Game changing factors impacting the scholarly record

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Lens.org - detailed review of a new open discovery and citation index

I first read about Lens.org via a tweet on my way back from a conference in April 2018. There seemed to be something in the water at the time, as there was an explosion of new discovery services and indexes in the past few months, including Digital science’s Dimensions, 1Science’s 1Findr, Scilit and the new resurgent challenge to Google Scholar posed by Microsoft Academic.

At the time, I took a quick look at Len’s about page to get a better sense of what the data included.
The game has changed
Library excellence used to be determined by collection size and use.
Now, library excellence is determined by university ranking measures.
used to be a well defined process in the print era …
… now, it is a digitally recorded process
Library stewardship was ... historically

- Collecting and managing print collections locally (it was an “uncoordinated”, highly distributed, and duplicative process)

- Sum of local collection efforts resulted in the aggregate library resource that was relatively complete (the record of all published scholarly outputs)
Library stewardship was ... historically

“WorldCat represents the holdings of thousands of libraries around the world. It is the best available proxy for the aggregate library collection and by extension for the scholarly and cultural record of which libraries are the steward.”

Lorcan Dempsey

http://orweblog.oclc.org/books-reservoirs-and-oceans/
Library stewardship is ... now

- Supporting the research process and safeguarding the institutional outputs
- The scholarly record is less and less well reflected in the aggregate library resource
The game-changing factors

Importance of Reasons for Pursing RIM Activities (n=222)
Base: Institutions with a live RIM

- Managing annual academic activity reporting: 58% Extremely important, 28% Important, 9% Somewhat important, 5% Not important
- Supporting institutional compliance: 53% Extremely important, 26% Important, 12% Somewhat important, 4% Not important
- Supporting institutional research reputation and strategic decision making: 40% Extremely important, 42% Important, 16% Somewhat important, 4% Not important
- Improving services for researchers: 36% Extremely important, 43% Important, 16% Somewhat important, 4% Not important
- Supporting expertise discovery: 23% Extremely important, 46% Important, 20% Somewhat important, 7% Not important
- Recording IR facilities and their use: 11% Extremely important, 32% Important, 25% Somewhat important, 17% Not important, 14% N/A or Not sure

Competition

Ranking

RIM/CRIS
IR
RDM
OA

by OCLC Research CCBY 4.0
Research services & tools

Recording the Research Process

Internet/Web

Digital

ESR

Clarivate Analytics

arXiv.org

ORCID

ELSEVIER

Creative Commons

Crossref

DSpace

Zenodo

ResearchGate

Google Scholar

#OCLCAPRC18
ESR

Research services & tools

Recording the Research Process

Internet/Web

Digital

The research article nexus
Mapping OA & Open Content efforts

How is your library helping to realize the benefits of OA & open content?

oc.lc/OAAPRC18

Please fill in the survey!
Librarians: supporting the evolving scholarly record
Some new skills, roles & technologies – or things I blog about

- Research Data Management
- Data Scholarship, Digital Humanities, GIS, Data carpentry
- Open revolution
  - OA/OER (OA publishing)
  - Open Data
  - Open Citations
  - Open Science
  - Open Infrastructure
- Linked data
- User experience design
- Assessment & Analytics
- Machine learning and NLP
The game is clearly changing…
Diversity in record + Open + New Technology (e.g. ML) = New roles

Diversity in scholarly record

Push to Open

Technology

Open Access
Open Data
Open Edu resources
Open Citations
Open Science
Open infrastructure

Linked data
Machine Learning
NLP
How we are collecting is changing

What we are collecting is changing
How and what we collect is changing

The ‘borrowed’ collection
The ‘shared print’ collection
The ‘shared digital’ collection
The evolving scholarly record

The ‘owned’ collection
The ‘licensed’ collection
The ‘demand-driven’ collection

The ‘facilitated’ collection

The ‘external’ collection:
Pointing researchers at Google Scholar;
Including freely available ebooks in the catalog;
Creating resource guides for web resources.

A collections spectrum

Low-High
Books & Journals
Newspapers
Gov Documents
CD & DVD
Maps
Scores

Collected in many collections
Stewardship/scarcity

High-Stewardship
Rare books
Local/Historical Newspapers
Local History Materials
Archives & Manuscripts
Theses & dissertations

Collected in few collections

Low-Stewardship
Low-Low
Freely-accessible web resources
Open source software
Newsgroup archives

COLLECTIONS GRID
(Lorcan Dempsey and Eric Childress, OCLC Research)

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The facilitated collection

Purchased and physically stored

Meet research and learning needs in best way
What is the role of the library in an OA dominant world?

"80% OA in 8 years"

Jason Priem (Impact Story/Unpaywall)

[http://blog.impactstory.org/oa-by-when/]
More of the scholarly record is collected & accessible
All this has naturally led to an interest in workflow

https://www.slideshare.net/bmkramer/the-good-the-efficient-and-the-open-oai9
Publishers like Elsevier want to be in the workflow

https://scholarlykitchen.sspnet.org/tag/workflow/

Example: SSRN – Digital Commons integration pilot - UGA

**Pilot Process**
- Upload pre-print article into Digital Commons
- SSRN is automatically populated
- E-journal selection
- Generation of cover sheet for UGA Research Series
- Update to article in Digital Commons automatically updated in SSRN
- Downloads between two systems aggregated

**Statistics & Outcomes – Law School Rankings**

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<th>Post-Pilot June</th>
<th>July</th>
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Interaction of open, diverse record & ML = new applications & roles

Diversity in ScholarIt record

Push to Open

Technology

Open Data
Open Citations
Open Science
Open infrastructure

Machine Learning
Natural Language Processing
Linked data
Visualizing Convolutional Networks for MRI-based Diagnosis of Alzheimer’s Disease

Johannes Stobbe1, Tobias Els1, Martin Wegscheider1, Jana Dühr1, Karl-Heinz Müller2, and for the Alzheimer’s Disease Neuroimaging Initiative

1 Charité - Universitätsmedizin Berlin, Department of Neurology, Berlin, Germany
2 Technical University Berlin, Neurology, Berlin, Germany

Abstract: Visualizing and interpreting convolutional neural networks (CNNs) is an important task in medical image analysis. In this study, we train a 3D CNN to detect Alzheimer’s disease based on structural MRI scans of the brain. To simplify the interpretation of the network’s decision-making process, we use saliency maps. We compare the methods and find that qualitatively the saliency maps help to explain the network’s decisions. While the saliency maps indicate crucial brain regions, the gradient-based methods are more consistent.

Scholarly – auto summarization

Scite – semantic parsing of citations
“In 2033, the research library will have shifted from its role as a knowledge service provider within the university to become a collaborative partner within a rich and diverse learning and research ecosystem” -- Report of the Association of Research Libraries Strategic Thinking and Design Initiative, 2014

“It is entirely possible that in 2030, the year which was the focus of the 2015–2017 Utrecht University Library Policy Plan, all scientific publications will be open access, data sets will in principle be freely accessible and open education will no longer be a future goal, it will be a reality” -- Utrecht university, “From access to accessibility The university library of the future in the scholarly communication cycle”, 2015
A tentative reorganization of roles

Collection of new inputs, processes, outputs –
- Mgt of CRIS, Institutional & data repo (RDM)
- OA / OER
- Curation of DH, DS projects
- Processing of open citations

Discovering & facilitating use
- Discovery & use of open resources (e.g. OER, Wikidata, TDM sources)
- Processing/Manipulation (e.g. Digital Scholarship/Humanities eg TDM, GIS)
- Data carpentry

Education on workflow & new technologies
- Advice on the various “open”
  - Access/Data/Citations/Science
- Fake news
- Impact of Algorithms

Technical Service?

Reference?

Information Literacy?

Building Supporting Library & Scholarly Infrastructure – Analytics & ML (Library IT)
“Library is heart of digital humanities” -- Miguel Escobar Varela

National University of Singapore Libraries

DIGITAL SCHOLARSHIP PORTAL LAUNCH!

Learn about NUS Digital Scholarship initiatives at libds.nus.edu.sg

Check out “who’s doing what” in NUS to find potential collaborators

Talks, workshops, reading groups and events related to digital scholarship

Helpful guides & best practices for your digital scholarship project

#OCLCAPRCE18
Citation mapping for Literature review workshop

Singapore Management University

Recommended Reading

- Discriminatory related party transactions: a new measure
  Tawo, 2017, International Journal of Accounting & Information Management (cites 1 seed paper)

- Corporate Governance: An International Journal of Business
  Shen, 2013, 2018, 2019
  (cites 7 seed papers)

- Related party transactions and separation between control and direction in business groups: the failed case
  Di Sarro, 2016 (cites 7 seed papers)

- IFRS related party transactions disclosure and firm valuation in the United Arab Emirates emerging market
  Eliazen, 2017 (cites 5 seed papers)

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Role of libraries in Open citations

Project LOC-DB – extraction of citations from German Social Science references into OpenCitations Corpus

Scholar index - Global citation index for all scholarly publications in the arts & humanities.
Things to ponder
How fast is the game changing?
What is the appropriate scale for scholarly services?
How does the organizational structure of the library of the future look like?
THANK YOU

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