward discussions at their institutions on challenges with the cost and availability of research resources.\(^10\)

### Publishing Platforms and Projects

#### Érudit

Érudit began as a pilot project in 1998 and in 2004 became a multi-university consortium comprising the Université de Montréal, the Université Laval and the Université du Québec à Montréal. Érudit supports mostly, but not only, French-language scholarly publications, including journals, books and proceedings, theses and

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dissertations, and documents and data from research centers. Érudit offers digital publishing services as well as dissemination, indexing and sustainable marketing services. Seventy percent of users come from outside the country. Seventy-five percent of subscription revenues are redistributed to journals, guaranteeing a direct and independent source of funding. In a business model shift, from a subscription-based model to a library-journal partnership model, Érudit is significantly increasing access to its collections by turning the two-year moving wall into a 12 months embargo without reducing journal royalties. In 2014, Érudit received a Canada Foundation for Innovation Major Science Initiative Fund award of $1.4M for 2014-2018 to support its evolution from a dissemination system into a robust research platform, building on its strengths and expertise in the curation and organization of large datasets. Taking advantage of the data science revolution (big data) and of new approaches in computational linguistics, bibliometrics and digital humanities, Érudit is currently working to deepen and improve its services to researchers.

**Public Knowledge Project**

The Public Knowledge Project was established in 1998 by John Willinsky at the University of British Columbia. Since that time PKP has expanded and evolved into an international and virtual operation with two institutional anchors at Stanford University and Simon Fraser University Library. John Willinsky, PKP’s founder and director, is based at Stanford and oversees the general direction of PKP and leads its research activities. Since 2005, the SFU Library has served as the administrative and operational home for PKP and is responsible for software development and support, PKP Publishing Services, and other administrative activities. PKP also has three major development partners — Ontario Council of University Libraries (OCUL), the University of British Columbia Library, and the University of Pittsburgh Libraries — who provide significant financial and in-kind support. PKP is having a profound impact on the scholarly communications landscape, for example with its Open Journal Software (OJS). This open source software currently provides a viable model for open access publishing for over 8,600 journals worldwide. The platform has enabled academic libraries to be active participants in the scholarly publishing ecosystem.

**Synergies**

Synergies was a founding project for the dissemination of Canadian research results in the social sciences and humanities. The project was made possible by the contributions of the Canada Foundation for Innovation and provincial governments as

part of the 2006 National Platforms Fund, and was governed under the leadership of Université de Montréal, in collaboration with University of New Brunswick, University of Toronto, University of Calgary and Simon Fraser University. Synergies’ technological infrastructure was based on the platforms of Érudit and PKP. The project advanced the development of digital publishing services, prepared to international standards with the lowest production and editing costs possible, especially around the PKP software suites and Érudit digital editing and dissemination services. The Synergies grant ended in 2012, but laid the foundation for ongoing technological advances in the scholarly publishing landscape in Canada.

**Open access repositories**

Internationally, the Confederation for Open Access Repositories, of which CARL is a member, is working to forge closer ties amongst repository and funder communities, to support a global network of open access digital repositories and enable the research community to regain some influence over the scholarly communication system.\(^\text{13}\) There are now at least 50 Canadian university repositories where researchers can deposit their published articles and other publications, such as theses.\(^\text{14}\) Although embargo periods are possible for particular deposited items, the overarching intent of these repositories is to support open access to their digital contents. Universities fund the technical infrastructure for their repositories, as well as support services. Another significant repository is PMC Canada (PubMed Central Canada), which provides free access to a stable and permanent online digital archive of full-text, peer-reviewed health and life sciences research publications. PMC Canada is a partnership of the National Research Council’s National Science Library, Canadian Institutes of Health Research (CIHR) and U.S. National Library of Medicine (NLM).\(^\text{15}\)

**Journal hosting services**

Library-based digital journal hosting is a logical extension of the support for scholarly publishing and communication that libraries initiated with institutional repositories. Library journal hosting coincides with the continuing growth of the open access movement in scholarly publishing and the associated interest in alternative publishing models to support it. In the same way that many scholars are exploring open access publishing, librarians are equally interested in encouraging alternative publishing models that might provide some relief from the control exercised by the large commercial publishers over the marketplace.

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In Canada, there are over 400 journals hosted on OJS or BePress Digital Commons at CARL and other Canadian academic libraries, many with a Canadian focus that might otherwise be overlooked in the broader publishing world.

### Open access policies

The ability to deposit journal articles in repositories supports the Tri-Agency Open Access Policy on Publications. Effective May 1, 2015, grant recipients are required to ensure that any peer-reviewed journal publications arising from Agency-supported research are freely accessible within 12 months of publication. This can be by publishing in a journal that offers open access within 12 months or by depositing a copy of the final, peer-reviewed manuscript into an accessible online repository. Researchers are strongly encouraged to deposit immediately upon publication, even if the article is freely available on the journal’s website. Canadian academic libraries are well positioned to support these new open access policies with their investment in institutional repositories and journal hosting services.

### Scholarly monograph publishing

Scholarly monograph publishing is facing multiple challenges: decreasing library monograph collections budgets, increasing publication costs, a diminishing number of publishers, and a technology-driven shift from print to digital platforms and formats. Some CARL libraries have made forays into providing new digital publishing services. However, activities in this area are still at an early stage in Canada. Neither is library and university press collaboration as widespread in Canada as compared to the United States although there are some examples in Canada such as the University of Calgary, where the Library and Cultural Resources portfolio includes the University Press. In 2015, the Mellon Foundation announced a new funding program of over $10 million to support the investigation and development of new digital publishing services that would require the collaborative efforts

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17 University of Victoria Libraries launched an imprint in 2013 and to date has three publications based on materials from their Special Collections and other campus partners. “Library Publications,” University of Victoria Libraries, accessed January 15, 2016 http://www.uvic.ca/library/about/ul/publications/
of university presses, academic libraries, faculty and other partners. A significant number of ARL libraries – Brown, California Digital Library, Indiana, Michigan – are participating in these initiatives. UBC Library is the only Canadian library involved in one of these projects although SFU’s Canadian Institute for Studies in Publishing (CISP) is participating as an external evaluator for all of the funded Mellon Projects. In Canada, there are no directly comparable funding initiatives for exploring new publishing models. CARL and other Canadian academic libraries in collaboration with Canadian university presses and other academic partners and funders are certainly capable of contributing to advancing this agenda in a Canadian context.

### Digital humanities and scholarly products

The digital humanities (DH) field has grown rapidly during the past decade and is attracting a new generation of academics who are adapting and incorporating technology as a direct component of their research. They are also producing an array of research outputs – websites, online databases, datasets – often coupled with specialized software tools. These scholarly products are often more accessible and functional than traditional print equivalents, but they also have new support and “publication” requirements. Libraries already possess extensive information technology expertise and resources that closely parallel many DH requirements, including: content digitization; development and implementation of applications software for the description, discoverability, curation, and preservation of scholarly products and related online content; provision and management of online research environments; and familiarity with open source software lifecycle management. Consequently, a growing number of Canadian academic libraries are not just providing services and support to local DH faculty but actively collaborating as partners on

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research projects. National DH initiatives such as INKE (Implementing New Knowledge Environments)\(^{24}\) also have a number of libraries as participants.

### Open educational resources

The term open educational resources (OER) encompasses a diverse range of teaching and learning materials – courses (full, modules, learning objects), textbooks, guides, streaming videos, tests, software, etc. – that are freely and openly available. Libraries already generate a significant amount of content that is often designated as an OER and have been participating in OER initiatives for years. One of the more recent developments in this sector is the appearance of open textbook initiatives that also have significant overlap with the other publishing areas described above. Two good examples are Open SUNY Textbooks\(^{25}\) – an academic library-based publishing enterprise – and the BC Campus Open Textbook Project.\(^{26}\)

### Digital preservation

One of the concerns in the transition from analog to digital content has been the risk that publications would become unavailable when licenses end, publishers cease to exist, or in the event of technical failure or obsolescence. Collaborative approaches to these issues have included consortial licenses that allow for local loading of subscription content, the Council of Prairie and Pacific University Libraries (COPPUL) Private LOCKSS Network project, and the OCUL Scholars Portal journal platform, the first certified Trusted Digital Repository (TDR) in Canada.

### Research data

Scholarly communication depends not only on the publication of research results but also on the management of research data. Increasingly, research data is recognized as one of the pillars of digital infrastructure in Canada.\(^{27}\) In 2015, CARL launched Portage, a national research data management (RDM) service to assist researchers and other RDM stakeholders through a library-based network of expertise on RDM and national platforms for planning, preserving, and discovering research data. CARL and Compute Canada have recently signed a memorandum of understanding outlining their collaboration in a two-year RDM project that plans to develop a software framework for an at-scale national RDM workflow.\(^{28}\)

Working in collaboration with multiple stakeholders, Portage will help researchers retain

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control of their research data outside the commercial sphere and enable appropriate access and re-use for future research and replication of research findings.

**Significant issues**

Although there has been important progress in some aspects of scholarly communication, several issues have become even more acute in recent years.

1. **Subscription journal models and costs**

   “Commercial publishers have been able to command high prices because as near monopolies, they have a captive audience and are not subject to normal market forces.” This statement from the 1996 AUCC-CARL report rings just as true today. The strong consortial licensing we’ve enjoyed through CRKN has significantly broadened access to scholarly publications, but the model remains fundamentally unchanged:

   - Five commercial publishers now account for more than half of today’s published journal output in natural/medical sciences and social sciences/humanities.²⁹
   
   - Publishers package journals into “big deals” that commit libraries to content they might otherwise not select and to annual increases that are generally higher than the cost of inflation.
   
   - The large commercial publishers have profit margins as high as 40%, funds that come from the public purse that supports faculty salaries, research grants and library acquisitions.
   
   - Most libraries struggle with flat acquisitions budgets, and have to reduce spending in other areas such as monograph acquisitions and human resources.
   
   - This situation has been exacerbated by the fall in the value of the Canadian dollar, which has effectively reduced buying power by about 25% over the past two years.

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2. **Alternative journal models**

Open access journal models are accepted in principle by many and supported by platforms such as PKP’s Open Journal Systems (OJS), but concerns still arise, particularly about cost models and impact factors:

- There are editorial and administrative expenses associated with managing a journal, in some cases covered by in-kind contributions but often requiring offsetting revenues traditionally obtained through subscriptions or grants (e.g. the SSHRC Aid to Journals program).
- There are costs for OJS hosting and associated services, usually borne by universities through their library operating budgets.
- The value or impact of research is measured predominantly by publication in prestigious traditional-model journals and by using products marketed by the publishers of those journals.
- Journals still strive to increase their visibility and impact by being indexed in services such as Web of Science, which libraries support through annual subscription costs.
- Journals often want the benefits of a service provider such as Érudit (see above). Universities then support these journals by paying an annual cost to the service provider.

3. **Article processing charges**

For publishers who want to support open access, the primary approach has been to pass on the cost to the authors, through article processing charges (APCs). Some commercial publishers offer a hybrid model, in which authors can elect to pay an APC to provide open access to their article, and libraries still pay a subscription fee for the journal. The APC amounts are often questionable and their rationales bear further investigation. In Canada, there is generally less support for the APC approach than in the UK and Europe. Several recent discussions highlight the issues and offer alternatives:

- Understandably, researchers object to APCs, particularly in the humanities disciplines where research grants are less plentiful, but also in the sciences where the practice began. Some open access advocates believe that the solution is to simply remove the funding burden from the author, while retaining the concept of a
per article processing charge. A notable proponent of this is the Max Planck Digital Library, which recently put forward a study that asserts that existing subscription budgets would be sufficient to fund APCs. “The current library acquisition budgets are the ultimate reservoir for enabling the transformation without financial or other risks.”\textsuperscript{30} Building on this study, the Berlin 12 Open Access Conference held in December 2015 resulted in an Expression of Interest that organizations will be invited to sign to build an internationally coordinated effort to shift libraries’ journal budgets away from subscriptions and towards APCs.\textsuperscript{31} A major concern about this approach, however, is that it essentially aims to maintain the status quo of existing commercial interests and monopoly pricing.

- The UC Davis University Library and the California Digital Library, with other partners including UBC Library and with support from the Andrew W. Mellon Foundation, are undertaking a major project to investigate the institutional costs of converting scholarly communications, particularly scholarly journals, to an entirely APC business model. They note that the implications of converting the cost of scholarly communications to an “author pays” (or an “institution pays”) model have huge implications for large research institutions that generate a disproportionate amount of the literature.\textsuperscript{32}

- With funding from the MacArthur Foundation, the Public Knowledge Project in conjunction with SPARC (the Scholarly Publishing and Academic Resources Coalition) is undertaking an open access scholarly publishing cooperative study\textsuperscript{33} as an alternative to APCs to sustain open access publishing activities. The goals over the next two years include (a) gathering data from journals and organizations to create a business model and/or to participate in pilots of cooperative publishing with libraries; (b) to consult with stakeholders, including journals, societies, funders, publishers, authors, and readers on what would make cooperatives work or not work; and (c) develop open source infrastructure for conducting co-op pilots to assess journal efficiency and quality through cooperative publishing on a global scale.


• Canadian universities have not addressed the issue of APCs collectively, but informal discussions within CARL indicate there is little appetite for APC’s as a business model for open access, though there have been efforts to defray the costs for researchers. Some related information appears in the recent report of the Library Open Access Funds subcommittee of the CARL Open Access Working Group.\(^{34}\)

Fourteen CARL members reported offering a fund to support faculty, staff and students to publish in fully open access journals: seven universities established funds between $10,000 and $50,000, five universities had funds between $50,000 and $150,000, and two universities had funds of $250,000 or more. As of 2015, four institutions’ funds have been suspended, either temporarily or permanently. Three of these suspensions are due to budgetary constraints while the remaining institution has eliminated its fund due to the perception of it being a poor use of funds. A fifth institution has discontinued funding individual APCs due to high demand, and is reducing and refocusing the fund on other types of open access publishing initiatives.

4. Sustainable “long-form” publishing

As noted in the sections above on scholarly monograph publishing, digital humanities and scholarly products, and open education resources, there are new opportunities to be explored for “long-form” publications in the digital landscape. For all concerned, the goal is to ensure that Canadian scholarship is published and as widely accessed as possible. From a marketplace perspective, however, there are significant challenges:

• University presses have relied heavily on academic libraries as a substantial source of revenue, and libraries have been keen to support them. For example, OCUL and twelve members of the Association of Canadian University Presses/Association des presses universitaires canadiennes (ACUP/APUC), in conjunction with EBOUND Canada, partnered in 2013 to promote and support the availability of Canadian scholarship in ebook format throughout Ontario’s universities.\(^{35}\) This led to a national license with CRKN. As consumers of scholarly monographs, however, university libraries are in a very different position than in decades past. Given the pressures outlined elsewhere in this paper, most library acquisitions budgets are simply unable to support the systematic purchase of scholarly monographs for potential research use, and instead respond to specific user demands. As well, although digital rights management regimes are intended to protect publishers’


revenues and thus sustain their businesses, they often result in a user experience that falls below the expectations of today’s digital consumer.

- With declining revenue streams, Canadian university presses and the Canadian scholarship they support are in a precarious situation. There is an openness to exploring new models but it is not entirely clear what form they might take. For example, while there is general commitment to open access for scholarly books benefiting from public funds (the Federation for the Humanities and Social Sciences has introduced a policy for its Awards to Scholarly Publications Program that states “the Federation will actively promote and facilitate Open Access publishing of ASPP-funded books”), there are strong concerns amongst Canadian university presses that there is insufficient evidence of the financial viability of open access models for scholarly monograph publishing.

### Potential actions

The time is right to repatriate scholarly publishing to the academy and disrupt centuries-old print paradigms. We want scholarly publishing that is not only sustainable: we want it to thrive. There are significant issues to be addressed, but there are also impressive developments that can be built upon further.

A national Canadian strategy must be undertaken in the international context for scholarly publishing, but there are components – such as funding agency mandates and existing collaborative arrangements as exemplified by CRKN – that are most effectively addressed at a national level. Similarly, the Canadian scholarly publishing domain has unique cultural and language requirements that must be addressed nationally. Canada’s academic publishing sector – scholarly societies and publishers, universities, academic libraries, funding agencies, infrastructure providers – has the expertise and ability to create a “made in Canada” solution that could serve as a model for the rest of the world. Most importantly, universities have the ability to work together and to determine how best to allocate their financial resources.

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Recommendations:

1. **Universities should develop joint strategies to challenge the costs of existing subscription models.**
   - a. Shift the perceptions of value that support the monopoly system, perceptions that are reinforced in predominant research impact measures and promotion and tenure processes. To a large extent, this shift is dependent on recommendation 2, below.
   - b. Collaborate in data-driven methodologies for analyzing “the big deal,” negotiating reasonable costs for selected commercial journals, and providing alternative access to articles where agreements cannot be reached. This is an international issue requiring a strong national voice. Impressive work has been carried out already by Université de Montréal and others, and CRKN may be in a position to assist other Canadian universities in building upon it.
   - c. Build upon the work of CRKN’s Institutional Mobilization Task Force in exploring the issues faced by each of our Canadian institutions in providing access to research content.

2. **Universities and funding agencies should allocate resources to developing collaborative, sustainable, high quality scholarly publishing venues.**
   - a. Continue to invest in platforms and services that enable open access and peer review. This includes supporting options such as Open Journal Systems and institutional repositories, and exploring the full costs of sustaining these services at scale.
   - b. Engage in the development of cooperative sustainable publishing initiatives that seek to attract scholarly journals from the more costly alternatives. In the short-term, these could mirror traditional publishing and aggregator services such as Érudit, and in the long-term they could transform the way journals are created, indexed and promoted, or supersede the journal entirely. The important thing is to develop a collaborative approach representing the real costs of publishing and providing alternatives to traditional subscription-based publishing.
   - c. Explore alternatives to the traditional journal, including the opportunities afforded by a global network of repositories and potential service layers. While traditional needs continue to be important – for example, supporting communities of scholarship and peer review, and making knowledge visible and accessible – the digital solutions may be quite different from those that arose in the print era.
   - d. Develop an inclusive strategy that addresses other forms of scholarly publishing such as monographs, textbooks, open educational resources and scholarly products.
from the digital humanities and other disciplines. The same issues associated with scholarly journals are also manifest in these publishing areas as are the potential solutions – adoption of technology, collaborative undertakings, and new sustainability models.

e. Invest in these collaborative, disruptive approaches, rather than APC models that sustain the status quo.

### Next Steps

This paper is intended to seed further discussion and to provide a framework to build upon. The next steps involve a two-tier strategy, of immediate tangible outcomes and higher level discussion and planning.

In terms of immediate outcomes, CARL’s Advancing Research Committee will guide a project that aims to develop a comprehensive collection of Canadian journals sustained through a cooperative open access publishing model.

At the higher level, CARL will seek opportunities for discussion with other university stakeholders in Canada (for example, Universities Canada) and internationally (for example, a meeting of several research library associations convened by Research Libraries UK in March 2016 and an upcoming joint CARL/ARL membership meeting in April 2016). These discussions will explore cooperative open access publishing models more broadly (including financial, governance and sustainability elements) and other recommendations of this paper.

### About the Authors

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