The changing nature of scholarly communication

Digital Humanities Australia 2012 – “Building Mapping Connecting”

Dr Danny Kingsley
Manager, Scholarly Communication and ePublishing
danny.kingsley@anu.edu.au
The cycle of scholarly communication

1. Read
2. Idea
3. Grant
4. Research
5. Publish
Invisible colleges
Spectrum of scholarly communication

- Hard science
- ‘Urban’
- Many people working on one area
- Fast publishing

- Arts & Humanities
- ‘Rural’
- Few people on a topic
- Slow publishing

Conference papers → Journal articles → Monographs
Unit of scholarly communication – scholarly article

1665
Philosophical Transactions of the Royal Society est.

2012
Electronic-only journals
Embedded in the reward system

- Read
- Idea
- Grant
- Promotion
- Publication record
- ERA HERDC
- Citation counts
- Impact factors
- Research
Traditional ways to assess value

– 1955 – Eugene Garfield founded Institute for Scientific Information & Science Citation Index
  • Based on a calculation of no of citations
– 1972 – Journal Impact Factor
  • Averages the number of citations per article in a journal
– early 2000’s – bought by Thompson Reuter’s Web of Science and Web of Knowledge
  • Still based on citations & JIF
Jumping on the assessment bandwagon 2004-2009

- Elsevier’s SciVerse Scopus
  - http://www.info.sciverse.com/scopus
- Google Scholar
- Microsoft’s Academic Search
  - http://academic.research.microsoft.com/

- Variations on a theme - still relying on citation data from bibliographic databases
- IFs rank journals, not articles
Scholarly publishing = failed economy

- The buyer and seller never meet
  - Publishers sell to Libraries
  - Libraries buy in behalf of authors
- Academics are often unaware of the role libraries play in giving them access to work
‘Academic authors write for honour’

• There is no direct payment for academic writing

• ‘Payment’ is in the form of esteem
  – Reputation
  – Prizes
  – Tenure
  – Membership of societies

• The ‘academic gift principle’
Cost of subscriptions

Figure 1: Average Price of Periodicals in Subject Fields
1980 to 2002

Sources: The Bowker Annual Library and Book Trade Almanac (published annually by R.R. Bowker until 1995 and since by Information Today, Inc.)
Regular publishing

Institutional reader → Library → Publisher → Author

Non-institutional reader
Open access – publicly funded research should be freely available

• Two roads to open access:
  – ‘Gold road’ - publishing in an open access journal
  – ‘Green road’ – putting a version of work in a subject or institutional repository
Gold (open access) publishing

Article processing charges can range from $0 to US$3000
The model can work - PLoS One

Interactive open-access journal for the communication of all peer-reviewed scientific and medical research.

- Short peer review period
- Multi-disciplinary
- Estab 2007, by 2010 world’s largest journal (6749 articles)
- Lower article processing costs
Green open access publishing

Institutional reader → Library → Publisher

Publisher → Author

Non-institutional reader → Repository

Library → free

Publisher → $
It comes down to the version

Preprint
Submitted Version
Work sent to publishers for review

Postprint
Accepted Version/
Accepted Manuscript
Author’s peer reviewed and corrected final version

Published Version
Version of Record
For green OA the accepted version is gold!

- Preprint
- Submitted Version
- Work sent to publishers for review
- Postprint
  - Accepted Version/
    - Accepted Manuscript
    - Author’s peer reviewed and corrected final version
- Published Version
  - Version of Record
Barriers to engagement with OA

• Lack of infrastructure
  – No subject-based repository (eg: arXiv, PubMed Central, RePEc, SSRN)
  – No institutional repository

• Infrastructure difficult to use
  – Copyright checking complex (even for me!)
  – Technical issues, eg: converting files to pdf
  – Administration of payment of article processing fees complex

• Lack of incentive
  – No mandate or other policy support for open access
  – No institutional/funding support for article processing fees

• Fear
  – Of plagiarism
  – Of contravening publisher’s agreements (& therefore risking further publication)
Open access is also making work understandable

• Research articles are often impenetrable

• Attempts to address this:
  • *Science*: one-line summary of articles in the contents page.
  • *Science* and *Nature*: articles that discuss research papers published in their journals.
  • *British Medical Journal* (BMJ) includes in its articles “What is already known on this topic” and “What this study adds”.
Changing scholarly presses

ANU E Press

http://epress.anu.edu.au/

– Fully open access - pdf/ePub/mobi/view online
– Print on Demand (mostly $25-$50)
– Downloads in 2011 = 4,280,168
– Self sustaining (except staff)
– 60 books per year
– 390 in catalogue
Changing scholarly article

• **RNA Biology**
  - Submit with article for peer review: a wiki article, readable by an undergraduate student.
  - [http://www.landesbioscience.com/journals/rnabiology/](http://www.landesbioscience.com/journals/rnabiology/)

• **PLoS**
  - How many times an article has been: cited, commented on, rated, blogged about, hyperlinked and bookmarked online

• **Realtime.Springer**
  - Visualisations of how literature is being used
Novel Biochemical Markers of Psychosocial Stress in Women

Article Usage

Total Article Views: 4,301
Jan 30, 2009 (publication date) through Mar 29, 2012

Cumulative Views

*Although we update our data on a daily basis, there may be a 48-hour delay before the most recent numbers are available. PMC data is posted on a monthly basis and will be made available once received.

Citations

Social Networks

Related Content

Included in the following collection

PLoS ONE: Stress-Induced Depression and Comorbidities: From Bench to Bedside

Related Articles on the Web

Google Scholar

PubMed

Share this Article

Email this article
# PLoS metrics view (2)

## Citations

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## Social Networks

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<tr>
<td>Mendeley</td>
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## Blogs and Media Coverage

| Search | |
|--------||
| Google | |

## PLoS Readers

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Changing ways to assess ‘usage’

– MESUR
  • http://mesur.informatics.indiana.edu/
  • (Metrics for Scholarly Usage of Resources) 2006 Andrew W Mellon Foundation grant

– Eigenfactor
  • Uni of Washington

– altmetrics.org
  • ‘community is striving to understand and measure the products and practices of scholarly communication on the web
Free & simple - Google citations

Danny Kingsley
Manager, Scholarly Communication @ ANU
Open access - scholarly communication - research assessment
Verified email at angstromgroup.com.au
My profile is private

Citation Indices
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Citations to my articles

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<tr>
<th>Year</th>
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<tr>
<td>2006</td>
<td>The publishing imperative: the pervasive influence of publication metrics</td>
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<tr>
<td>2006</td>
<td>The journal is dead, long live the journal</td>
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<td>2007</td>
<td>The state of the nation: A snapshot of Australian institutional repositories</td>
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<td>Those who don't look don't find: disciplinary considerations in repository advocacy</td>
</tr>
<tr>
<td>2008</td>
<td>e-Publishing's impacts on journals and journal articles</td>
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Changing ways to share

• Online sharing:
  – Zotero [http://www.zotero.org](http://www.zotero.org)
  – Mendeley [http://www.mendeley.com](http://www.mendeley.com)

• Social bookmarking
  – CiteUlike [http://www.citeulike.org](http://www.citeulike.org)
  – Connotea [http://www.connotea.org](http://www.connotea.org)

• Data
  – Datacite [http://datacite.org](http://datacite.org)
Changing ways to communicate findings

- **News**
  - Faculty of 1000

- **Publisher hosted comment spaces**
  - BMJ, PLoS, BioMed Central, Bioinformatics

- **User-edited reference**
  - *Encyclopedia of Life*, Scholarpedia, Citizendium

- **Blogs**
  - Researchblogging.org, [www.blogger.com](http://www.blogger.com)

- **Social networks**
  - Nature Networks, VIVOweb

- **Data repositories**
  - GenBank

- **Social Video**
  - SciVee
Summary

• Methods of scholarly communication change between and within disciplines
• Unit of ’currency’ still article/book chapter
• Reward system is beholden to the article
• Scholarly publishing is at crisis point
• Open access offers alternative to traditional publishing
• New types of communication are emerging
• New types of measuring ‘impact’ and relevance are emerging
• Until the reward system catches up we are stuck with the old paradigm
Questions?

Dr Danny Kingsley
Manager,
Scholarly Communication and ePublishing
danny.kingsley@anu.edu.au
Ph: x56839