REPORT TO SENATES

# TOWARDS OPEN

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# Introduction

I am very pleased to present this year's UNB Libraries Report to Senates. We have titled this year's Report Towards Open, with a specific focus on the evolving scholarly communications landscape. UNB faculty and student researchers experience a publishing landscape that is dramatically different from even a few years ago. Universities across the country, and indeed across the world, are working both collaboratively and within their institutions to develop strategic approaches to the "open science" landscape. Within UNB Libraries we share the goals of our Canadian Association of Research Libraries colleagues to foster timely, equitable, and enduring global access to, and dissemination of, knowledge. We are committed to strengthening UNB's research contributions to the advancement of science, scholarship, and the betterment of society.

While significant developments are emerging across the world for stronger "open science" policies, and gains continue to be made to ensure that the results of publicly funded research are made openly available (when appropriate), investment in these initiatives is required. As our Report explains, UNB Libraries actively supports our researchers in meeting their own publishing objectives, and in meeting open access requirements. We contribute to the national commitment to sharing and preserving the outputs of Canadian research, and to containing the costs of subscribed access.

With our Report to Senates we are seeking a commitment from UNB at an institutional level for an Open Access Policy, aligned with the role that UNB Libraries plays in contributing our expertise, our services, and support locally for UNB researchers and the necessary regional, national, and international open infrastructures and services.

I invite you to read our Report. You will find a draft version of a UNB Open Access Policy as Appendix A, for which your support is requested.





# Towards Open

Scholarly communication is changing. The methods by which academic research is created, evaluated, preserved, and disseminated have evolved significantly over the last generation. Publishing, once locked in time by print, has become more fluid and iterative. For some disciplines, preprints obviate the need for traditional publishing almost entirely. An embrace of open science i – where researchers share not just publications but supplementary materials, research data, proceedings, and other works – has dramatically increased access to research outputs

throughout the entire scholarly communications lifecycle. And these products may be cast far and wide across preprint servers, social media, traditional journals, scholarly profile services, personal websites, and a variety of repositories, be they data, institutional, or disciplinary. The where of publishing research is no longer enough. Modern scholars are also concerned with what products of research to share, and how they want to share them.

UNB Libraries recognizes the need to affirm our commitment to "Open Access" and ensure that our strategies are aligned with both national and international trends.

Openaccess (OA) – the call for which first emerged in Budapest over twenty years ago – has been the primary catalyst for these changes. The movement asserts that "removing access barriers to this literature will accelerate research, enrich education, make literature as useful as it can be, and lay the foundation for uniting humanity in a common intellectual conversation and quest for knowledge."ii Or, in other words, a public good. Funding bodies have, increasingly, agreed. Mandates from jurisdictions the world over are employing requirements for open access to research and/or engagement in open science practices. This expectation – one of free, immediate, and equitable access to publicly funded research – has, predictably, shifted the ground under publishers, institutions, and our researchers.

Researchers may find themselves between a rock and a hard place. They are asked to accommodate funder mandates as publishers increase fees for so-called "article processing charges", and often believe this to be a requirement (it is not). They navigate agreements and look for discounts. They reallocate funding from research to pay for these fees or skip mandate requirements entirely. They find themselves at the crossroads of publishing as they might prefer, meeting mandates, observing opaque policies, and navigating copyright. UNB's researchers need explicit support, not just from UNB Libraries, but as a collective effort throughout the institution.

In 2014, the Libraries brought to Senates a "Statement of Support and Guidelines for Open Access" which encouraged UNB to join the global movement away from traditional scholarly publishing practices which, having evolved in a print-only era, impose an increasingly untenable profit model on the mobilization of knowledge. Twenty-to-thirty years ago, a researcher might have operated under the assumption that their publications were available to their colleagues around the

world. As costs rise, and some jurisdictions extract themselves from agreements with major publishers, these assumptions are no longer safe. Both the open access movement and our participation in it have evolved considerably since 2014, in an effort that is very much aligned with the values inherent in librarianship.

The goals outlined in Toward 2030 reaffirm the core values of academic activity and renew the Library's resolve to engage with our global, national, and regional partners to construct and maintain an infrastructure for scholarly communication that helps UNB "tell our story proudly to the world" and "mobilize knowledge to transform communities". These goals are certainly easier to achieve when UNB research is not locked behind paywalls and if our scholars retain rights to their published works. With the highest level of institutional support, we wish to redirect our involvement with authors and publishers toward a digital, interoperable framework that most benefits researchers and learners, with participation in the full cycle of scholarly communication.

We are not alone in this venture. Universities across Canada are increasing their commitment to the open access movement. Compared internationally, Canadian publications are less likely to be published openly, but Canadian researchers make more than average use of open publications<sup>iii</sup>. As more jurisdictions adopt open access mandates, UNB researchers who collaborate externally will be expected to be part of the open scholarly commons. Quebec's adoption of Plan S, and the 2022 White House Office of Science and Technology (OSTP) Memorandum have accelerated the push to broader adoption.



### Collaborating Countries 2020–2022

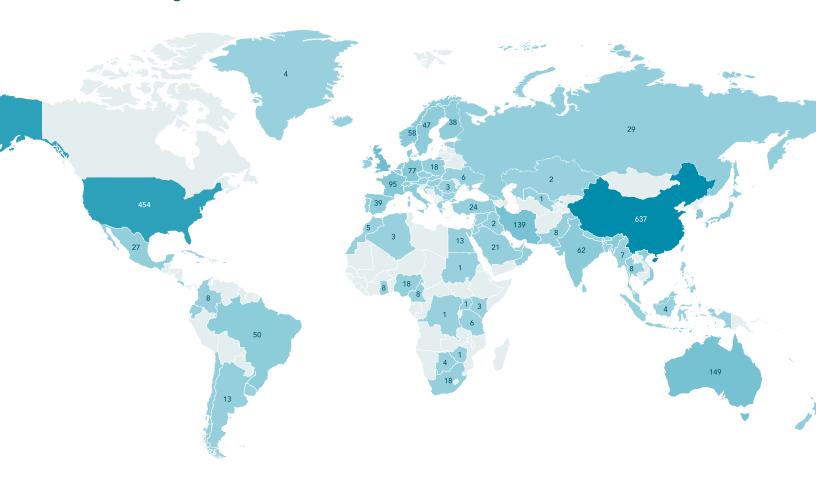


Figure 1: UNB's collaborating countries



# Costs of Publishing and Reading

UNB Libraries' acquisitions budget supports the provision of hundreds of electronic resources through subscriptions. The "top ten" publishers account for fully 42% of our total spending, at just under \$2,000,000 annually. This significant amount is only compounded by additional charges now being levied against authors, as commercial academic publishers participate in the open access movement.

# The Rise of the Author Publishing Charge (APC)

There is likely no more pernicious or frustrating trend in modern publishing than the Author Processing/Publishing Charge (APC). Just a few years ago, APCs were indicators of predatory publishing practices from bad-faith publishers. Today, APCs are a routine strategy whereby journals ask authors to pay to publish open access in what are known as "hybrid" or "gold" journals. Major publishers argue these fees are necessary to replace subscription revenue lost in providing open access, yet still required to cover costs for peer-review, copy-editing, layout, and distribution. It is often the higher-impact journals which are charging APCs, with costs for the publishing of a single article that can exceed \$3,000 USD.

APCs have earned their controversial status. Researchers already provide authorship, peer-review, and editorial labour to publishers. The burden of APCs is directed on the community doing much of the work. We know OA is beneficial to researchers, providing increased visibility to works, higher citation counts, and greater democratization of knowledge. Or, in other words, "impact". Many publishers offer a viable route to green open access, where authors are permitted to self-archive an accepted manuscript in a publicly accessible institutional repository. However, they rarely express these free options to authors directly. And so, we see mandates created to make the products of publicly funded research accessible to that same public resulting in public funding of publishing costs paid to private publishers. And these costs have been mounting.

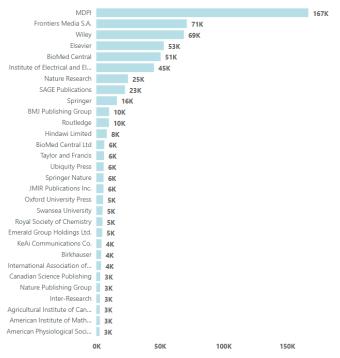
As OA policies and mandates (such as those from our own Canadian Tri-Agencies) require more researchers to engage in open access, they find themselves tethered to this "pay-to-publish" solution at either personal expense or using public monies from funders. In some cases, this might make sense.

Paid open access could be necessary if the publisher offers no alternative route for "green" (i.e., free) OA via self-archiving of accepted manuscripts in an institutional repository. This is rare, however. Authors might also wish to pay an APC to support a specific OA publisher or to retain more rights to reuse or distribute their work. Immediate OA via APC can also ensure access to time-sensitive research of relevance to practitioners or policy makers.

The libraries are concerned about these increasing costs to publish. Libraries already pay subscription fees to publishers, and APCs represent a large institutional spend on top of those costs. For example, UNB-affiliated researchers paid an estimated \$69,000 CAD to Wiley for publication fees over three years, in addition to subscription costs. In almost every case, an accepted manuscript placed in our institutional repository would have provided delayed open access (within 12 months) at no cost, meeting Tri-Agency requirements in the process.

Another concern is that paying APCs allows for unequal access to publishing. This model excludes many authors from the global south or authors without funding from accessing higher impact journals and giving their work visibility. Some, but not all journals offer discounts or waivers to authors from marginalized geographies.

#### Sum of APC (\$CAD, after discount) by Publisher



This figure shows the top publishers to whom UNB authors paid APCs in 2020–2022. Although Elsevier was the leading publisher, most of their publications were not open access (only ~22% of Elsevier publications were OA), whereas all research outputs published with MDPI between 2020–2022 were published open access.

Figure 2: APCs paid to publishers, 2020–2022

#### 31% Increase in APC from 2020-2022

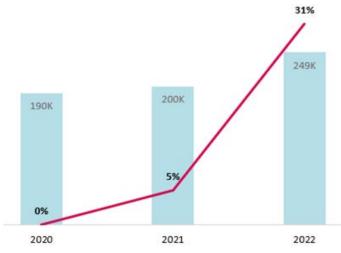


Figure 3: Total APC spend (estimated), 2020–2022

We estimate that spending by UNB authors on article processing charges has seen a dramatic increase in the 2020–2022 period (~5.25% YoY 2020-2021; ~24.5% increase YOY 2021–2022). However, accounting for these costs can be significant challenge. There are no clear workflows or reporting mechanisms in place for APC costs. On works with co-authors or where the corresponding author is not identified, it may be impossible to discern who has paid the APC or if APC costs have been split between authors.

### **Transformative Agreements**

Because commercial academic publishers have strategically aligned themselves within the open access movement, libraries have had to organize collectively for less extractive subscription models. In what are called 'transformative agreements', publishers have been bundling discounts or complete waivers of APCs with traditional subscription packages. Conceptually, these agreements should be cost-neutral; as more content is published OA with payments to publish, subscription fees would decline accordingly. We have participated in several such agreements which usually include greater financial transparency from the publishers, along with regular reports of our authors' output. International groups such as the ESAC Initiative enable the sharing of data about publishers' agreements in other countries, which help libraries to negotiate effectively. Ostensibly, transformative agreements are a transitional phase for commercial publishers to move to more fulsome open access within a reasonable timeframe. However, few publishers have identified a clear timeline for such a transition.

Hybrid journals – those containing a mix of open access and paywalled content – present a particular challenge to transformative agreements with commercial publishers. Too often, we find that publishers are failing to reduce subscription costs by acknowledging the content for which they have already been paid to publish. This double dipping is being challenged in negotiations, but so long as "high impact journals" are associated with paywalls and individual authors pay to publish using what are, to the institution, unaccountable expenditure streams, we will need to devote significant time and energy to tracking these costs.

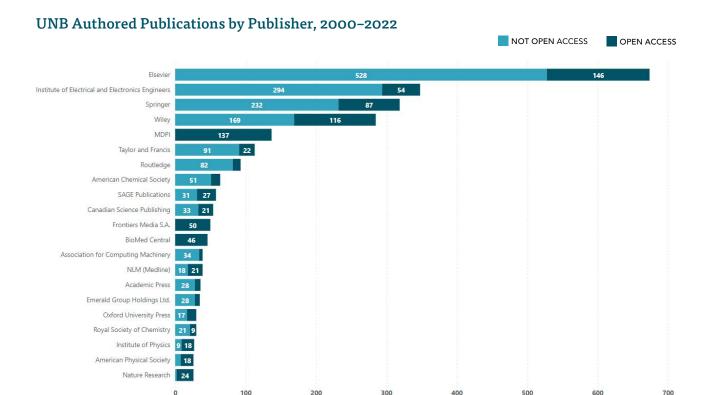
Alternative models of open scholarship better complement academic values. We have agreements with not-for-profit publishers such as the Public Library of Science (PLOS), Company of Biologists and MIT Press to pay UNB authors' costs of publishing in advance, or to "subscribe to open". These are appealing approaches because they divert acquisitions funds from commercial publishing and fund global open access to research materials. However, any funds used in these agreements are not currently line items in our budget, as they are extraneous to our traditional spending. As long as we need to direct funds to commercial publishers, our ability to support alternative models is dependent on a strong Canadian dollar, or some other source of savings.

In assessing potential publishers to support, we generally follow the criteria set out by CRKN, which considers financial sustainability, academic quality, and good operational practice.

# Faculty Publishing Behaviour

Just as the Library tracks usage of the resources to which we provide access, we also follow the publishing destinations of UNB authors. Knowing where our researchers choose to publish helps us to direct acquisitions funding appropriately, to support both reading and publishing for this community.

Most library licenses are negotiated at the publisher level, and since authors' publishing costs are included in some agreements, we need to measure the projected impact of each publisher's offer. For the nearly 3,200 articles in STEM areas published since 2020, Elsevier, IEEE, Springer, Wiley and MDPI are the preferred destination publishers of UNB authors. About 46% of these articles were published open access.



Number of Publications

#### Figure 4: UNB Publishing destinations by publisher, 2020–2022

Unfortunately, our source for this data is exclusive to Scopus, which focuses on peer-reviewed journal articles in STEM areas. This overlooks most monographs and grey literature, and so is ineffectual for revealing all UNB researchers' work, especially those in the humanities and social sciences.

What we do know is that a significant portion of the journals belonging to these major publishers regularly allow for self-archiving via institutional repositories. Were UNB researchers more consistently sharing accepted manuscripts in UNB Scholar, they would be spending less money on APCs and a greater percentage of their research would be open access. This accessibility benefits not just the public, practitioners, or scholars around the world, but also expands the scope of readership for UNB's authors.



# Library Support for Open Scholarship

## Open Scholarly Infrastructure

The Library directs a portion of its acquisitions budget to help fund open infrastructure projects and alternative publishing models. In the past few years, we have supported:

- OpenCitations
- DSpace
- Érudit, the Public Knowledge Project (PKP), and Coalition Publica
- SHERPA/RoMEO
- CRKN Heritage Content Access Preservation Fund
- SCOAP3
- PLOS Community Action Publishing
- MIT Press D2O

Open scholarly infrastructure forms the framework by which scholarly publications and their metadata are shared and exposed to illuminate the connections between researchers, funding bodies, publications, research data, and the use of their works. It also includes the platforms in which researchers self-archive, disseminate, and preserve the products of their work. Open infrastructure and open access, though not the same, work in tandem to illuminate connections between researchers, institutions, and the enormous variety of research outputs across the globe.

Perhaps the Library's most impactful investment has been in the creation of UNB's institutional and data repositories. UNB Scholar and UNB Dataverse are both stable open-source software platforms designed to facilitate the discovery, sharing, and preservation of research products and data. Both are designed to interoperate with global platforms leveraging, in part, the open scholarly infrastructure that we have supported. UNB Libraries direct roughly \$500,000.00 toward building capacity for open scholarship annually. At 5% of our total budget, this amount places UNB ahead of the national average (2020) of 3.09%.iv

#### **UNB** Scholar

UNB Scholar is the Institutional Repository managed and maintained by UNB Libraries. Housing more than 10,000 individual documents – including research reports, theses & dissertations, working papers, journal articles, honours theses & senior reports, and other research outputs – this repository provides public access for open access research at UNB, and UNB-community-specific access when needed. Institutional Repositories are common the world over and are identified by funding bodies as appropriate deposit locations for self-archived versions of works. An accepted manuscript (the article version accepted by peer review but before copy-editing and layout) in an institutional repository is compliant with Tri-Agency policies without the need for OA APC fees.

#### UNB's Dataverse and Research Data Management

UNB Libraries had already been providing research data management services to the UNB community for several years when the Tri-Agency Research Data Management Policy was released in early 2021, introducing new requirements for data management planning and data deposit. Although the policy is specific to Tri-Agency funded research, similar requirements (particularly with respect to data deposit) are becoming increasingly common with other funding agencies and publishers. The library's RDM Services Team offers support for these critical research data management practices, from training and instruction for student researchers to consultation and assistance for research faculty. This includes access to the UNB Dataverse data repository, hosted and maintained by UNB Libraries. UNB's Dataverse repository is available to all UNB researchers, and provides controlled public access, detailed descriptive metadata, and persistent identifiers (DOIs) for all deposited datasets.



# Library Publishing

UNB Libraries have long been a participant in publishing initiatives. For over two decades, the Centre for Digital Scholarship (and, formerly, the Electronic Text Centre) has provided journal hosting and publishing services leveraging Open Journal Systems (OJS), a free open-source platform developed by the Public Knowledge Project at Simon Fraser University.

OJS is designed to manage the entire researcher-to-reader workflow for submission, peer review, and production from one place. We currently host fourteen active journals, including UNB's own Acadiensis, Studies in Canadian Literature, and the UNB Law Journal. Further, the libraries are working in close collaboration with the Faculty of Arts to explore digital monograph publishing (using Open Monograph Press), expand open access availability, and to enhance instruction and learning opportunities, as well as available infrastructure for the Certificate in Publishing program.

The Canadian scholarly journal landscape is significantly distributed across Library Publishing efforts across the country. With membership in international Library Publishing Coalition (LPC) and with journal members as long-standing participants in the Canadian Association of Learned Journals (CALJ), UNB Libraries' publishing services stay abreast of narratives and issues facing journals, from the impact of Tri-Agency mandates, transitions to open access, platforms, formats, metrics, and other trends.

#### **Coalition Publica**

Coalition Publica is a partnership between Érudit (Université de Montréal) and the Public Knowledge Project to advance research dissemination and digital scholarly publishing in Canada. Recent recipients of a \$10 million grant from the Canada Foundation for Innovation, they are developing a non-commercial, open-source national infrastructure to support a very different kind of transformative approach to publishing, one where library publishers and smaller Canadian consortia can collaborate to reduce costs, better disseminate Canadian scholarship, and embrace collective funding models to support open access. UNB Libraries are proud supporters and participants in Coalition Publica, with membership on both the advisory and technical committees, facilitation and support for our hosted member journals, and \$24,000 annually supporting subscriptions and the open access publishing infrastructure.

#### **ORCID**

ORCID, or "Open Researcher and Contributor ID", is a not-for-profit organization committed to establishing clear, trustworthy connections between researchers, their works, and their affiliations. As ORCID members, UNB Libraries provide support to our researchers looking to establish and populate their ORCID profiles and understand the applications and interactions of persistent identifiers across scholarly publishing. ORCID is increasingly useful for scholars in applications for funding, dissemination of works, and disambiguation of authorship.

### **Open Educational Resources**

The issue of affordable and accessible textbooks is a significant challenge for post-secondary education. The Library has been urged by students to lead UNB's movement to balance the commercial textbook model with open access alternatives. In the past, print textbooks allowed the library to place a copy on Reserve when provided by the instructor or acquired through special funding. This was a legitimate alternative for students who could not afford to purchase their own copies. Now, many instructors direct their students to purchase or lease electronic versions of textbooks, which often include ancillary learning and assessment tools and cannot later be resold as "used textbooks". This model is often referred to as "Inclusive Access" by the publishing sector, and the library is very concerned about the restrictions and mandatory costs that this transformation represents. Publishers normally refuse to license textbooks in e-Book format to libraries, recognizing the erosion of profit that such sales would incur.

UNB Libraries participate by offering platforms for finding, modifying and hosting open educational resources, and encourage their use in instruction, but decisions regarding instructional resources rightly rest with course instructors. OER use has seen little take-up at UNB, though regional efforts from the Council of Atlantic Academic Libraries (CAAL) in the creation of the AtlanticOER platform have encouraged some growth in the region. Notably, their development grant program awarded funds for the creation of OER for the Faculty of Management's Business Information Skills Certificate. Incentives such as credit for adopting or modifying open resources, course relief, and adequate funding have resulted in increased use elsewhere.

In the meantime, students either go without their course's prescribed readings, find workarounds that deprive learning opportunities or violate copyright, and a compelling asset in recruitment and retention is being overlooked.

### **Open Digitization Projects**

UNB Libraries are pleased to have led or partnered in the design and development of numerous digital research projects and digital collections for researchers at all levels, at UNB and beyond. The Libraries' Systems Group and Centre for Digital Scholarship are central in these efforts and participate in a range of activities from assisting with the development of grant proposals to designing user interfaces and data structures to providing high-quality digital imaging services and support. We have partnered with UNB faculty and researchers on SSHRC and CRC funded projects from English (Early Modern Maritime Recipes), French (Vocabularies of Identity), History (British North American Legislative Database), and Biology (Connell Memorial Herbarium, Nature's Bounty), and we are currently in discussion with the Quartermain Earth Sciences Centre to bring another of UNB's unique collections to a global audience.

Beyond UNB, UNB Libraries has partnered with our community on several freely available digital resources. The Passamaquoddy-Malisseet Language Portal, developed in collaboration with the Passamaquoddy tribe, is a multi-media resource that is actively used by linguists and Indigenous language teachers in Canada and the US. More recently, we are working with the Provincial Archives of New Brunswick to update and revise PANB's Directory of NB Newspapers (to be hosted by UNB Libraries as part of the New Brunswick Historical Newspapers Project), and collaboratively digitize, preserve and share nearly two centuries of the province's printed news heritage. UNB Libraries are also developing the New Brunswick Bibliography Online, an online bibliographic database of books, articles and other materials published in New Brunswick, by New Brunswick authors or about New Brunswick. Our commitment to providing open, freely accessible digital content has enriched and promoted both the history and the scholarly output of the university, province, and Atlantic region.



# Motion for an Open Access Policy

A decade out from the release of the 2014 Statement on Open Access, it is clear to the libraries that UNB needs to pivot towards a more intentional and fulsome Open Access Policy. It is no longer enough to simply acknowledge the value of OA. Researchers should be supported in navigating open scholarship and the evolving demands of funder mandates. As such, UNB Libraries are proposing the adoption of a new Open Access Policy for the University of New Brunswick; one that brings the institution more in line with nation-wide efforts and the current scholarly communication landscape. Our proposed policy, attached as Appendix A, was created using the OA Policy Tool maintained by the Canadian Association of Research Libraries.

#### Means

#### **Centralized APC Tracking**

The Library's acquisitions model has changed profoundly in the past ten years, to include publishing along with subscription costs in various open access models with commercial academic publishers. Because complete cost data is essential in negotiations with publishers, we need to know how much UNB authors are paying to publish anywhere. A centralized APC tracking system will bring clarity to the costs of creating and using published works. Open access publishing will never be free, and the library requires participation from across campuses to effectively manage UNB's scholarly communication and access to research costs.

#### Reaffirmation of IR and DR

The UNB Scholar Institutional Repository and our research data repository, Dataverse, provide clear avenues for meeting the Tri-Agency Open Access Policy for Publications and the Research Data Management Policy, respectively. As support for these platforms increases, so too can efforts to streamline deposit and dissemination within global open scholarly infrastructure projects (such as ORCID, Crossref, Datacite, OpenAIRE, and ROR) to not only improve the discoverability of UNB research but the connections between institution, researcher, funding, and works.

Though not universal, it remains the case that myriad routes to free (i.e., green) open access are supported by most journal publishers. We have the tools on hand to subvert the need for authors to pay for publishing in traditional or hybrid models. Routes to green OA allow for researchers to publish as they would, without additional fees, while still providing some public access to these works.



# Rights in OA Publishing

Developing an open access policy for UNB will require a measured approach and awareness of our disparate scholarly communities. UNB Libraries understands that every discipline has its own culture of publishing. Relationships may vary by type of output, predominance of specific publishers, communities of practice, and long-standing forms of disseminating research. Discussions toward an open access policy should include clear criteria and procedures for responsible applications, opting out, and privacy. Wider consultation will reveal other potential caveats, but some bases for exclusion follow.

### Academic freedom

Faculty members are entitled to publish where they choose. While we hope that the costs of traditional publishing and of access to published data are recognized by all, we uphold the tenet of academic freedom. If authors' motivation to publish in certain journals is influenced by criteria for tenure and promotion, another set of questions deserves attention.

## Cultural sensitivity

Indigenous data sovereignty (IDS) and other movements assert the rights of groups to maintain control over data about themselves and their environments. Such challenges to the dominant discourses that underlie open science should be respected.

### Diverse fields of study

So far, open access publishing has primarily affected journal articles in the STEM areas. While models for the creation of open monographs such as MIT Press Direct to Open test the success of open scholarly book production, publishing output in the humanities and social sciences continues largely along traditional paths. Beyond publishing culture, some programs such as Creative Writing consider open access publishing as a threat to future remuneration. A faceted approach is needed, with input from all faculties.

### Opting out

Once we have defined categories of exclusion from open access depositing/publishing, we will need an institution-wide process for opting out. These decisions belong at a VPA, VPR or Provost level.



# Related Advocacy and Literacies

While authors may have the impression or expectation that they own the products of their work, the reality is that copyright is often granted to publishers. Increasingly, this misapprehension raises issues for researchers, publishers, and libraries.

# Copyright

Traditional publishing models that rely on authors to relinquish their control of rights create legal and ethical uncertainty in academic research and instruction. UNB Libraries' Copyright Office works with the Office of Research Services and the School of Graduate Studies to encourage researchers to consider their intellectual property early in the publication process. The UNB community is provided with professional support for the important role of IP commercialization and technology transfer for research and innovation output. Similarly, UNB authors require support in navigating and negotiating the copyrights of their work when they publish through commercial academic publishers. Retaining rights to their published works will ensure authors and the UNB community will have unrestricted access to scholarly output for instruction, dissemination and the public good. Institutional support for open access publishing provides authors a legitimate framework to retain ownership of their intellectual property, usually using a variety of CC-BY license.

#### Academic Social Media

Researchers share their works in myriad places depending on intended audience, communities of practice, or assumed reach. An increasingly popular choice is to distribute works via academic or professional social media platforms, LinkedIn, Academia.edu, SSRN, and ResearchGate, alongside more ubiquitous platforms such as Twitter and Facebook. These public platforms can be valuable to researchers in the dissemination of their research, providing venues for engagement with the public, policy makers, and journalists. They can also strengthen connections to and between communities of practice.

However, academia-themed social media platforms are managed by for-profit, venture-capital-funded start-ups and are developed to sell user data pertaining to their connections and behaviours. Too often, ResearchGate and Academia.edu are thought to be credible and accountable locations for self-archiving and sharing copyrighted resources. For funder purposes, they are not considered viable repositories for research. Nor do these platform providers observe any preservation, copyright, or privacy mandates that would differentiate them from Facebook or Twitter. It is vital that researchers appreciate the potential issues related to privacy, data ownership, and copyright in these spaces.



# Validity & Prestige in Publishing

# OA Publishing and Research Assessment

Open access publishing has greatest impact in an open science framework, where individual research outputs are linked to their associated data, source code and other related creations, funding sources, and subsequent use in other publications. Institutions' reliance on metrics such as the journal impact factor and h-index to assess research can now be replaced with a more holistic and contextual appraisal of research impact. The Declaration on Research Assessment (DORA) and its affiliated projects have developed effective critiques of blinkered, quantitative research assessment and describe how an open science framework encourages a more inclusive and rounded approach.

Measures of impact can include direct citation and field weighted citation counts, considering publishing cultures across disciplines. Additionally, we may consider policy citations, interdisciplinary research, global collaborations, and number of open access publications and contributions to the open scholarly ecosystem. As librarians, we can support researchers as they employ these metrics in grant proposals or when building out open scholarly profiles, like ORCID.

### **Bibliometrics**

Bibliometrics refers to the analysis of academic outputs of institutions and individuals using statistical and quantitative measures. It is also used to understand the impact of those outputs, including published articles, books, patents, policy reports and other research publications. Bibliometricians appreciate the differences between disciplines in scholarly communication. For example, and to contrast with the STEM focus of this report, a profile of Dr. Lucia Tramonte (Appendix B) illustrates the nature of her work in the social sciences, and how the Library may support it.

Bibliometric inquiry is aided by indexing and citation-tracking tools, like Web of Science or Scopus. Recently, an open indexing tool, OpenAlex, has offered free and open access to scholarly data. The preponderance of connected open scholarly infrastructure has led to an increase in analytical tools, such as TheLens and VOSViewer.

Universities face growing pressure from funding bodies, the public, and other institutions to make research transparent and accessible. Bibliometrics can help to illustrate research impact, and researcher engagement, benchmarking, and collaboration, and to support calls for grant funding such as the Canada First Research Excellence Fund (CFREF) application. Additionally, bibliometrics has been used at UNB to help researchers discover new research networks and publications, exhibit interdisciplinarity using graphs, and support rankings initiatives such as the THE rankings through partnerships with the Office of Institutional Analysis (OIA).

Some have shown an interest in altmetrics, which measure the reach and discover potential audiences for academic outputs using non-traditional research outputs such as policy document mentions, number of comments and reshares on social media, or breadth of readership.



# Summary

UNB Libraries have laid the groundwork for participating in open scholarly communication with the development of trusted institutional and data repositories. It is time to work together to encourage more intentional and coherent practices so that we can share the knowledge that is essential to push society forward. Through collaboration, we can construct an open access policy that serves the aspirations of Toward 2030 while guiding UNB researchers through a re-mapped scholarly communications landscape. We look forward to working with you to achieve our shared goals in support of open access.

- Government of Canada, Innovation.
   Open Science Helping Make Science Accessible for All Canadians.
   15 Feb. 2022
- "Budapest Open Access Initiative Budapest Open Access Initiative". Retrieved 26 February 2023.
- iii Simard M-A, Ghiasi G, Mongeon P, Larivière V (2022) National differences in dissemination and use of open access literature. PLoS ONE 17(8): e0272730.
- iv CARL Open Investments Report July 2020



# **External Affiliations**

The work of academic librarianship is highly collaborative, and we interact with colleagues at other institutions and organizations to build a sustainable scholarly communication infrastructure, ensure fullest access to research resources while observing copyright and other considerations, negotiate access to licensed resources that is amenable to our principles, and challenge ourselves to observe best practices in what we do.

These are a few of our partnerships:

Canadian Association of Research Libraries (CARL)

Council of Atlantic Academic Libraries (CAAL)

Canadian Research Knowledge Network (CRKN)

Canadian Federation of Library Associations (CFLA)

#### **Lesley Balcom**

Dean of Libraries

- CARL- Representative of the Atlantic Region on the Board of Directors, and Treasurer, Chair of Finance & Audit Committee
- | CAAL Chair of the Board of Directors
- CRKN Member
- I Coalition Publi.ca Advisory Committee (CFI-funded partnership created to advance digital scholarly publishing and support social sciences and humanities journals in the transition towards sustainable open access) Serves as the CARL representative.
- Borealis The Canadian Dataverse Repository Atlantic representative on the Consortium Committee

# James MacKenzie Associate Dean of Libraries

- | CARL Shared Repositories Infrastructure Advisory Committee
- | CRKN Coalition for Canadian Digital Heritage Advisory
- I CRKN Canadian Persistent Identifier Advisory
- | Portage/Alliance Core Trust Seal Certification Cohort

#### Joanne Smyth

Director, Collections Strategy and Scholarly Communication

- | CRKN Content Strategy Committee (Atlantic region rep.)
- | CAAL Scholarly Communications Committee

#### Siobhan Hanratty

Director, Learning and Engagement

- Portage Network Dataverse North Working Group Training (Chair)
- Statistics Canada DLI External Advisory Committee (co-Chair)

#### Jeannie Bail

Business & Renaissance College Librarian

IFLA Management & Marketing Standing Committee

#### Marc Bragdon

Head, Harriet Irving Research Commons

| CFLA Indigenous Matters Committee



#### **Evan Echols**

#### **Digital Collections Archivist**

I CAAL Digital Preservation and Stewardship Committee

#### Josh Dickison Copyright Officer

- CFLA Copyright Committee (Al and IoT, and Controlled Digital Lending working groups)
- | CAAL Copyright Committee (CFLA representative)
- CARL Code of Best Practices for Open Educational Resources and Fair Dealing

#### Sue Fisher

#### Curator, Eileen Wallace Children's Literature Collection

| New Brunswick Born to Read Program

#### Alex Goudreau

#### Science and Health Sciences Librarian

- Canadian Health Libraries Association 2023 Conference Planning Committee
- I Joanna Briggs Institute Information Science Methods Group

#### **Julie Morris**

#### Collections Analysis and Bibliometrics Librarian

| CAAL Scholarly Communications Committee (Chair)

#### Mike Nason

#### Open Scholarship and Publishing Librarian

- | CARL Open Repositories Working Group
- | CRKN ORCID-CA Governing Committee (Chair)
- I Coalition Publica Technical Committee
- I NISO Journal Article Version Working Group (co-Chair)
- PKP & Crossref Working Group Metadata for Everyone w/ Crossref, Scholcomm Lab, and TIB Berlin
- Tri-Agency Grants Management Solution Initiative -External Change Agent Network
- | CARL Shared Repositories Infrastructure Advisory Committee
- Library Publishing Coalition Canadian Community
  Development Working Group

#### Linda Roulston

#### **Electronic Licensing Librarian**

| CAAL Collections Committee

#### **Scott Shannon**

#### e-Resources Administrator

| CRKN - Knowledge Base Entitlements Sub-Committee

#### **Merle Steeves**

#### **Head of Technical Services**

NACO (Name Authority Cooperative Program) Canada, Atlantic Chapter member

### Tatiana Zaraiskaya

STEM Librarian

| Portage Research Intelligence Expert Group



# UNB Libraries by numbers, 2021–22



321,338 In-person Visits



**1,591,964** Electronic Visits



**9,175**Consultations



**959,978**Total Print Collection



**1,201,923** Total E-books



Library Expenditures by Fomat Type

**\$4,209,180** E-journals & Databases

\$216,740 Print Journals

**\$108,818**Print Books

**\$117,086** E-books

**\$7,514**Media Materials



9,248
Items in the
Institutional Repository



106,528 Electronic Journals



**45,171**Streaming Video Titles



**58,332** E-Reserves Accessed



105
Average Weekly HIL
Operating Hours
(Fall & Winter Terms)



235 UNB Libraries YouTube Videos



170 UNB Libraries Research Guides



147,275 UNB Libraries Research Guide Views



# **UNB Open Access Policy (Draft)**

#### **Preamble**

The University of New Brunswick is committed to the democratization of knowledge and recognizes that open research and scholarship practices foster collaborative, community-engaged, reproducible, and impactful scholarship that can "mobilize knowledge to transform communities<sup>ii</sup>". As a publicly funded institution, UNB has a responsibility to "tell our story proudly"; to "share the knowledge that is essential to push society forward", as a "mission of service to our province and the world."

#### Rationale

Open access accelerates discovery across the disciplines and increases the visibility and impact of research. It facilitates connections and collaborations between scholars and strengthens the rigour of published research by ensuring it is open to scrutiny by all, enabling scholars from all sectors, policymakers, and the public to use and build on this knowledge.

Since academic research is developed within this institution and is supported through salaries and tri-agency funding, its dissemination should take place with as little third-party, commercial involvement as is possible.

#### **Application / Actions**

UNB commits to increasing access to the products of research and scholarship consistent with the open access movement. Application of this policy involves the following clauses:

- 1. UNB researchers will...
  - a. publish research in open access publications and/or;
  - b. deposit accepted versions of scholarly works in UNB's Institutional Repository (UNB Scholar) or another trusted repository in accordance with publisher policies.
- 2. Works should be deposited sometime between the date of acceptance and the date of publication.
- 3. Deposited works may be embargoed to meet publisher or granting body requirements.
- 4. The authors of works deposited in UNB Scholar will maintain ownership of their right in their works. To facilitate the dissemination and archiving of deposited works into UNB Scholar, authors grant to UNB Libraries the non-exclusive permission to archive, preserve, reproduce, and freely disseminate an electronic copy of deposited materials, provided that these works are properly attributed to the authors, and that it is done for non-commercial purposes only<sup>1</sup>.
- Open access will not be considered mandatory, recognizing that, in some cases, its tenets are at odds with the protection of Indigenous Knowledges, legal or privacy requirements, academic freedom, or other interests.

#### Scope

In the spirit of enabling the broadest access to research, accelerating discovery, enabling transparency and reproducibility of research, this policy applies to journal articles, book chapters, and conference papers produced by faculty members, graduate students and any other scholars affiliated with UNB. In addition to these types of scholarly output, authors are urged to consider depositing into the UNB Scholar – or our research data repository, Dataverse – all their scholarly works, regardless of format, including their research data, to enhance visibility and impact of these research outputs.

#### Implementation

While this policy commits UNB to the open dissemination of research, it also recognizes that the University's authors are entitled to full control of their intellectual property. UNB faculty, staff and graduate students are encouraged to know their rights as authors and to retain copyright of their works through use of appropriate author addenda when negotiating publication of their works. Further, UNB encourages faculty to understand the open access policies and procedures of their publisher. These policies set out terms and conditions under which open access can be provided, such as the version of a work, which can be made available, time delays after publication and required credit statements or links to the original publication.

This policy is intended to encourage open access to scholarly work and strengthen author rights. This policy is to be read and interpreted in a manner consistent with relevant collective agreements and University policies related to academic freedom and intellectual property.

This policy comes into force on [date] and applies to all applicable works published after this date.

[Specific university body(ies)] will be responsible for interpreting this policy, resolving disputes concerning its interpretation and application, and recommending changes to the policy to the appropriate university body as necessary.

- 1 For further clarification, Creative Commons defined non-commercial uses "as not primarily intended for or directed towards commercial advantage or monetary compensation."
- i Adapted from CARL Institutional Open Access Policy Template and licensed under a Creative Commons Attribution 4.0 International License
- ii UNB Toward 2030



# Profile: Dr. Lucia Tramonte

In early 2023, Julie Morris, UNB Libraries' Collections Analysis and Bibliometrics Librarian, conducted a case study of Dr. Lucia Tramonte. This meeting, inspired by a desire to better understand the nature of Dr. Tramonte's work and venues for knowledge mobilization, revealed some of the complexities that are inherent in assessing diverse, interdisciplinary fields of inquiry. As it happens, such interactions are also useful in raising awareness about the Library's resources, expertise, and services that may assist UNB's researchers.



Dr. Tramonte is a Professor in Fredericton's Sociology department where she has worked since 2005. Her research interests are interdisciplinary and global in nature, touching on comparative education, equity, and equality in educational systems. Her primary activities are designing contextual questionnaires, measures, and tools for large-scale international assessment. Dr. Tramonte has worked with large-scale international organizations such as the OECD and UNESCO, and she has partnered with international governments, private organizations, and researchers from around the world.



**Projects** 

Dr. Tramonte is currently the lead expert tasked to develop both the conceptual framework of – and the contextual assessment tools for – a new comparative educational assessment by the Organization for Economic Cooperation and Development (OECD). The study looks at the competencies and skills of students in Vocational Education and Training (VET) programs in several countries. It aims to put the skills and competencies of VET students in context, analyzing inequalities

and inequities throughout these educational systems.

Additionally, Dr. Tramonte is collaborating with the UNB Faculty of Engineering to develop a new first-year course called "Life Lab" on campus, with a focus on sustainability and social infrastructure. The Lab will serve as an introduction to interdisciplinary collaboration for undergraduate students in Engineering and Social Sciences. This course is to strengthen the professional communication and problem-solving skills of students by working on tangible problems, such as water scarcity issues in education, school space and bullying, and spatial segregation. She hopes that the new program will also bring greater diversity to on-campus collaborations, and address gender gaps in different fields.

#### Lucia Tramonte, Research Outputs

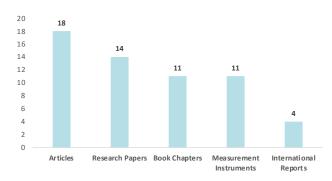


Figure 1: "Articles" and "Research Papers" differ in that "Articles" are peer-reviewed research articles, whereas "Research Papers" are grey literature specifically targeted toward international organizations.

Dr. Tramonte is interested in traditional metrics, such as journal article citations. But she's also invested in citation data from national and institutional grey-literature, and metrics evaluating lecture slides for training new analysts and/or specialists.

When supporting governments on long-term assessment projects, it is valuable for her to see sustainability evaluations to ensure that the instruments she has designed continue to be useful for the intended purpose. In one case, she worked with the Senegalese government to design and implement monitoring tools as part of budgetary support from the Agence

Française de Developpement (AFD), the UNESCO IIPE, and the Global Partnership for Education. She liaised with UNESCO IIPE and AFD to evaluate the various stages of development and implementation of the monitoring tools. In another case, she worked with the Moroccan government to design a new program of assessment and contextual data collection for a new educational monitoring system. The instrument was evaluated to ensure its usefulness, and to remain accountable to stakeholders.



### Research Impact

Dr. Tramonte is interested in assessing the impact of her work at the intersections of education, development, and equalityequity. Much of her work is invisible to traditional bibliometric indicators, as it does not always result in a published research artefact. The data and information that she creates often remain the property of the governments she works with, undergoes an embargo period, or does not specify her as a leading author on the work. Although she asks for authorship rights, often these works remain under copyright of the parent organization she works with.

Furthermore, Dr. Tramonte publishes a significant volume of grey literature and survey instruments which do not get captured by citation-tracking databases, like Scopus. As such, it is a challenge for her to demonstrate the strength of her work using quantitative measures. Balancing qualitative and quantitative approaches will help highlight some of the work that Humanities and Social Sciences researchers, like Dr. Tramonte, do that otherwise would remain invisible.

The UN Sustainability Goals identify important foci for research and policy development and can be referred to in describing research impact. Dr. Tramonte has played an integral part in addressing the UN Sustainability Goals (SDG4) through her work developing the International Large-Scale Assessments (ILSA) in education. She worked with other researchers on this project to determine which data were needed and which could be reused to define indicators where many are interconnected, such as gender and inequality.

#### Tramonte, L. & Willms, J.D. (2010). Cultural capital and its effects on education outcomes

Economics of Education Review, 29(2), 200-213.



9 policy citations

UN SDGs Quality education

Decent work and economic growth Reduced inequalities

# Interdisciplinarity

Most researchers work at disciplinary intersections in some form or another, and Dr. Tramonte is no exception. She is interested in so-called "wicked problems" that incorporate theories, models, and practices from various disciplines. For example, she is working with other UNB researchers from the faculty of Civil Engineering to study how climate change

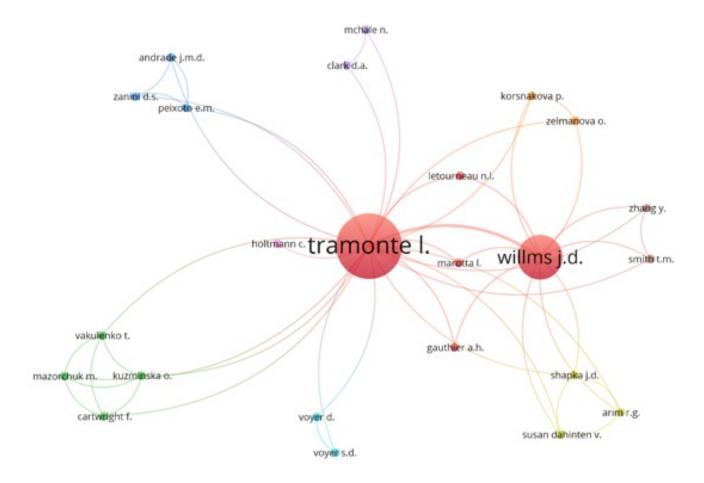
will affect school learning through impacts to sanitation and drinking. She spoke about the importance of exchanging knowledge between colleagues to solve non-discipline specific problems, which is reflected also in the development of the Life Lab course that she is working on with the Faculty of Engineering.



### Collaboration

When asked about her experience working collaboratively, Dr. Tramonte said that "It brings reality, expertise, and discovery." Discussing the balance between goals and priorities, Dr. Tramonte stressed the need for diplomacy, respect, good communication and listening skills. Working with non-academic researchers presents different challenges and opportunities as there is a need to communicate the working behaviours of your profession. Furthermore, the goals of academics often differ from practitioners, which requires trust of one another's expertise when moving forward in research programs.

Dr. Tramonte has worked with researchers from as far afield as the Ukraine, Senegal, Morocco, Brazil, the Netherlands, and as close as the United States and Canada. There are always challenges to working internationally, but Dr. Tramonte is equipped with four different languages and an aptitude for intercultural communication.





# Library Supports: Responding to the Needs of Dr. Tramonte

#### Networking, and Collaboration

Dr. Tramonte expressed that she has been using Academia. edu as a source for finding potential co-authors and researchers with which to connect. For researchers who collaborate across disciplines, networking and discovery can be vital for finding partners, opportunities, and communities of practice. There are, of course, a wide range of methods for sharing research profiles. When it comes to reaching a community of practice, the best tool is the one you use. It is worth noting that some platforms may be more trustworthy or transparent than others.

Academia.edu, ResearchGate, and LinkedIn are increasingly used by researchers in the effort to make connections across their fields. These connections can be invaluable, and in this way, it is useful to consider these platforms as akin to academic social media. But the similarities to social media platforms do not end there. Like Facebook or Twitter, these academic-focused social media platforms are for-profit and funded by venture capital. Their objective is to make money, and they do so by monetizing the data they collect on researcher behaviours to publishers or other third parties.

There are, however, platforms for the dissemination of scholar profiles that are considered more transparent in their funding models and practices. ORCID – the "open researcher and contributor ID" – is an increasingly ubiquitous, author-focused, not-for-profit, platform that is strongly tethered to other pieces of scholarly open infrastructure such as Crossref, Datacite, and OpenAIRE. ORCID serves not just as a way to better track and attribute researchers to their works through metadata, but also as a method of name disambiguation and identity/affiliation assertion. In some cases, it is even used for funder applications, as publication metadata can be pushed to an increasing number of government funding agencies the world over. ScopusID is another commonly used scholar platform, though one focused predominantly on journal publications.

#### **Knowledge Mobilization and Repositories**

While useful for connections and networking, UNB Libraries generally discourages the use of Academia.edu, ResearchGate, and LinkedIn as platforms for research dissemination. From the perspective of most institutions and government bodies – including our own Tri-Agencies – these platforms do not count as valid deposit locations for OA versions of works or as research repositories. What's worse, it is not uncommon for researchers to post final, publisher-owned versions of their articles on these platforms, in a way that exposes them to non-trivial legal risk.

Alternatives to posting literature on Academia.edu include encouraging researchers to put their literature in the Institutional Repository, UNB Scholar, as well as in other disciplinary repositories like Humanities Commons, Zenodo, Arxiv, and other trusted, not-for-profit platforms.

There is an identified need to help researchers with knowledge mobilization, to share and communicate novel research, and to maximize the impact and visibility of their work. Dr. Tramonte communicated the need for assistance in crafting messages about her work for publication on UNB supported profiles, such as ORCID and UNB websites. Looking forward, a partnership with ORS could help support research translation and promotion, as well as help researchers build out their academic profiles.

**APPENDIX B** 

# Assessing Readership and Potential Connection

Academic.edu is attractive because it offers a "Premium" option that allows users to gain analytics into who is reading and accessing their literature, but we advise against using this platform. Due to privacy concerns, we cannot help researchers find out who is reading their work specifically; however, we can help with citation tracking, social media and public policy mentions using Scopus, PlumX, and Altmetric services.

Furthermore, bibliometric methodologies can help identify new co-authors and research networks. Using indexing tools, like Scopus, we can track keywords and to see emerging trends in themes and authorship.

#### **Research Trends**

Dr. Tramonte communicated a need for support staying current with trends in her fields of research. Alerts set up by librarians may be one solution to this issue.

# Open Access Publishing

Dr. Tramonte has a wide variety of research outputs. From proprietary instruments to reports, grey literature, and traditional journal publications, her work runs the gamut. In our interview, she indicated that she has been largely unaware of the support available to facilitate open access, despite being "very open" to it. Her struggles are not uncommon. Many UNB researchers produce scholarship that falls outside traditional publishing. What's more, authors looking for a home for interdisciplinary scholarship often find themselves searching for publications that might support their specific interdisciplinarity. It is in this searching that the challenge of bad-faith (or, so-called "predatory") publishers can flourish.

Researchers' struggles with OA are well known to the Libraries, and Dr. Tramonte's experience validates the need for more training, guidance, and literacy building around scholarly publishing and open access throughout the UNB community. We can offer support in three ways: finding and assessing journals, article processing charges, and self-archiving/green open access.

#### Finding and Assessing Journals

Between the push for open access, funder mandates, and the increase in volume of electronic journals, many researchers find themselves between a rock and a hard place. Whether looking for an open access journal to publish in, or just a venue for interdisciplinary titles, finding a new journal to submit to can be a daunting and labour-intensive task.

The Libraries can help scholars navigate the Open Access Scholarly Publishing Association (OASPA) and Directory of Open Access Journals (DOAJ) to help find credible publishing destinations for their work if they are seeking OA journals. So, too, can the library assist with the assessment of titles. Bad-faith publishers certainly have operated in the open access space, but not exclusively. We provide several evaluative tools and strategies for determining the credibility of a title to determine whether they are a low-quality publication, vanity press, or bad-faith operation. There is no "easy button" for knowing which journals are legitimate, but we can equip researchers with the knowledge of red flags.

#### **Article Processing Charges**

Speaking of red flags, Article Processing Charges (APCs) have a specious reputation. Dr. Tramonte indicated that requests for APCs make her even more wary to publish openly. In some disciplines, APCs are seen as clear indicators of predation. But the prominence of the APC has drifted fully into the mainstream of modern publishing as a direct response to the open access movement. These fees recoup lost income from subscription or individual article purchase revenue (hybrid open access). Other publishers function entirely on APCs as their funding model ("gold" open access).

An APC is typically phrased as a fee necessary for immediate open access of a work. Outside of mandate, there may be real benefit to immediate open access. If, for example, research findings might have an impact on policymakers or the public in the short term, immediacy might be vital. It is also the case that research essential to practitioners – who, variably, may not have access to major publications or subscriptions – could benefit from immediate, public access.

In cases where researchers have no alternative route to paying an APC, UNB Libraries can leverage our engagement in what are called "transformative agreements". Transformative agreements are intended to offset subscription prices against APCs by offering APC discounts or waivers. Unfortunately for Dr. Tramonte, of the publications we evaluated, none were yet covered by such agreements. Librarians can help scholars find suitable publishing destinations where they may obtain a

discounted publication rate, may be able to help negotiate fees, and provide transparency into publishing contracts.

However, many publishers do not reveal their increasingly permissive options for green/free open access. In most cases, there is a method of supporting delayed open access with no attached cost via "self-archiving".

#### Self-Archiving and "Green" Open Access

Self-archiving is the process by which researchers deposit – depending on policy – a version of their work into an open access repository. The deposition of preprints to preprint servers, for example, is self-archiving. In the case of the Tri-Agency OA policy, the submission of an accepted manuscript into an institutional repository (such as UNB Scholar), with a twelve-month embargo is sufficient to meet open access criteria.

Many publishers only express the APC route and leave information about self-archiving buried on policy pages. But most publishers have support for self-archiving at no cost. Ideally, the Libraries would love to see scholars publishing in venues with immediate open access and without incurring personal or publicly funded costs. But, in the meantime, UNB Scholar is an approved, compliant, and convenient destination for self-archiving that can facilitate OA requirements or general OA Support.

### **Grey Literature**

Grey literature is information that is not published by commercial publishers, for example government documents, business information, or policy documents. It is considered "wild" in that its metadata is not structured formally the same way as formally published works. Often, it is at risk of not being preserved on the scholarly record. Dr. Tramonte publishes many grey literature documents, for example in her work with the OECD, which is largely invisible to research metrics and discoverability as it is not indexed in the same way as traditionally published materials.

Institutional repositories are a great home for grey literature. Too often, these works can disappear from government websites as staff or priorities change. Or they may not be exposed in the first place. But it is typically the case that such reports can be self-archived in managed repositories, providing these works not just a stable home for reference but also a platform supporting indexing, metrics, and preservation. Because much of her work is published in the European Union, we could encourage her to ensure her work is indexed in repositories, like opengrey.eu or UNB Scholar.