Open Access to Research: Understanding policy, preparing for the future

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Online Scientific Platforms

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<th>Internet (packets)</th>
<th>Web (documents)</th>
<th>Repository (persistence)</th>
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What have we achieved with this multilayered platform in the last decade? What scope have we for achieving new things?
Repositories

• Systems to support author-provided open access (green OA, self deposit etc)
  – EPrints, OAI-PMH 1999
  – EPrints Services 2004

• Curation, access and long term management of data assets by data providers

• Complement publisher-provided systems
Open Access Repositories & Policies

Repositories over time: now more than 2,500

PASTEUR40A project
Alma Swan, Stevan Harnad
Beginning of the Web

- Developed at Central European Nuclear Research facility by high energy physicists
- In 1989 the Web established itself in CERN, then international academia, industry and the rest of the world
Are we all going to die next Wednesday?

Two nightmare scenarios, two ends of the world. In the first, there is little warning. For maybe a month there would be no sign that life was about to come to an abrupt and nasty end for all living things on Earth. Then, earthquakes would start unexpectedly, alerting geologists that something terrible, unimaginable, was amiss. After a few days, these seismic disturbances would reach catastrophic proportions.

Cities would be levelled, the oceans would rise and wash in a series of mega-tsunamis that would attack the world’s coasts, killing millions.

Remember These Headlines?
Expansion of the Web

- The Web spread the conditions of its initial creation throughout the whole of society as it underwent an initial inflationary phase.
- The academy has
  - government patronage
  - large-scale co-operation
  - sharing of intellectual property with others

This is not like other areas of society – e.g. media, industry, commerce.
Openness Agendas

• Open Access to Research Outputs
  – Supported by all Research Councils
  – Heavily promoted by JISC

• Open Research Data
  – Move from closed VRE / EScience environment
  – To open (able) data

• Open Educational Resources
  – Move from “Learning Objects” to “Learning Resources” via Open Access practice and methodology
  – Move from closed VLEs to sharing resources
  – All underpinned by active preservation and curation policies and workflows
Open Scientific Data

A repository of chemical data. Scientific, not bibliographic, metadata.

JISC EBank project (2003)

Run by the UK Crystallographic Service and latterly an international consortium.
Open Arts Data

• JISC KULTUR consortium of universities and art colleges

• Capturing performance, practice, exhibition, evidence
  • In a no publication environment

Capturing artistic experimentation & performance vs capturing scientific experimentation
Open Educational Resources

- EdShare
- Applying community openness within the profession...
- and to learners
Beyond OA Agendas: Data Driven Universities

• Open standard datasets describing Universities
  – Organisational profiles opd.data.ac.uk
  – Research outputs, equipment, facilities, places
    • strategies, policies, events, applications, prospectuses

Working with DCC on the UK Research Data Discovery Service project
Compliance, transparency

Buildings, sensors, energy consumption, buses, canteen menus, allergens
Directions for Academics

- MOOCS, Open Science, Open Data, Open Educational Resources
  - Web Technology joins the High Moral Ground
- vs the established economic model for ensuring continuity of information production
  - trading of privately held information through payment and subscription products such as journals or magazines
Directions for Businesses

The key commercial differentiating advantage of the web: It’s porous.

1. NETWORKED
   The web is us, dummy.

2. SEAMLESS
   No structural barriers.

3. OPEN
   Social engagement and consensus. Led by users.

4. COMPELLING
   Don’t be dull or merely important.

5. PURPOSE BEYOND PROFIT
   Multidimensional value

The Web helps us to break down external and internal barriers.
Graduate Education

• Higher education is more than
  – Acquiring advanced knowledge
  – Acquiring advanced skills

• It is also
  – Acquiring a leadership position within the digital economy
  – By a mentored program of networked industry engagements/relationships

• Don’t just write a thesis, form an impressive network and take advantage of it
MOOC

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Concluding Remarks

• Maximising openness and the benefits of openness
  – linking grant information in EPrints using funding info from Gateway to Research
  – ORCID pilots for identity management
  – enhancing capacity as data repository
  – linking publications to use of equipment via DCC Research Data Discovery Service
• investment in linking our well managed institutional systems to national discovery infrastructure is important
  – cf recent BIS science and innovation strategy ”keeping UK research at the leading edge”
• funders’ OA policies – confusing/ seemingly conflicting requirements – becoming too hard to do the right thing even if you wanted to
• “managing oa” - clue is in the phrase - it is needing a lot more managing, gold payment processes complex, compliance checks complex – “gold” seems to refer to the costs, not the benefits!
Universities = Knowledge Activities + Knowledgeable People + Praxis

• The Web isn't a thing but an activity
  – the creation of a network of information by a network of individuals.

• The Web wasn't invented by Tim Berners-Lee,
  – it is being invented by all of us as we gradually adapt our tools and change our practice.

The web both *shapes* and *is shaped by society.*

There is a gap between the ‘script’ proposed by a technology and what it actually becomes in practice.
Mediating New Practice

Not just enforcing historic norms, but stimulating new practice to emerge

• Copyright
• Openness
• Intellectual Property
• Privacy
• Creativity
• Science 2.0
Best Practice from the team

• Bend over backwards to engage and support your academic community -- your repository is only as strong as their engagement with it.
  – make the repository provide added value for them (e.g. profile page lists, preservation, usage stats, request a copy),
  – make the barriers to deposit as low as possible (outreach, training, well-staffed support team)
  – make management on how the repository supports reporting and compliance

• Understand the core mission of the repository
  – any increase in system complexity should be in support of that.

• Engage with the wider repository community
  – They're a friendly bunch fighting the same fight.

• If you're fortunate enough to have a techie invested in the project, involve them from the start.

• Identify people in your academic champions and engage with them.
  – They will promote the repository for you.

• If the project team are enthusiastic about what the repository is and does, amazing things can happen.