The Inside-Out Library

How OA is Changing the Role of the Librarian

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The Inside-Out Library – How OA is Changing the Role of the Librarian

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Dean of University Libraries
Director of Emerging and Integrative Media Initiatives
The conversation gains momentum

Much of the remarkable growth of scientific understanding in recent centuries is due to open practices; open communication and deliberation sit at the heart of scientific practice. Publishing scientific theories, including experimental and observational data, permits others to scrutinise them, to replicate experiments and to reuse data to create further understanding.

The Royal Society, 2012
JANUARY 11, 2023

FACT SHEET: Biden-Harris Administration Announces New Actions to Advance Open and Equitable Research

OSTP launches Year of Open Science to advance national open science policies across the federal government in 2023

Today, the White House Office of Science and Technology Policy (OSTP) announced new actions to advance open and equitable research, including new grant funding, improvements in research infrastructure, broadened research participation for emerging scholars, and expanded opportunities for public engagement. OSTP is also launching the Year of Open Science, featuring actions across the federal government throughout 2023 to advance national open science policy, provide access to the results of the nation's taxpayer-supported research, accelerate discovery and innovation, promote public trust, and drive more equitable outcomes.

As historic new investments in research, science, and innovation—including through the bipartisan CHIPS and Science Act and the Inflation Reduction Act—drive progress for people across the country, the Year of Open Science will yield significant benefits on a number of U.S. strategic interests and deliver evidence-based results for the American people.
Transparent and Reproducible Workflows

DMPTool

LabArchives

R
Python
OpenRefine
Citizen Science

protocols.io
Open Science Framework

KiltHub

Open Science Symposium
AIDR
Collaborative Bioinformatics Hackathon
dataCoLAB

APC Fund
Transformative Agreements
ABSTRACT

Single-cell RNA sequencing (scRNA-seq) has emerged as a central genome-wide method to characterize cellular identities and processes. Consequently, improving its sensitivity, flexibility and cost-efficiency can advance many research questions. Among the flexible plate-based methods, “Single Cell RNA-sequencing and Sequencing” (SCRSQ) is one of the most sensitive and efficient ones. Here, we systematically evaluated experimental conditions of this protocol and find that adding polyethylene glycol considerably increases sequencing by enhancing cDNA synthesis. Furthermore, using 3'-terminal primer increases efficiency due to a more even cDNA amplification, which requires less sequencing of libraries. We combined these and other improvements to a new scRNA-seq library protocol we call “Molecular counting (MCQ-seq)” (mcSCQ-seq), which we show to be the most sensitive and one of the most efficient and flexible scRNA-seq methods to date.

BEFORE STARTING

Wipe bench surfaces with TRAAN Away and keep working environment clean.
OA: Our Approach

a) We pay to support preprint servers eg arXiv

b) We provide the KiltHub service powered by Figshare for open access article sharing

c) We provide financial support for gold open access article fees

d) We negotiate open access agreements with commercial and society publishers to allow all articles with a CMU corresponding author to be published open access with no further fee payable
We set out to focus on our leading publishers by volume, but open to agreements form other publishers where terms were attractive or business models were innovative.

2016-2018

72%

Source: Dimensions
<table>
<thead>
<tr>
<th>Publisher</th>
<th>Eligible Journals</th>
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<tbody>
<tr>
<td>American Chemical Society (ACS)</td>
<td>All ACS journals</td>
</tr>
<tr>
<td>Association for Computing Machinery (ACM)</td>
<td>All ACM journals, conference proceedings and magazines</td>
</tr>
<tr>
<td>Cambridge University Press</td>
<td>See list of journals covered under this agreement</td>
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<tr>
<td>Cold Spring Harbor Laboratory Press</td>
<td>Genes &amp; Development&lt;br&gt;Learning &amp; Memory&lt;br&gt;Genome Research&lt;br&gt;Molecular Case Studies&lt;br&gt;RNA</td>
</tr>
<tr>
<td>Elsevier</td>
<td>Gold or Hybrid Open Access journals (excluding Cell Press journals)</td>
</tr>
<tr>
<td>Institute of Physics (IOP)</td>
<td>See list of journals covered under this agreement</td>
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<tr>
<td>Multidisciplinary Digital Publishing Institute (MDPI)</td>
<td>A 10% discount on APCs for all journals</td>
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<tr>
<td>PeerJ</td>
<td>All PeerJ journals:&lt;br&gt;• The Journal of Life &amp; Environmental Sciences (PeerJ)&lt;br&gt;• PeerJ Computer Science&lt;br&gt;• PeerJ Physical Chemistry&lt;br&gt;• PeerJ Organic Chemistry&lt;br&gt;• PeerJ Inorganic Chemistry&lt;br&gt;• PeerJ Analytical Chemistry&lt;br&gt;• PeerJ Materials Science</td>
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<td>Nucleic Acids Research (NAR)</td>
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<td>Public Library of Science (PLoS)</td>
<td>All PLoS journals</td>
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<td>Society of Photo-Optical Instrumentation Engineers (SPIE)</td>
<td>See list of journals covered under this agreement</td>
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<tr>
<td>Springer</td>
<td>All Springer Hybrid journals (excluding Nature journals)</td>
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<tr>
<td>Wiley</td>
<td>Wiley hybrid and gold journals</td>
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<tr>
<td>Multidisciplinary Digital Publishing Institute (MDPI)</td>
<td>A 10% discount on APCs for all journals</td>
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<tr>
<td>Oxford</td>
<td>Hybrid Oxford Journals</td>
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<td>See list of journals covered under this agreement</td>
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<td>Royal Society</td>
<td>All Royal Society Journals</td>
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<tr>
<td>Royal Society of Chemistry</td>
<td>All Royal Society of Chemistry Hybrid Journals and Gold OA Journals (including&lt;br&gt;RSC Advances)</td>
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2024
17 agreements to date
Data Management

- **KiltHub**: An approved generalist repository for meeting mandated data sharing requirements and sharing the products of research
- **DMPTool**: Template platform for creating data management plans that meet funder requirements
- **Data management services**: Guidance and support for writing DMPs and managing data effectively
- **Expert support** from disciplinary faculty at the University Libraries
Software as a primary research object
Open Source Programs Office

The open source programs office (OSPO) raises awareness and capacity for open source software to better develop, manage, curate, and share it for research, education, translation, and broader impact.

As a community convener and center of competency, the OSPO aims to build open source capacity within CMU and beyond, leveraging the institution's research, teaching, and policy expertise to maximize its social impact on a global scale.

OPSO Core Objectives

- Explore open source software and its impact as an underlying component for automated science.
- Examine how both US Federally Funded Research and Development Centers (FFRDCs) and University Affiliated Research Centers (UARCs) can develop open source policies, processes and programs.
- Support wider university services such as student internships and open source educational efforts.
- Build the university's capacity to curate, manage and share open source software.
The policy landscape

• NIH Data Management and Sharing Policy - effective 25 Jan 2023
• Effective Practices for Making Research Data Discoverable and Citable (Data Sharing) - 3 March 2022
• OSTP Ensuring Free, Immediate, and Equitable Access to Federally Funded Research - 25 August 2022
Publishers sell in markets around the world. Pricing varies according to local markets, journal format, initiatives such as Research4Life. Forex exposure can impact both publishers and libraries. The role of (quasi-)government agencies can also be impactful.
The Inside-Out Library – How OA is Changing the Role of the Librarian

Mathew Willmott
Assistant Director for Open Access Agreements, CDL
Choice-ACRL Webinar
February 27, 2024
OA strategy at the University of California

Pathways to OA:
Foundational project charting multi-pronged approach to supporting OA publishing at UC.

Includes:
● OA Policy and institutional repository
● Library publishing platform
● Transformative Agreements negotiated with our largest publishers
● Investments in alternative publishing models
Engaging on new terms: evolving librarian roles

Supporting these pathways means engaging with our communities about them:

- Assist authors to navigate publishing options available to them
  - How to think about dissemination of research results
  - How to consider equity when choosing publication pathways
- Help our community understand the library’s engagement in the publication space
- Take feedback and help authors drive the process
- Build systems to better support author communities
Repositioning the library itself

Subscription contracts
Primary purpose:
Support for UC readers’ access to content

OA Publishing contracts
Dual purpose:
Support for UC authors’ publishing
Support for UC readers’ access to content
Evolution of other roles at UC

Authors and faculty becoming more deliberate about how they disseminate their research

- More informed choices around publishing (as supported by the library) and equitable dissemination

- Deeper understanding of and engagement with library processes

- Different choices in other areas of scholarly communication (e.g. editorial responsibilities, peer review, data sharing, etc.)
Thank you!
Poll question

1. What do you feel is the most significant benefit of OA?
How OA is changing the role of the librarian

Key learnings from a global perspective

Caroline Nevison
Director Open Access Agreements
Supporting research

Engaging with publishing policies and workflows

- Monitoring OA policies
  - Funders and compliance requirements
  - Institutional volume
- Appreciating global and regional pace of OA
- Hearing and interrogating author pain points with workflows and APCs: what can be eased?
- Relevant to all: not only large research-intensive institutions
Open Access goals

What do you want to achieve in the OA transition?

- Understanding publication output and discipline trends
- Existing OA/subscription content usage
- If you are considering OA Agreements:
  - How to evaluate offerings and who will be involved
  - Library involvement - do you want more control or ease of management?
  - What new insights will you gain through having an agreement?
  - What would success look like if you had an agreement: for your team and your institution?
Beyond to Open Science

What are your priorities beyond open access?

- Stay abreast of global extension of agreements and models
- Review case studies on what has and hasn’t worked for similar institutions - or get involved in a case study
- How is/how do you want your library to be involved in:
  - Open Code
  - Open Data
  - Sustainable Development Goals and Research Impact
  - Research Integrity

To learn more about our new strategic partnership to accelerate progress on global societal challenges through open research, visit: springernature.com/SDGimpact
Open Access & Roles
A NASIG Retrospective

Bob Boissy
Director Account Development Americas
NASIG Core Competencies for Electronic Resources Librarians

See the document on the NASIG site and especially the still useful E-resource life cycle graphic by Oliver Pesch (2009)

- Reassembled authors of NASIG Core Competencies for Electronic Resources Librarians (published in 2013)
- Comment on item 1.6 “Commitment to maintain awareness of Open Access publications” as they relate to the electronic resource management field.

1. ERLs must now consult with subject liaison and scholarly communication
2. Added time needed for decisions that involve OA
3. Must consider article processing costs and staff time for OA support
### Decisions, Awareness, and Guidance

1. **APC involvement**
   - Will the library be involved with article processing charges?
     - Just for fully gold open access journals?
     - Just for limited numbers of articles and limited payouts?
     - Who are the stakeholders and deciders now?
     - ERLs who once maintained digital resources are now in negotiations too

2. **OA options & deals**
   - Need for knowledge of open access deals and options is unavoidable

3. **Understanding research funders**
   - Need to grasp the world of research funders and their requirements

4. **Researcher guidance**
   - Need to be involved in providing guidance, services, and tools for researchers is greater than ever
NASIG created an additional core competency document for Scholarly Communications Librarians. This newer document was originally written in 2017 and then updated in 2020.

Main areas outlined in the document:
- Institutional Repository Management
- Publishing Services
- Copyright Services
- Data Management Services
- Assessment and Impact Metrics

Electronic Resources Management librarians + Scholarly Communications librarians moving gradually closer to researchers and their research outputs
Integrated workflows & new roles

1. Scholarly Communications and Technical Services find themselves integrating and balancing workflows.

2. Rise of cross-directorate negotiations teams for OA Agreements.

3. Possible inclusion in local OA publishing programs.

4. Possible inclusion in local repository programs.

5. Skills in e-resources brought to scholarly communications / copyright.

6. E-resources librarians may be asked to be collections analysts and strategists, all considering OA resources.

7. Advocates for promotion and tenure consideration for open access publication. This is what drives transformation.
Questions for Mathew & Keith

1. What task relating to OA is not well-loved among your library staff?

2. Does the library get adequate credit for underwriting open access publishing on your campus? If so, in what way?

3. Should the library financially support research data management costs on campus?

4. Does the library interact with research administration on your campus? If so, how and on what?
Thank you

Contact us:

- Caroline.Nevison@springernature.com
- Robert.Boissy@springernature.com
Q&A

Ask your questions:

- Keith
- Mathew
- Caroline
- Bob