

POSSIBLE MODELS OF SCHOLARLY PUBLISHING AND LIBRARY ROLE

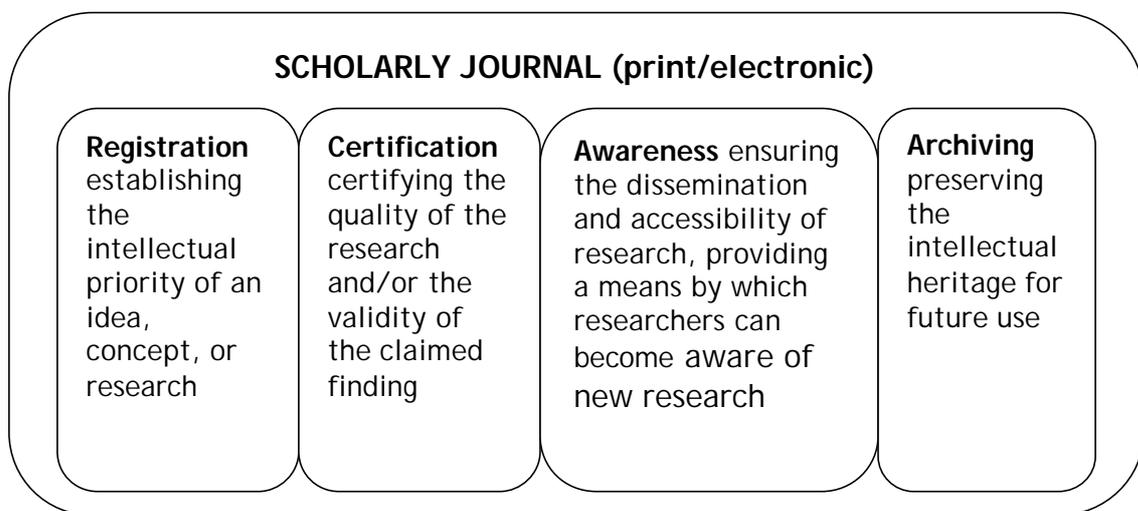
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"Scholarly communication comprises four essential components.

Traditionally, those four functions were integrated in one publishing model:



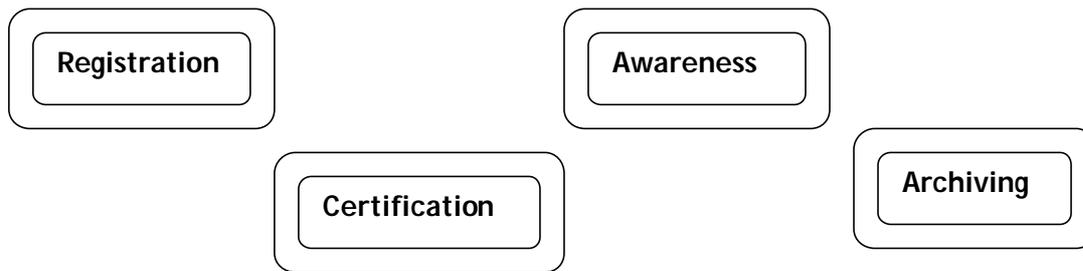
INTEGRATED COMMUNICATION MODEL

Scientific journals have been major means of scholarly communication throughout last three centuries.

Disadvantages of (both printed and electronic) journals:

- expensiveness,
- time-consuming editing and publishing process,
- delays of content delivery,
- inflexibility,
- complicated mechanisms of acquisition, access and archiving.

Dissatisfaction with current model: "**serial crisis**"!



NEW DISAGGREGATED MODEL OF SCHOLARLY COMMUNICATION

Each future model will also have to ensure fulfillment of all four functions, but particular functions will be carried out by different instances: authors, academic institutions, professional societies, journals, eprint archives, librarians.

Emergence of Internet (and especially World Wide Web) has brought new possibilities for profound transformation of scientific communication process.

New models are far more heterogeneous and flexible, and are taking full advantage of new online media. There are two main categories:

EPRINT ARCHIVES

- archiving peer reviewed literature or preprints (or both),
- discipline based and institutional,
- centralised or distributed systems.

Examples:

ArXiv (www.arxiv.org)

- appeared in 1991 as first preprint archive
- discipline-based: major forum for dissemination of information in the field of theoretical physics
- popularity of ArXiv has inspired development of numerous discipline based archives

CoRR - Computing Research Repository (xxx.lanl.gov/archive/cs/intro.html)

CogPrints (cogprints.soton.ac.uk)

CPS Chemistry Preprint Server (www.chemweb.com/preprint)

Dspace (www.dspace.org)

- digital repository created to capture, distribute and preserve the intellectual output of Massachusetts Institute of Technology (MIT)
- a joint project of MIT Libraries and the Hewlett-Packard Company
- provides stable long-term storage needed to house the digital products of MIT faculty and researchers
- one of the latest and most significant examples of institutional archives

Caltech Collection of Open Digital Archives (CODA) - California Institute of Technology
(<http://library.caltech.edu/digital/>)

CERN Document Server (CDS) (cds.cern.ch)

Nottingham ePrints University of Nottingham (www-db.library.nottingham.ac.uk/eprints/)

PubMed Central (www.pubmedcentral.nih.gov)

- centralised digital archive of life sciences journal literature
- only peer reviewed journal literature (no preprints)
- managed by the National Center for Biotechnology Information (NCBI) at the U.S. National Library of Medicine (NLM)

ALTERNATIVE JOURNALS

Examples:

BioMed Central (www.biomedcentral.com)

- commercial publisher of biomedical literature
- open (free) access journals
- long-term archiving is ensured by PubMed Central
- innovative business plan: "author pays" model

Public Library of Science Journals (www.publiclibraryofscience.org)

- promoting open-access publishing in life sciences and medicine
- funding model similar to BMC

BioOne (www.bioone.org)

- collaboration of non-profit publishing organisations
- provides an inexpensive vehicle to convert existing print journals to electronic form
- pricing model based on cost recovery

DOAJ - Directory of Open Access Journals (www.doaj.org)

- launched by Lund University Libraries
- comprehensive directory of all quality controlled open-access journals

SUPPORTING INITIATIVES

Examples:

OAI - Open Archives Initiative (www.openarchives.org)

- develops and promotes interoperability standards that aim to facilitate the efficient dissemination of content (OAI-PMH Open Archives Initiative Protocol for Metadata Harvesting)
- enhances access to e-print archives as a means of increasing the availability of scholarly communication
- developing framework for distributed, interoperable network of eprint archives

BOAI - Budapest Open Access Initiative (www.soros.org/openaccess/)

- aims to accelerate progress in the international effort to make research articles in all academic fields freely available on the internet
- supported by the Open Society Institute
- to achieve open access to scholarly journal literature, two complementary strategies are recommend: self-archiving and a new generation of open-access journals

SPARC - Scholarly Publishing and Academic Resources Coalition (www.arl.org/sparc/)

- launched by the Association of Research Libraries
- an alliance of universities, research libraries, and organizations “built as a constructive response to market dysfunctions in the scholarly communication system”
- focuses on enhancing broad and cost-effective access to peer-reviewed scholarship
- creating new lower-cost alternatives to high-price journals

FIGARO (www.figaro-europe.net)

- two Dutch (Utrecht & Delft), and two German universities (Oldenburg & Hamburg)
- initiative to set up an infrastructure for academic e-publishing in Europe
- investigates new business models for scholarly publishing and stimulate open access

ROLE OF THE LIBRARIES

- librarians should raise the awareness of the academic community regarding problems and opportunities in scholarly communication
- libraries as promoters of open access to scientific information, helping scientists to regain control over scientific publishing
- libraries as technical and professional support to emerging systems (records management, metadata creation, classification schemes, preservation, applying standards, etc.)
- libraries - responsibility to store, preserve and provide access to digital scientific output of the “mother institution” through institutional archives
- librarians - (among others) need to invent new and better tools for evaluating scientific performance (existing tools are hindering open access)

REFERENCES

Crow, R. (2002) *The Case for Institutional Repositories: A SPARC Position Paper* [Internet]. Washington, The Scholarly Publishing & Academic Resources Coalition. Available from: <http://www.arl.org/sparc/IR/IR_Final_Release_102.pdf> [Accessed 5 May, 2003]