Scientific Communication and Open Access

JÖRGEN ERIKSSON, LUND UNIVERSITY LIBRARY
About me

• Librarian

• Work at the Department of Scientific Communication at Lund University Library since 2002.
  – Open Access
  – Publication registration service
  – Bibliometrics
  – Publishing support (Open Journal Systems)
From Gutenberg to Open Access

• The development of scientific communication
• Open Access: why and how
• Tools to find open access options when you publish
• Support at LU
• Exercises
The Gutenberg Heritage: ca 1439-

- Faster communication
- No overview
  - Est. Printed books in Europe
    » 1454-1500: ca 12,000
    » 1501-1550: ca 79,000
    » *J. Econ. Hist.* 2009 Buringh & van Zanden
- Scepticism
  - “One day this is a truth, and almost an Article; the next week it is no such matter, but some other thing is the right” *Edward Fisher, 1644*
Scientific Communication ca1660

- Manuscripts/Books
- News = letter writing
- Personal meetings = travel
- Common language = Latin
Scientific Societies 1663-

• Scientific and learned societies
  • meeting places
  • correspondents writing letters
  • support the advancement of science

• Printing replaces letter writing

• De Sallos newsletter “Journal des scavans” 1665
  – “The newsletter has been invented to relieve the pressure on those who are either too lazy or too busy to read entire books. It is a way to satisfy your curiosity and become a learned man without any trouble”
The roles of the journal

- Dissemination
- Quality control = (witness) peer review
- Author protection = copyright act of 1709 (England)
- Register priority to research results
- Prestige
20th century – Big Science

- Industry/Government
  - WWII/The cold war
- International cooperation
- Rapid growth + new fields
- For-profit publishers see a market
- Computer (r)evolution
Difference between for-profit and society publishers

Society publishers use surplus to support their field of science:

• Conferences
• Stipends
• Awards

= returning surplus to science

• For-profit publishers use surplus as dividend to shareholders.
= moving surplus away from science
For-profit steps in: some consequences

- Mergers and price increases
- 3 for-profit publishers = 60% of titles in important index Web of Science

**Journal growth mainly for-profit**

- 1960 NE 30 >10% for-profit
- 1980 NE 120 50% for-profit
- 2000 NE 300 66% for-profit

**Weak connection between price and quality.** Economics & ecology

- the average institutional subscription *price per page* charged by commercial journals is about 5 times that charged by non-profit journals.
Meanwhile in the US...
Paradigm shift in scientific publishing possible.

- Internet and the possibility to distribute files +
- Substantial price increases on scientific journal subscriptions (major for-profit publishers had a profit margin between 30 and 40% in 2016.) =
- The Open Access Movement!
Actors I: Researchers

- Do the research
- Write the paper
- Do the quality control
- Belong to the editorial board
- Sign away their copyright
- And fund their library to buy back the content – if they can afford that....
- Return science to the scientists!
Internet + scientific communication = new possibilities

- National Center for Biotechnology Information (1992). GenBank
Actors II: Libraries

Rapidly rising journal prices + growing amount of research + library budgets that does not keep up. =


Libraries II

= research libraries become active advocates for the OA movement

“The system is absurd, and it is inflicting terrible damage on libraries. One year's subscription to The Journal of Comparative Neurology costs the same as 300 monographs.”

Robert Darnton, Director, Harvard University Library, 2012
OA becomes a society issue ca 2004-

- The results of publicly funded research should be publicly available for free = democracy argument
- OA brings a quicker and broader dissemination of results which means a better return on invested resources = efficiency argument
- OA leads to an increase in innovations, jobs and wealth = society development argument
Research funders & countries

• First major funder that mandates OA – National Institute of Health 2004.
  – If you are funded by NIH your publications must be made freely available at minimum 12 months after publication
• Followed by research funders all over the world – Sherpa/Juliet
  – Funding of the dissemination costs are becoming part of research funding
  – Publishers are seen as service providers but the content is free
• National mandate: UK 2012
Transnational organizations

European Union

"The conclusion is clear: open access spurs innovation, generates jobs and creates wealth.”"

Màire Geoghegan-Quinn, European commissioner for Research, Innovation and Science, Berlin10, 2012

• Horizon 2020.
  • Open Access mandatory to publications
  • Pilot: optional to make research data open access
Transnational organizations

The World Bank – Open Agenda

“Today, the Bank remains the largest single source of development knowledge. But knowledge must be opened to all.

We need to throw open the doors, recognizing that others can find and create their own solutions. And this open research revolution is underway.

We need to recognize that development knowledge is no longer the sole province of the researcher, the scholar, or the ivory tower. The aim is to open the treasure chest of the World Bank data and knowledge to every village health care worker, every researcher, everyone.”

Robert Zoellick, President, World Bank, 2010
Lund University Policy 2005-

In order to maximize the number of open access publications the Board of Lund University strongly recommends that:

• Researchers at Lund University, if possible, publish in journals with open access. If no equivalent open access journal is available, researchers choose a journal allowing parallel publishing/deposition of the article.
Lund University Policy contd

• Transfer of copyright be avoided. As a minimum the author's right to parallel publishing must be retained.

• Lund University work for the transition of scholarly journals to a publishing model, where articles either are made freely available to the reader directly or through parallel publishing.
Open Access at Lund university: how do we support you?

Support

- Dissemination
- https://lup.lub.lu.se/
- And Google et al. of course

- Tool for publication registration and self-archiving (LUCRIS)
  - https://lucris.lub.lu.se/admin/
And your Local library will give you support!
How to make a publication OA: Green and Gold

1. Green road/Self-archiving: Researchers should deposit copies of original articles in their institutional repositories.

2. Gold road: Researchers should be encouraged to publish in Open Access journals and encouraged to establish such journals.
Green: Self-archiving
Gold: Publishing in an OA journal
How to select a good open access journal to publish in?

How to evaluate the quality of an open access journal?

• Some general things to look for
  – Are previously published articles relevant, written by prestigious authors and/or from prestigious departments in the field?
  – Who are the members of the editorial board?
  – Is there concrete contact information?
  – Are the terms and conditions in the License to publish reasonable?
  – Is the journal indexed? Where?
  – Do you get irrelevant spam from a publisher?
  – Thinkchecksubmit
The roles of the journal: subscription vs OA journals

- Dissemination - OA advantage
- Quality control = peer review - equal
- Author protection = copyright - OA advantage
- Register priority to research results - equal
- **Prestige** = impact factor = better salary, job, funding.. - subscription journals advantage
Changes in scientific communication?
Towards open science: trends

- PLoS One (megajournals)
- PolyMath (open collaboration)
- ResearchGate (Facebook for researchers)
- More preprint archives (bioRxiv)
- Open peer review/reviews after publishing
- Publish data sets
Towards open science: funders

• European Union (https://ec.europa.eu/research/openscience/index.cfm)

• RCUK statement on the responsible use of metrics in research assessment
  
  "Research councils consider the journal impact factor and metrics such as the H-index are not appropriate measures for assessing the quality of publications or the contribution of individual researchers, and so will not use these measures in our peer review processes."
Questions from you

- Are there any risks in publishing in open access sources?
- If the funder does not require "open access", what are the benefits of doing so?
- What do you think scientific communication will look like in 20 years compared to now?
- Are there any good guidelines on how to write an informative and catching abstract?
- What are the systematic process for scientific communication that target-audience oriented?
Questions from you

• What are the options and entry points to public on non-academic channels/ media?

• What are good practices, tips on story-telling for communicating science in non-academic channels/ media?

• What's important to keep in mind when communicating your research with non-experts so that it's not misinterpreted?

  – http://www.lth.se/index.php?id=101263
Exercises

• Find 2 key journals (from different publishers) in your subject area. Check their self-archiving policy in SHERPA/RoMEO

• Check and see if there are any reasonably good journals in your subject area to publish your next paper in.
http://www.ub.lu.se/en/publish/open-access/oa-journals

  – Beware of gray-zone publishers!

• If your project have external funding, does your funder have any OA requirements? http://www.sherpa.ac.uk/juliet/index.php
Thank you!

Ask me about OPEN ACCESS