The Open University

Communicating science in the information age: revisiting scholarship, reassessing media, exploring public participation

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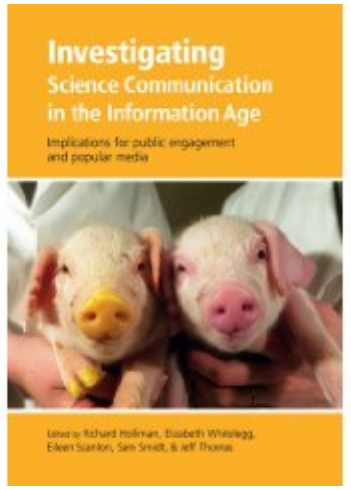
overview: lecture and module

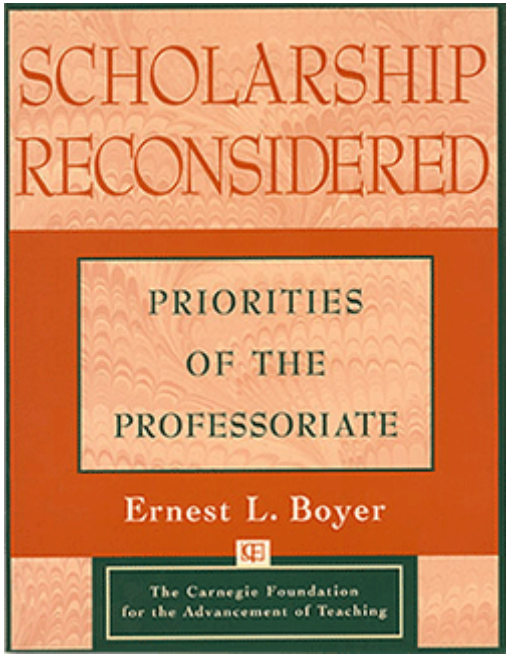
- from ‘analogue’ to digital scholarship (*Jcom*)
- from analogue and print to digital media, tools and technologies
- changes to audiences and public participation
- questions
- module - ‘Using the web: Developing information literacy skills and competencies’



revisiting scholarship

‘Traditional’ scholarship

- Boyer's “Scholarship Reconsidered” (1990)
  - discovery
  - integration
  - application
  - teaching



- How might digital technologies affect these dimensions (Borgman, 2007)?

From ‘analogue’ to digital scholarship: what does this mean in practice?

- Martin Weller and Nick Pearce
- Open University project exploring digital scholarship
  - emerging practices
  - identities
  - the impact of the information age
- interviewing researchers about their teaching communication and publication practices
- academics in higher education

Attitudes to digital scholarship

- What counts as digital scholarship?
  - process vs. product
- Can you map traditional scholarly outputs against digital work?
  - e.g. podcast vs. keynote
- How can a young academic at the start of their career make an impact in the digital space?
- What makes a good blog?
- How are academics making use of the possibilities of digital scholarship?
- How can these forms be evaluated and rewarded?

Interviewee

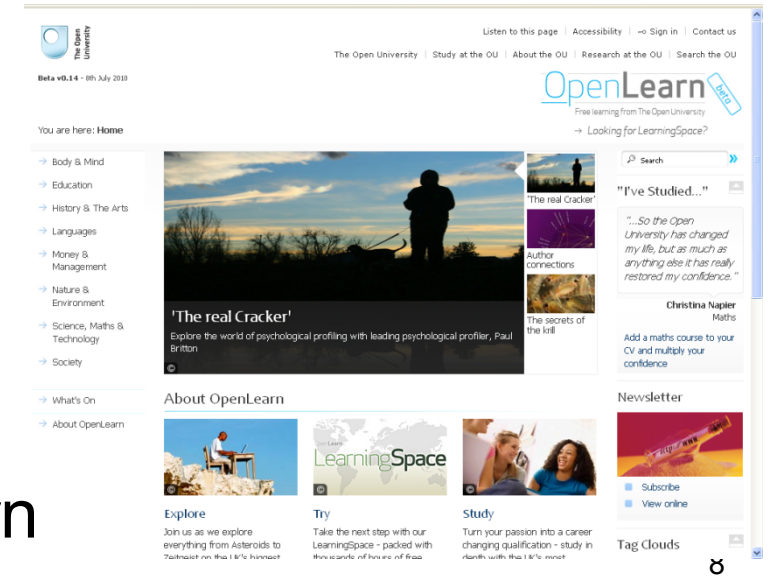
I don't want to be a private intellectual. Too much is real, too much at stake, in the public sphere. The interaction between the scholar and the world should not be solely within the classroom or the lab or through the occasional snippet quoted by a journalist.

All the tools are at hand for scholars to be public intellectuals. It truly does not require a rocket scientist to communicate with the entire world online.

But it may require someone who is not a scientist or scholar to believe he or she has the right and privilege to express and develop ideas without first seeking peer permission to publish those ideas.

Possibilities for digital scholarship

- changing practices are not inevitable
  - discovery – open data
    - generation, analysis, storage, curation
  - integration – open publishing
  - application – open engagement
  - teaching – open education



Open learn

Implications for the sciences: from ‘analogue’ towards digital scholarship

- training (information literacy)
- automated & personalised updates on funding calls
- searching online for collaborators
- electronic submission and review—grants & papers
- sourcing literature, patents and other media
- blogging and social networking
- open lab books
- data sharing and processing
- grid computing
- responding to FoI requests
- conferences and presentations
- publishing – various forms

revisiting scholarship

- How is knowledge produced in the information age, and by whom?
- What forms of publication are deemed reliable and valid?
- How is knowledge circulated, responded to and debated in the digitally-mediated public sphere?
- How are ideas about public engagement shifting and extending practices of knowledge production?

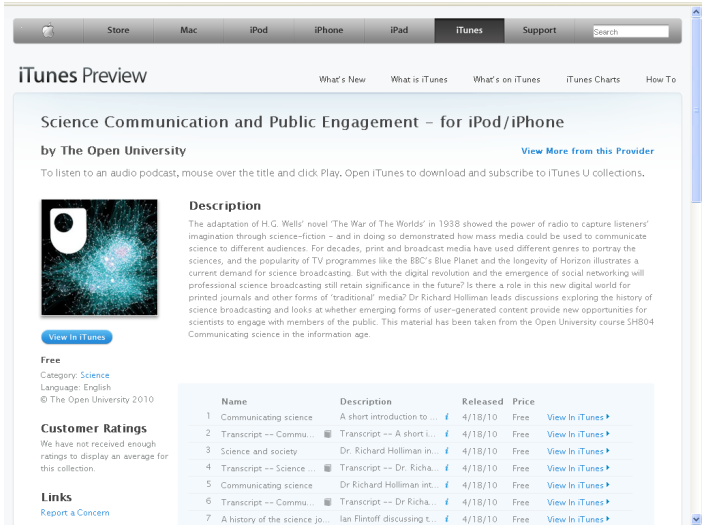
reassessing media

reassessing media

- social technology
- What forms of digital media are available to publish, represent, circulate, share and discuss forms of academic knowledge?
- How are academics, media professionals and user communities using digital media to represent and discuss public knowledge?
- How might we assess the impact of engagement via the digitally-mediated public sphere?

‘Traditional’ routes to publication

- primary literature
- establishing priority
- printed text
  - developments in form
  - developments in political economy of publishing (Flintoff, 2009)
- peer review (Wager, 2009)
- searched by indexes (Gartner, 2009)



‘Alternative’ routes to publication

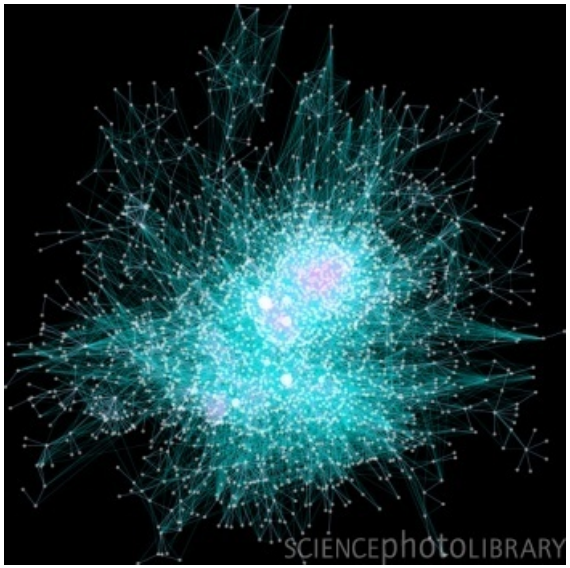
- open access
  - e-print servers (arXiv)
  - ‘gold road’ (‘author’ pays, *PLoS*)
  - ‘green road’ (repositories ORO)
- open review (JiME)

Open University library

- popular science books
- ‘festschriften’
- press conferences (e.g. ‘cold fusion’)
- news and current affairs media (e.g. GM potatoes)

Other forms of ‘publication’

- ‘secondary’ and ‘grey’ literature
- patents
- email and online forums
- social media and networking
- podcasts, audio downloads
- web video
- science centres/exhibitons
- events



The blogosphere

Universe of particles

professional news media

- strategic
  - print = niche market
  - digital first policies
  - converged newsrooms
  - international audiences
- operational
  - experiments (research, representation, collaboration)
  - open newslists
  - search engine optimisation
  - comment and debate

Everyone's at it: blurring boundaries

- academic journals
- scientific institutions
- 'big science' projects
- higher education institutions
- industry
- news media
- magazines
- NGOs and advocacy
- scientific citizens

content creation and sharing, convergence,
interaction, participation, choice,
digital divide, 'info poor', managing flows of information

public participation

rethinking public participation

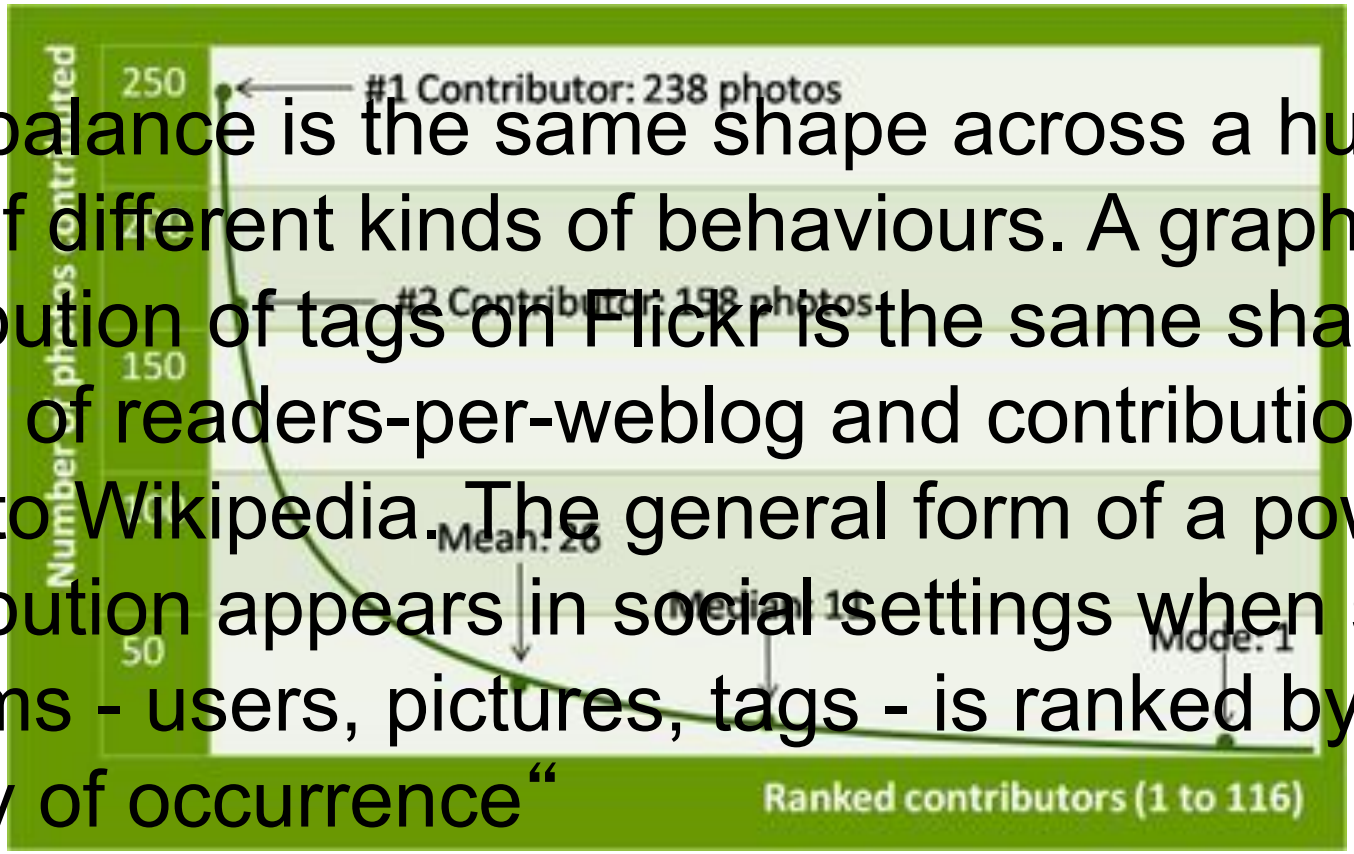
- How are publics defined in the information age?
- How might publics participate in the production of academic knowledge and how might this influence the validity and reliability of data?
- Who chooses to engage, and why? Who is excluded from debates about public knowledge?
- Should upstream (and downstream) public engagement become a routine aspect of the academic research cycle?

audience descriptors

- group
- crowd
- public
- mass
- viewers
- listeners
- readers
- contributors
- collaborators
- subscribers
- friends
- followers
- members
- bloggers
- tweeter
- lurkers
- trending

power law distribution

"...the imbalance is the same shape across a huge number of different kinds of behaviours. A graph of the distribution of tags on Flickr is the same shape as the graph of readers-per-weblog and contributions-per-user to Wikipedia. The general form of a power law distribution appears in social settings when some set of items - users, pictures, tags - is ranked by frequency of occurrence“



(Shirky, 2008)

citizen cyberscience

“To be fair, long before the Internet and the Web, citizen science has been challenging the amateur/professional boundary in fields like astronomy and archaeology. The only difference now – the “cyber” part of the story – is that the Web greatly broadens the scope of what fields of science amateurs can contribute to.”

Francois Grey, Citizen Cyberscience Centre

citizen science

- creating publics and communities
  - social networks
  - open source communities – drupal
- data collection
  - evolution megalab
- data analysis
  - distributed computing – LHC@Home 2.0
  - collaborative gaming – folding@home
- advocacy and activism - climategate and PRO-TEST

Digital scholarship is about…

"...the role of digital technologies in shaping all aspects of the scholarly enterprise, encapsulating scholars' and citizens' established and emergent social practices, and related governance and policy developments."

(Holliman and Scanlon, 2011)

"embracing the open values, ideology and potential of technologies… to benefit both the academy and society"

(Pearce et al. 2011)

Resources

- Isotope isotope.open.ac.uk
- iTunes U open.edu/itunes
- Open Learn open.ac.uk/openlearn
- OU You Tube channels youtube.com/user/TheOpenUniversity
- Open Research Online oro.open.ac.uk
- Creet creet.open.ac.uk