Scholarly Publishing: Transition and Diversification

Transformations in scholarly publishing over the last 30 years have inspired many theses and disquisitions, and the wisest of commentators concur we will continue in transition for some time. As a few hundred years was needed for the transition to print, so the transition to digital will need more than three or four decades.

In the last decade or two, the need for systematic changes to ensure long term sustainability and access to research information has been compelling. Libraries have been leaders because of their role as stewards for the funding and the collections that serve their users. The digital environment has also made more necessary library engagement in the systems that support production, access and storage of research.

Scholarly Publishing as Big Business

That a large segment of scholarly publishing is big business is evidenced by the International Society of Scientific, Technical and Medical Publishers, a global trade association for academic and professional publishers, with over 150 members in 21 countries, claiming to publish over 66% of journal articles and many thousands of monographs and reference works. Its members include learned societies, university presses, and private companies.

The STM 2018 Report notes:
- 33,000 active peer-reviewed English language journals, with another 9,400 non-English language journals, publishing over 3 million scholarly articles a year.
- Growth for journals has accelerated recently from 3% to over 5% a year, as a result of real-term research growth and rising numbers of researchers.
- China has now overtaken the USA as the major producer of global research, with a share of about 19%.
- The broader STM publishing market is now worth $25.7 billion.[1]

Who Publishes?

STM members may publish 66% of the world's journal literature, but many other groups publish the rest.
- Commercial publishers, of all varieties and sizes.
- Professional and scholarly societies, ranging from STM members such as the Institution of Engineering and Technology to specialized, national, and local societies.
- University presses, and other non-commercial publishers. There are significant differences in size among these groups, and many small players – small professional societies, university presses, library publishers, and small or non-profit commercial publishers support scholarly areas that are less lucrative and less well funded than STM.

The list of publishers and acquisition agents from which academic libraries acquire information has a very long tail, with a few major publishers accounting for most of the budget, but many smaller sources being needed to provide information required by researchers and students.

Disciplinary Differences

Disciplines have differing needs for their communications, and the uOttawa Library Collections Primer summarizes ways in which these differences affect collection strategy.
- Digitization has also moved at different rates in different disciplines.
- Topic-based and interdisciplinary approaches and multiplication of specialties within disciplines and fields have increased the complexity of scholarly publishing.
- The overwhelming growth of STM information sometimes overshadows the practices and needs of other disciplines.

La Francophonie

While all Canadian academic libraries acquire French language materials, Quebec and bilingual academic libraries, like uOttawa, have significant collection needs, which require specialized acquisition staff and tools. Different patterns in the transition to electronic publishing exist in francophone countries. Quebec is a distinct market, with a lively publishing industry. As described in the 2014 report, Costs and Benefits of Bilingualism at the University of Ottawa, the bilingualism-related expenditures for the library collection was calculated as $3,125,076 (2014). In the 2017-18 fiscal year, we acquired 7,402 documents in French (mostly books) This includes purchasing costs, annual costs for subscriptions, and the costs of cataloguing and related processing costs. As a result of increases in electronic journals, more researchers choose to publish results in English, and in Quebec, francophone researchers may choose to publish in bilingual or English journals.²

Diverse Formats
Digital technology has enabled diversity, as well as quantity of scholarly information. The digital transition began in the nineties first with scientific journals, and grew at different rates of acceptance in different disciplines. By now, most university libraries acquire a large percentage of materials digitally, and in an increasingly diverse variety of formats.

The journal article remains the primary means of communication in STM, and in other scholarly areas is increasingly important.

Monographs in all fields are more likely to be acquired in digital formats by libraries, but there are subject areas where print may be the only available format. Non-English languages is an example. The Humanities is a primary area in which libraries acquired print books, because they are not available in e-format or because of audience preference for print for reading long-format materials, or because books in e-format are generally more expensive than in print. A continuing decline in the circulation and use of print collections has increased the impetus to electronic monographs, as have better interfaces for reading online.

Other digital formats are:
- Streaming video and audio is available for Music, Theater, Film, and other media studies materials, and may be preferred by libraries, if costs of access are sustainable.
- Numeric data, maps and geographic information systems.
- Digital humanities, which include primary digital sources, datasets, and specialized software.
- Teaching and learning materials, online courses, print and online textbooks, and tests, etc. are often supported in academic libraries for both teachers and students.
- Research data is increasingly important in good research practice, and highly challenging to manage. Many academic libraries offer services for storage and access to both locally produced and external research data.
- Indexes and subject databases are tools to access scholarly literature, often giving a depth of access to specialized topics that is not replicable by web resources such as Google Scholar, and other search engines.

The Audience for Scholarly Communications

- Peers. For many researchers, the audience for their research is firstly their colleagues and fellow researchers: their peers.
- Students and learners. Some will be the next generation of researchers, but the majority will become the citizens maintaining a society in which research can flourish.
- Funding agencies. They have a key impact on how research is funded and disseminated.
- The general public. The Guedon Report notes another audience is the public: the practitioners, educators, social groups, and regular citizens who are engaged or affected by the work of researchers.[4]
The Big Deal

The big deal is a principal means for academic libraries to provide access to scholarly journals and other literature. Big deals have existed since the late nineties and allowed large academic publishers to maintain their subscription bases and academic libraries to provide access to significant journal collections. Big deals:
- Have expanded to include monographic collections, and the model is used to acquire primary research digital resources.
- Are mostly negotiated by library consortia, which provide the scale of size to negotiate somewhat reasonable price increases.
- Have fallen out of favour for four reasons:
  1. Budgetary. As serials prices rose, and library budgets did not, big deals consumed more dollars, and libraries could buy fewer non-big deal materials.
  2. Policy. Libraries lose the ability to adjust collections because big deals are generally all or nothing agreements.
  3. Systemic. Big deals have created conditions for the growth of large commercial publishers at the expense of smaller publishers[5]
  4. Societal. There is a rapidly growing consensus in many countries that the results of publicly-funded research should be openly available, from the standpoint of social equity and the value of knowledge as a common good.

Recent cancellations of big deals by some Canadian research libraries (Laval, Université de Montréal, Calgary and Memorial), by the University of California and other US institutions, Norway, and other European countries suggest that alternative forms of access to the scholarly literature are reducing the importance of large commercial publishers and the big deal. The Scholarly Publishing and Academic Resources Coalition (SPARC) tracks the cancellation of big deals internationally on their website.

For Reference: University of Ottawa’s Big Deal spending

<table>
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<tr>
<th>Publisher</th>
<th>Costs 2018-19 (CAD)</th>
<th>Number of current journals</th>
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<tbody>
<tr>
<td>Elsevier</td>
<td>$1,352,812</td>
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<td><strong>TOTALS</strong></td>
<td><strong>$3,156,281</strong></td>
<td><strong>9,867</strong></td>
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Digital Collections: Own or Lease

In the print era, libraries maintained buildings to store and make accessible the materials that they acquired in perpetuity. With digital content, libraries make other decisions as well:
- Buy or Lease. While uOttawa and most other academic libraries prefer to acquire digital content permanently, costs may encourage libraries to consider leasing content.
- Licensing Terms. Whether digital content is bought or leased, licensing terms have to be negotiated for each resource, to assure appropriate access. Printing and downloading is often the subject of contention; examples of other issues are which users have access, and whether the access is available only in the library or remotely.
- Libraries now maintain systems that can support loading of content locally, or as part of consortial arrangements. Content that is available from publisher or aggregator sites will still require library support systems.

Copyright

Licensing for digital resources inevitably involves copyright law, and libraries have developed expertise to ensure that digital licenses fall within provisions of copyright law and that user rights under copyright are not eroded by license agreements. Libraries also educate users to understand their responsibilities and their rights under copyright, and to work for a balance to protect authors’ rights and give fair use for education and research to the information under their stewardship.

Open Access

Though Open Access has existed since the early 2000s, as a movement to make scientific research available freely to the world, researchers have been openly sharing their research since the 70s. Open Access is now a significant and complex addition to the scholarly publishing environment.

Open access as a publishing approach began with low cost portals supported by universities and research centres, and has now grown into a huge industry, in which the interests of commercial publishers are firmly embedded. Tellingly, libraries have not seen costs of journal
literature decline as large commercial publishers see the economic benefit of publishing in open access using the Article Processing Charge (APC) model.

Many European funding agencies have committed to ensuring the research they support is distributed freely to all users, often by rolling costs of article processing charges into research funds. Such a support system is not universally well-regarded as it ensures the active participation of commercial enterprises in open access. In Canada, the Tri-Agencies adopted an open access policy that adopts a balanced approach, encouraging researchers to make use of open access repositories to make their work freely available in addition to publishing in open access. Most Canadian academic libraries host institutional repositories that make institutional research available freely as publisher policies allow, such as uO Research here at uOttawa.

How to fund open access is answered differently among engaged parties, and in some disciplines, especially arts and humanities, open access may be resisted since the currently dominant APC model of open access does not respond to their publishing needs. However, models are emerging that look to library financial support and shared governance to create publishing platforms for open access journals and monographs with no author-facing charges.

The Public Knowledge Project (PKP) and Érudit are two Canadian examples of groups that are creating these platforms that support scholarly publishing within Open Access models.[7] These platforms and institutional repositories are examples of how roles have blurred in production, dissemination and access of scholarly digital content, and created opportunities for new players and partnerships.

We are proud of the fact that the University of Ottawa Library invested over $330,000 in open access initiatives in 2018-19. These initiatives included shared financial support for publication fees or a reduction in publication fees through memberships and licensing agreements, support for publishing infrastructure as described above and and campus partnerships, such as one with the University of Ottawa Press to publish open access monographs.

Made in Canada Scholarly Publishing

A recent report on the Canadian scholarly publishing environment affirmed the importance of a “robust and sustainable scholarly publishing system that meets the needs of Canadian researchers.”[8] This report detailed Canadian initiatives that meet these needs for journals, monographs and born digital scholarly forms, and made recommendations for initiatives and funding commitments that could increase the profile of Canadian research. Local support for publishing research is an indicator of a healthy enterprise.

At the same time, Canadian researchers work in an international context, and even when research has a Canadian scope, Canadian researchers aim to be internationally authoritative in
their chosen discipline. For this reason, Canadian academic libraries are highly integrated into the international context of scholarly publishing.

As part of the Canadian research infrastructure, academic libraries are keenly aware of the need to support information produced in Canada. Because an academic library both supports and mirrors its parent institution, national and local scholarship is important for them to support.

Who Pays?

Academic libraries are responsible for managing the funds for their institution’s scholarly collection needs. These funds come primarily from central university funds. As the specialization and variety of information needed by their users has increased, funding provided to libraries has decreased.

A CAUBO Report in 2015, and an update in 2018, noted that ‘the increase in Library expenditures was far below the overall increase’ when General Operating Expenditures were analyzed by Function (e.g. Computing Services, Administration, Instruction, etc.).[9]

Globally, from 2011 to 2015, the prices of academic journals rose about 5-7% per year, approximately 25% over the 4-year period, with similar increases experienced in 2016 and 2017. The top five publishers, who control over 50% of the market and above 70% in some disciplines, have profit margins in the order of 28-38.9%. [10]

Libraries as Active Players in Scholarly Publishing

With electronic access and digital collections, libraries have moved naturally from traditional functions of acquisition, access and storage to publishing activities. This first developed as digitization of local collections (archives, maps, theses, French books), which necessitated local systems of access. More recently though, with the rise in open access, many libraries have moved into publishing operations or partnered with other sectors of the university to become publishers of original content in their own right. The Library Publishing Coalition lists over 80 member libraries in the United States and Canada actively supporting open access journal and monograph publishing. While many of these support journals of local faculty editors, large players have emerged that not only produce high quality content, but also experiment with new forms of scholarly communication beyond the traditional journal article and contribute to the development of open infrastructure for scholarly publishing. Here at uOttawa we proudly work with 12 peer reviewed journals to host and publish their content on Open Journal Systems, a
robust open source journal publishing platform developed by PKP and hosted with our consortial partners at Scholar’s Portal.

Through the market influence of library consortia, libraries have been significant players in working for more reasonable costs for scholarly journals and other publishing ventures. CRKN for Canada, and OCUL for Ontario have been leaders in these developments.

The mandate of academic libraries is to acquire the information needed by their students, faculty, and researchers for learning, teaching, and research, and to preserve it for future use. In this time of digital transition, libraries are transforming the means to fulfill their mandate, and ensure sustainability of information acquired for their users.


