



What we can do to promote cheaper and open scientific information?

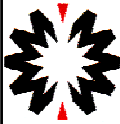
David Prosser • SPARC Europe Director
(david.prosser@bodley.ox.ac.uk)



SPARC Europe

Scholarly Publishing & Academic Resources Coalition

- Formed in 2002 following the success of SPARC (launched in 1998 by the US Association of Research Libraries)
- Encourages partnership between libraries, academics, societies and responsible publishers
- Currently focused on STM, but coverage expanding
- Has over 60 members and is growing
- By acting together the members can influence the future of scholarly publishing



The Global Journals Problem

www.sparceurope.org

UK 1989-99

Journals unit cost +364%

Faculty salaries +60%

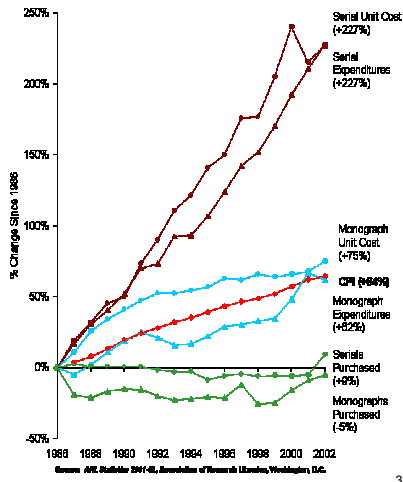
Australia 1986-98

Serials unit cost +474%

Serials expenditure +263%

Titles purchased - 37%

Graph 2
Monograph and Serial Costs
In ARL Libraries, 1988-2002



The Situation Today – Dissatisfaction at All Levels

www.sparceurope.org

- Authors
 - Their work is not seen by all their peers – they do not get the recognition they desire
 - Despite the fact they often have to pay page charges, colour figure charges, reprint charges, etc.
 - Often the rights they have given up in exchange for publication mean there are things that they cannot do with their own work
- Readers
 - They cannot view all the research literature they need – they are less effective
- Libraries
 - Cannot satisfy the information needs of their users
- Society
 - We all lose out if the communication channels are not optimal.



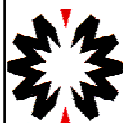
What is a Journal?

Scholarly publishing comprises four functions:

REGISTRATION Establishing intellectual priority	CERTIFICATION Certifying the quality/validity of the research	AWARENESS Assuring accessibility of research	ARCHIVING Preserving research for future use
---	---	--	--

Current model:

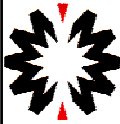
- Integrates these functions in journals
- This made sense in print environment



Budapest Open Access Initiative

Two complementary strategies:

- **Self-Archiving**: Scholars should be able to deposit their refereed journal articles in open electronic archives which conform to **Open Archives Initiative** standards
- **Open-Access Journals**: Journals will not charge subscriptions or fees for online access. Instead, they should look to other sources to fund peer-review and publication (e.g., publication charges)



What are institutional repositories (open archives)?

www.sparceurope.org

Essential elements

- *Institutionally defined*: Content generated by institutional community
- *Scholarly content*: preprints and working papers, published articles, enduring teaching materials, student theses, data-sets, etc.
- *Cumulative & perpetual*: preserve ongoing access to material
- *Interoperable & open access*: free, online, global

7



Why institutional repositories?

www.sparceurope.org

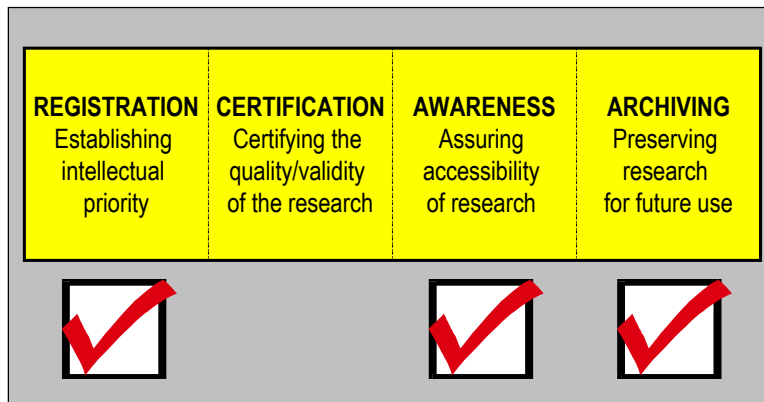
- **For the Individual**
 - Provide a central archive of their work
 - Increase the dissemination and impact of their research
 - Acts as a full CV
- **For the Institution**
 - Increases visibility and prestige
 - Acts as an advertisement to funding sources, potential new faculty and students, etc.
- **For Society**
 - Provide access to the world's research
 - Ensures long-term preservation of institutes' academic output

8



The Four Functions of a Journal

www.sparceurope.org



9

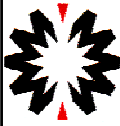


Certification

www.sparceurope.org

- Certification gives:
 - Authors – Validation of their work (important for promotion and grant applications)
 - Readers – Quality filter
- Journals would provide peer review services for a sub-set of the material in the Institutional Repositories
- The journals would give a ‘quality stamp’ to the research presented in the Repositories
- Journals should be open access

10



Open Access

www.sparceurope.org

What is it?

Call for *free, unrestricted access* on the public internet to the literature that scholars give to the world *without expectation of payment*.

Why?

Widen dissemination, accelerate research, enrich education, share learning among rich & poor nations, enhance return on taxpayer investment in research.

How?

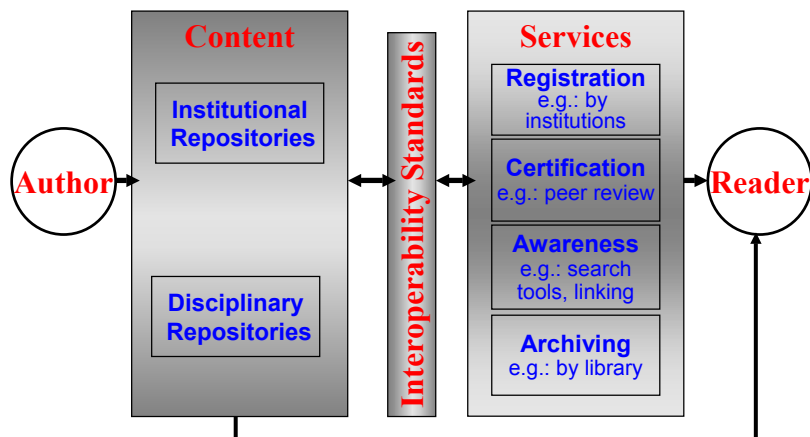
Use existing funds to pay for *dissemination*, not *access*.

11

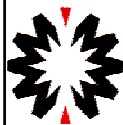


How the pieces work together

www.sparceurope.org



12

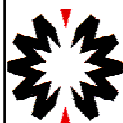


Utopia!

www.sparceurope.org

- All research material freely available in a world-wide network of repositories
- Peer-reviewed papers receive quality stamp from journals, financed by authors not readers
- All peer-review papers are freely available to anybody with internet access

13



Theory Into Practice - Institutional Repositories

www.sparceurope.org

- Eprints.org – Southampton produced software
- D-Space – MIT Repository, expanding to Cambridge, UK
- CDSWare – CERN
- ARNO – Tilburg, Amsterdam, Twente

- SHERPA – UK
- DARE – The Netherlands
- \$12 million grant for repositories in Australia
- Over 200 institutions world-wide have set-up repositories

- SPARC Resources –
(<http://www.arl.org/sparc/core/index.asp?page=m0>)

14



Theory Into Practice - Service Providers

www.sparceurope.org

- Arc Search engine
- Callima Search engine
- citebaseSearch Search engine (with citation ranking)
- CYCLADES Search engine
- DP9 Presents OAI archives hidden in the deep Internet
- iCite Citation indexing system covering physics journals
- my.OAI Search engine
- NCSTRL Unified access to archives in computer sciences
- OAIster Search engine
- Perseus Search engine in humanities
- Public Knowledge Discipline-specific OAI metadata harvesting service
- Scirus Elsevier Science search engine
- TORII Unified access to various open archives (physics and computer Science)

15

Use this form to find digital resources (what is a digital resource?) from many institutions (which institutions are available?).

Why do I sometimes get duplicate records?
Why do I sometimes have trouble accessing digital objects?
Check out this explanation.

See help for search tips.

Search all fields (help)
Use a word or phrase, e.g., diploma*, fancy dress

and or

Search within particular fields (help)
Use a word or phrase, e.g., diploma*, fancy dress

Title: and

Author/Creator: and

Subject: and

Resource Type:

Choose sorting of results (help)
e.g., results in date descending order, from 2002 to 1999

title author/creator

date descending date ascending

hit frequency weighted hit frequency



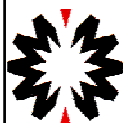
Theory Into Practice - Open Access

www.sparceurope.org

SPARC open access journal partners:

- *Algebraic and Geometric Topology*
- *BioMed Central* (published 4000+ papers)
- *Documenta Mathematica*
- Calif. Digital Library *eScholarship*
- *Geometry & Topology*
- *Journal of Insect Science*
- *Journal of Machine Learning Research*
- *New Journal of Physics*

17

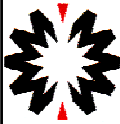


Theory Into Practice - Open Access Journals

www.sparceurope.org

- Two new journals from the Public Library of Science - *PLoS Biology* and *PLoS Medicine*
- Indian Academy of Sciences has made their 11 journals available free online
- Lund Directory of Open Access Journals (<http://www.doaj.org/>) – over 670 peer-reviewed open access journals
- Sabo – ‘Public Access to Science’ Act
- UK Science and Technology Committee Inquiry
- Wellcome Trust support of Open Access
- Berlin Declaration in Support of Open Access

18



Theory Into Practice - Open Access Journals (Cont.)

www.sparceurope.org

Berlin Declaration in Support of Open Access:

Germany

Fraunhofer Society
Wissenschaftsrat
HRK
Max Planck Society
Leibniz Association
Helmholtz Association
German Research Foundation
Deutscher Bibliotheksverband

France

Centre National de la Recherche
Scientifique (CNRS)
Institut National del la Santé et de la
Recherche Médicale (INSERM)

Austria

FWF Austrian Science Fund (FWF Der
Wissenschaftsfonds)

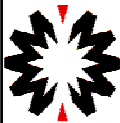
Belgium

General of the Fund for Scientific
Research – Flanders (Fonds voor
Wetenschappelijk Onderzoek -
Vlaanderen)

Greece

National Hellenic Research Foundation

19



The Power of Open Access – Self Archiving

www.sparceurope.org

- For 72% of papers published in the *Astrophysical Journal* free versions of the paper are available (mainly through ArXiv)
- These 72% of papers are, on average, cited **twice** as often as the remaining 28% that do not have free versions.

Self-archiving gives authors an advantage, even for journals where ‘everybody already has access’!

Figures from Greg Schwarz

20



The Power of Open Access – Journals

www.sparceurope.org

- The average number of downloads for articles in ScienceDirect over the past year was **28**
- Over the same period the average number of downloads for articles in BioMedCentral was **2,500**
- And **1000** for the *New Journal of Physics*

Open Access gives

- **89 times** as much usage in biomedicine, and
- **35 times** as much usage in physics as closed, subscription-based access!

Figures from Peter Suber

21



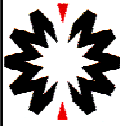
Open Access – Making the Transition

www.sparceurope.org

- Give Authors the choice:
 - If they pay a publication charge the paper is made open access on publication.
 - If they do not pay the publication charge the paper is only made available to subscribers.
- Over time, as proportion of authors who pay increases subscription prices can fall
- Eventually, entire journal is open access

(<http://www.sparceurope.org/Open%20Access/From%20Here%20to%20There.doc>)

22



Gradual Transition - Advantages

www.sparceurope.org

- Authors who are willing and able to pay receive the benefits of open access (i.e., wider dissemination, higher citation, greater kudos, etc.).
- Authors who are unwilling or unable to pay can still publish in their journal of choice.
- The benefits to authors of open access can be accurately measured
- As the benefits of open access become clear authors will place pressure on their funding bodies to provide grants for publication.
- As the proportion of open access papers increases so should the journal's impact factor.
- The owner is provided with a smooth transition period as the decline in subscription revenue is matched to the increase in publication revenue – low financial risk

23



Open Access – Making the Transition

www.sparceurope.org

- A number of ‘traditional’ publishers are transforming their closed access journals into open access journals:
 - Oxford University Press
 - Company of Biologists
 - American Physiological Society
 - Florida Entomological Society
 - Entomological Society of America
 - Infotrieve

24



Practical issues

www.sparceurope.org

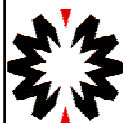
Impediment to formal publication?

- Trend for publishers to accept that online posting is not prior publication
- Develop discipline-specific policies

Intellectual property issues

- Repository registration protects priority
- Retain rights to e-print
- <http://www.lboro.ac.uk/departments/dis/disresearch/romeo/index.html>
- No more plagiarism online than offline

25



Practical issues

www.sparceurope.org

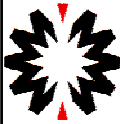
Perceived quality

- Label & differentiate types of content
- Reveal certification methods

Rewarding faculty participation

- Should institutions reward registration in institutional repository?
- Should funding agencies reward institutions and scholars for registration in institutional repositories?

26



What Libraries Can Do

www.sparceurope.org

Self-archiving:

- Maintain institutional repository.
- Help faculty deposit their research papers, new & old, digitizing if necessary.

Open-access journals:

- Help open access journals launched at your institution become known to other libraries, indexing services, potential funders, and potential readers.
- Make sure scholars at your institution know how to find open access journals and archives in their fields. Set up tools to allow them to access these.

27



What Libraries Can Do

www.sparceurope.org

- Support open access journal ‘institutional memberships’ (e.g. BioMedCentral)
- As open access journals proliferate, and as their usage and impact grow, cancel over-priced journals that do not measure up (e.g. Oldenburg, Cornell, University of California)
- Engage with University administrators and funding bodies to raise the issue of open access
- Familiarize yourself with the issues – see *Create Change* at <www.createchange.org>.
- Support SPARC Europe to multiply your effort.

28

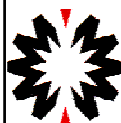


What Academics Can Do

www.sparceurope.org

- Deposit papers in local repository
- Check Project RoMEO page for publishers' attitudes to self-archiving
<http://www.lboro.ac.uk/departments/dis/disresearch/romeo/index.html>
- Support open access journals, by submitting and reviewing papers, reading and citing articles
- Launch new open access journals if appropriate
- If an Editor or Board member discuss publication rights, open access, and reasonable prices with their publisher
- Discuss with funding bodies and university administrators funding and promotion criteria – ensure that faculty are not penalized for using repositories or publishing in open access journals
- Lobby funding bodies for specific publication funds

29



Theory Into Practice - Building Momentum

www.sparceurope.org

- Increasing numbers of libraries are taking on role of hosts for institutional repositories
- Increasing library resistance to the old models (subscriptions, big deals, etc.)
- More open access journals proving the feasibility of the business model
- Open access journals are attracting quality authors, editors, and readers
- Increasing awareness of authors of need to retain their publishing rights

30



Theory Into Practice - Building Momentum (Cont.)

www.sparceurope.org

- Increasing awareness of Editors and Editorial Board members of their power and responsibilities
- Increasing awareness amongst funding bodies of publishing issues
- Increasing awareness at the political level of scholarly communication issues
- Entry level for new players reduced
- Membership of SPARC Europe increasing
- The benefits to authors are becoming apparent

31



Open Access – Appealing to All the Major Stakeholders

www.sparceurope.org

- To the funders of researcher – both as a public service and as an increased return on their investment in research
- To the authors – as it gives wider dissemination and impact
- To readers – as it gives them access to all primary literature, making the most important ‘research tool’ more powerful
- To editors and reviewers – as they feel their work is more valued
- To the libraries – as it allows them to meet the information needs of their users
- To the institutions – as it increases their presence and prestige
- To small and society publishers – as it gives them a survival strategy and fits with their central remit of serving their communities

32



Create Change!

www.sparceurope.org

**“Although the battle is being fought over
subscription prices, what is really at stake...is
the scientific process itself.”**

New York Times, Dec. 8, 1998

**“ An old tradition and a new technology have
converged to make possible an
unprecedented public good. ”**

Budapest Open Access Initiative, Feb. 14, 2002

Contact SPARC Europe:
david.prosser@bodley.ox.ac.uk