Open and FAIR: building blocks of integrity in scholarship

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The situation now

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Fig 3. Percentage of papers published by the five major publishers, by discipline in the Natural and Medical Sciences, 1973–2013.

The situation now

- Inequity in access to knowledge occurs everywhere, even in developed countries such as Australia.
- The scholarly ecosystem remains primarily-based on a print, subscription model, dominated by a few publishers.
- There are at best inconsistent connections between published research with its underlying data code and relevant other research leading to questions about the quality and integrity of research.

http://journals.plos.org/plosbiology/article?id=10.1371/journal.pbio.1002506
A long term aim

A fully interconnected, global scholarly ecosystem supported by a wide variety of open publishing models, underpinned by sophisticated linking of well-curated, interoperable research articles and other outputs, including data and software.
Despite massive global impetus for change still only around 15-20% full OA 15 years after OA initially defined

- Most research outputs have no associated license & unclear reuse rights
- Uncoordinated diversity of models
- Still focus on traditional research outputs
- Need for global cooperation often not balanced with local needs

Barriers to change
- Incentives
- Costs
- Publisher resistance to change
To support integrity and interoperability we therefore need to think beyond free/open: F.A.I.R

- **FINDABLE** associated with rich metadata (e.g. identifiers, DOIs)
- **ACCESSIBLE** available in a public repository or open journal site
- **INTEROPERABLE** in a format that allows it to be exchanged and integrated
- **REUSABLE** has a licence that allows reuse

https://www.fair-access.net.au/
“The F.A.I.R. principles are a more explicit definition of the requirements that are needed to ensure that anyone can find, read, use and reuse research outputs”

https://www.fair-access.net.au/
The nuts and bolts of F.A.I.R.

For a globally interconnected scholarly ecosystem we need

Permanently identified objects linked to the researchers in open sites, in human and machine readable formats linked to related objects with clear reuse rights.
Data

Paper

Thesis

FAIR in practice

Data

CrossMark

genomeAnnouncements

Cite this collection

Major recent regional updates

• 2016 ORCID Australian consortium launched
• 2017/8 ARC and NHMRC revise OA policies; both mention F.A.I.R. & need for licencing
• 2016 Productivity Commission Inquiry into Intellectual Property Arrangements recommends national and states and territories OA policies
  • August 2017 Australian Government supports recommendation
• 2017 National Science Statement notes OA policy
• 2017 Innovation and Science Australia launch 2030 Strategic Plan (no OA mention)
• CAUL “Fair, affordable and open access to knowledge” program
• ARDC formed from ANDS, Nectar and RDS
Overarching themes from past year

• Maintaining quality and integrity of research outputs remains critical

• We have moved from whether OA is needed to how to how much re-engineering of other aspects of scholarly publishing is needed e.g. assessment

• Need to plan and implement specific, concrete steps that advance OA and scholarly innovation e.g. F.A.I.R.

• Increasing importance of metadata and related infrastructure

• Need better transparency of the costs of publishing - OA Article processing charges and costs of subscriptions and infrastructure
The opportunity now:
to purposefully design a global open ecosystem

- Data
- Preprints
- Journals
- Archiving
- Book & monograph publishing
- Grey literature
To change the system we need:

• Planning and support of high level needs – the infrastructure
• Support for diversity of solutions – the ecosystem
• Collaboration regionally and globally – the community
Advocacy
Policy advice
Responding to national consultations

Collaborations
National - especially CAUL
International – SPARC, OA2020, SCOAP3

Raising awareness
The Conversation
Webinars
Talks, newsletters, blogs, twitter

Building capacity
Communities of practice