

Accessing Research Results in the Open Information Environment

Marjut Salokannel
LL.D. Adjunct Professor

Scientific knowledge as a public good

- Knowledge as a global public good
- Non- rival and non-excludable
- Not produced by market mechanisms; requires public support
- Scientific knowledg;
 - publicly funded
 - Not diminished when used; on the contrary scientific knowledge is based on the previous knowledge; accumulation of knowledge
 - Open access reinforces the public good nature of scientific knowledge

Open Access in historical perspective

- Budapest Open Access Initiative, 2002
 - Free unrestricted on-line availability of results of scientific research
 - 5936 signatories
- Bethesda Statement on Open Access Publishing, 2003

Berlin Open Access Declaration, 2006

- a wider vision of Open Access
- Engages each and every individual producer of scientific knowledge and holder of cultural heritage
- 294 research organization signatories including the Rectors Council of Finnish Universities in 2006
- Regular annual conference since 2003
- Defines open access contributions as original scientific research results, raw data and metadata, source materials, digital representations of pictorial and graphical materials and scholarly multimedia material.

Berlin Decl. Cont.

- Two conditions have to be met to satisfy the requisites for open access
 - 1) The author(s) and right holder(s) of such contributions grant(s) to all users a free, irrevocable, worldwide, right of access to, and a license to copy, use, distribute, transmit and display the work publicly and to make and distribute derivative works, in any digital medium for any responsible purpose, subject to proper attribution of authorship, as well as the right to make small numbers of printed copies for their personal use.

Berl Decl. Cont.

- 2) A complete version of the work and all supplemental materials, including a copy of the permission as stated above, in an appropriate standard electronic format is deposited (and thus published) in at least one online repository using suitable technical standards (such as the Open Archive definitions) that is supported and maintained by an academic institution, scholarly society, government agency, or other well-established organization that seeks to enable open access, unrestricted distribution, inter operability, and long-term archiving.

Institutional Open Access Recommendations

- UN World Summit on the Information Society Declaration of Principles and Plan of Action, 2003
- Organisation for Economic Co-operation and Development (OECD) Declaration on Access to Research Data From Public Funding, 2004

European Union

- Study on the economic and technical evolution of the scientific publication markets in Europe , 2006
 - Resulted in, i.a., a recommendation for member states to “Guarantee public access to publicly-funded research results shortly after publication”
 - Communication on scientific information in the digital age: access, dissemination and preservation

Commission position:

- *“Initiatives leading to wider dissemination of scientific information are necessary, especially with regard to journal articles and research data produced on the basis of public funding.”*
- *“Fully publicly funded research data should in principle be accessible to all”*
- *Need for “clear strategies for the digital preservation of scientific information”*

EU cont.

- Green Paper – The European Research Area: New Perspectives (COM(2007)161)
 - effective knowledge sharing

Council Council Conclusions on scientific information in the digital age: access, dissemination and preservation, 2007

- reinforce national strategies and structures for access to and preservation and dissemination of scientific information
- enhance the co-ordination between Member States on access and dissemination policies and practices
- ensure the long term preservation of scientific information

EU cont.

Lisbon European Council Conclusions March 2008

- encouraging open access to knowledge and innovations

Commission Recommendations on the management of IP in knowledge transfer activities (COM(2008)1329)

- Promote open access to research results

- First Report of the European Research Area Board (2009)
'Preparing Europe for a New Renaissance'

- *"We will know the ERA is a shared responsibility in 2030 when we see: [...] All outputs of public, non-military funded research will be available via 'open access' to all concerned and interested"*

Two roads to Open Access

- Green Road
 - based on university self-archiving mandates
 - researchers have to archive their final peer-reviewed manuscripts to the institution's digital repository or subject based open repository
 - Provides for free, immediate permanent, full-text, global on-line access
 - Maximises use, applications and impact of the research output
 - Long term sustainability

- Golden Road
 - Open access journals
 - Publisher driven
 - Financed by author fees, advertisement or otherwise
 - Same impact as self-archiving if the article is freely available on-line on world-wide basis

Different ways of achieving open access

- 1) Executive decisions (e.g. European universities)
- 2) Public legislation (NIH, United States)
- 3) Faculty approval (United States)
- 4) Funder mandate (e.g. Wellcome Trust, ERC, Vetenskapsrådet)

Faculty approval -based open access mandate

- Harvard (2008) and MIT (2009); others have followed
- Faculty members, i.e. authors grant a nonexclusive permission to make available his or her scholarly articles and to exercise the copyright in those articles for the purpose of open dissemination.
- The license is a nonexclusive, irrevocable, paid-up, worldwide license to exercise any and all rights under copyright relating to each of his or her scholarly articles, in any medium, provided that the articles are not sold for a profit, and to authorize others to do the same
- Faculty member may ask for an opt-out from the license

Executive decision -based OA mandate

- Used in Europe
- Mandate with voluntary compliance; enforced by incentives not by sanctions
- Requires individual author's permission if not transferred by employment contract or otherwise
- It is recommended that copyright is retained by authors; only publication right is granted to the publisher

Exec. Dec. Cont.

- Makes it easier to measure and reward the publications, their use and application and impact of the research output of the university
- Makes it easier to collect, manage and demonstrate a permanent record of the research output of the university
- Makes it possible to link publications to underlying research data and into the wider research infrastructure

University of Helsinki decision

In 2008 the Rector of the University of Helsinki made the OA Decision

The reasons for the open access decision are i.a.,

- To support open access to research results
- To make results of publicly funded research openly accessible online to anyone interested
- To increase the visibility, use and impact of research results of the University of Helsinki by providing open access through the University's own repository
- To make its repository and publication records openly available online and
- available for linkage to other repositories internationally
- To ease the reviewing of research results with open access research publications

University of Helsinki cont.

- According to the Decision

The University of Helsinki requires that researchers working at the University deposit copies of their research articles published in academic research journals in the open repository of the University

- Applies to manuscripts of peer-reviewed scientific articles that have been accepted for publication (author's final manuscript)

Public legislation based mandate

- United States: National Institutes of Health (NIH)
- Previously voluntary, did not achieved the desired outcome

According to the law The Director of the National Institutes of Health shall require that all investigators funded by the NIH submit or have submitted for them to the National Library of Medicine's PubMed Central an electronic version of their final, peer-reviewed manuscripts upon acceptance for publication, to be made publicly available no later than 12 months after the official date of publication: Provided, That the NIH shall implement the public access policy in a manner consistent with copyright law.

NIH cont.

1. The NIH Public Access Policy applies to all peer-reviewed articles that arise, in whole or in part, from direct costs funded by NIH, or from NIH staff, that are accepted for publication on or after April 7, 2008.
2. Institutions and investigators are responsible for ensuring that any publishing or copyright agreements concerning submitted articles fully comply with this Policy.
3. PubMed Central (PMC) is the NIH digital archive of full-text, peer-reviewed journal articles. Its content is publicly accessible and integrated with other databases (see: <http://www.pubmedcentral.nih.gov/>).
4. The final, peer-reviewed manuscript includes all graphics and supplemental materials that are associated with the article.

NIH cont.

- Compliance with the NIH Policy is a statutory requirement and a term and condition of the grant award and cooperative agreement, in accordance with the NIH Grants Policy Statement.
- As a consequence all major scientific publishers include special provisions in their publications agreements that adjust the agreement to the NIH and other similar research funder policies

Other research funding body policies

Wellcome Trust, OA decision 2006

- * requires electronic copies of any research papers that have been accepted for publication in a peer-reviewed journal, and are supported in whole or in part by Wellcome Trust funding, to be made available through PubMed Central (PMC) and UK PubMed Central (UKPMC) as soon as possible and in any event within six months of the journal publisher's official date of final publication
- * will provide grantholders with additional funding, through their institutions, to cover open access charges, where appropriate, in order to meet the Trust's requirements
- * encourages - and where it pays an open access fee, requires - authors and publishers to license research papers such that they may be freely copied and re-used (for example for text and data-mining purposes), provided that such uses are fully attributed
- * affirms the principle that it is the intrinsic merit of the work, and not the title of the journal in which an author's work is published, that should be considered in making funding decisions.

Howard Hughes Medical Institute (2008)

- HHMI's research policies link the publishing of research results with the sharing of underlying data and research materials firmly together
- For research articles the publishing policy states that

An Institute laboratory head is responsible for ensuring that each original, peer-reviewed research publication on which he or she is a major author is freely available and downloadable on-line within six months of publication either in PubMed Central or other comparable institutional repository

An Institute laboratory head whose appointment is up for review may submit in his or her collection of significant papers only articles that are compliant with this policy.

HHMI cont.

For research data the policy states that

Publishing a scientific paper is a quid pro quo in which authors receive credit and establish priority in exchange for disclosure of their scientific findings. A responsibility of authorship is to make available materials, databases, and software integral to the publication so that others may validate or falsify the results and extend them in new directions. (Sharing of Publication-Related Materials, Data and Software (SC-300))

Upon publication of their work, laboratory heads are expected to make materials, data and databases, and software integral to their publication freely available for research use by other scientists and to handle requests expeditiously

Austrian Science Fund (2008)

- the FWF requires all project leaders and workers to make their publications freely available through open access media on the Internet
- Free access to publications can either be ensured through direct publication in open access journals or by archiving electronic copies of previously published original articles in subject-specific or institutional repositories; maximum 6 months embargo
- grants covering the costs of scholarly publications in refereed specialist journals can be requested up to three years after the end of the project; monographs, proceedings and collections are also covered

Austria cont.

- Research data collected and/or analyzed using FWF funds should (where legally possible) be made available free of charge by project leaders and workers in accordance with subject-specific standards no more than two years after the end of the project. The data should be provided in subject-specific or institutional repositories.
- Open access activities are to be indicated in any reports to the FWF, and grant recipients are required to provide justification in cases where the FWF's open access policy could not be observed for legal reasons.

Vetenskapsrådet (2010)

- Researchers who receive funding from the Swedish Research Council must archive their articles in open databases within 6 months of publication, or publish directly in Web-based journals that use Open Access.
- applies only to peer-reviewed texts in journals and conference reports, not monographs and book chapters.

Other Swedish funders

Riksbankens jubileumsfond

- same policy as Vetenskapsrådet

Knut och Alice Wallenbergs Stiftelse

- research results must be freely available and downloadable on Internet
- published articles must be archived in open searchable databasis; extra costs involved may be introduced in the research budget

ERC (2007)

- The ERC requires that all peer-reviewed publications from ERC-funded research projects be deposited on publication into an appropriate research repository where available, such as PubMed Central, ArXiv or an institutional repository, and subsequently made Open Access within 6 months of publication.
- The ERC considers essential that primary data are deposited to the relevant databases as soon as possible, preferably immediately after publication and in any case not later than 6 months after the date of publication.
- The ERC is keenly aware of the desirability to shorten the period between publication and open access beyond the currently accepted standard of 6 months.

Current situation

- 112 institutional mandates
- 46 funder mandates

(source ROARMAP at
[/www.eprints.org/openaccess/policysignup/](http://www.eprints.org/openaccess/policysignup/))

Only mandates have effect; recommendations have had no impact

Research funders mandates are crucial

Next steps

- linking data and other research materials to self-archiving mandates makes it possible to create seamless integrated research environments where all research resources can be accessed and built upon
- From output to input; openly available scientific articles as input to the wider research infrastructure which includes research data and metadata and other research materials

The way ahead

- Building globally accessible research infrastructures which enable research across borders and across disciplines and thus can provide answers to new and emerging challenges facing the society