

Declaration

'We believe that the interests of Scotland will be best served by the rapid adoption of open access to scientific and research literature.'

Preamble. The timely, universal and organised dissemination of advances in scientific and public policy research is fundamental to the proper operation of a modern society, in terms of community awareness and empowerment, economic advance, and optimal functioning of health, education and other vital services. For Scotland, this means not only gaining access to the fruits of research from throughout the world but also exposing the endeavours of our researchers as widely as possible to the world at large.

The Present Situation. Until recently, the current system of scholarly communication and dissemination of research results has worked well for society, learned institutions, universities and individual researchers, given the restrictions of print-based publication. These restrictions are caused not only by the limitations of print as a medium for presenting research, but also by the high annual subscription charges and price increases well above inflation in some disciplines which distort the 'traditional' publication system for research journals by reducing the availability of journals in all disciplines, often at the expense of small learned societies.

This subscription-based system is showing signs of increasing strain, and we believe that it is no longer the most advantageous means of disseminating crucial research results to all those interested, whether in our leading research institutions or in the wider community. By its very nature, it severely restricts access to leading edge research, published only in appropriate scientific journals and subscribed to by at best a handful of institutional libraries. Yet the advent of digital content and the web has the potential to render the current system obsolete, and there are signs now that the full power of networked digital content to change the system for the benefit of research and the diffusion of knowledge generally is beginning to be understood. The research pooling agenda within Scotland depends on wider access to research, if it is to achieve its aim of maximising Scotland's research potential.

New options have been developed in recent years, potentially removing constraints upon access and opening up research literature to be available online to everyone. These developments go under the broad heading of Open Access, which has been defined as 'free availability on the public Internet, permitting all users to read, download, copy, distribute, print, search, or link to the full texts of these articles, crawl them for indexing, pass them as data to software, or use them for any other lawful purpose, without financial, legal or technical barriers other than those inseparable from gaining access to the Internet itself'¹.

Open Access. This vision of open access to the scientific and research literature has captured the imagination of research funding agencies, international organisations and other nation states and we seek to follow the example of similarly sized countries in Scandinavia and elsewhere in seizing the opportunities now open to us. Other initiatives

¹ *Budapest Open Access Initiative*, February 2002 [<http://www.soros.org/openaccess/read.shtml>]

are being undertaken in this area worldwide^{2,3,4,5}. We believe that the interests of Scotland – for the economic, social and cultural benefit of the population as a whole, and for the maintenance of the longstanding high reputation of research within Scottish universities and research institutions – will be best served by the rapid adoption of open access.

There are two main routes to achieving open access, and we wish to register our support for both. The number of open access journals has been growing in recent years, with some publishers offering all their journals on an open access basis, and others offering it only for selected titles. There are of course still significant costs associated with publishing online, in particular the cost of organising the essential peer review service, but for open access journals these are covered by publication fees rather than subscriptions (with appropriate exemptions for those who cannot pay for various reasons, including financial constraints in the case of researchers in the developing world).

The second route is usually described as ‘self-archiving’, where authors deposit the final, post peer review, electronic version of their articles in an institutional, or subject-based, repository: appropriate software adhering to open standards and encouraging interoperability allows these repositories to be searched jointly, and relevant articles retrieved from repositories located worldwide. Some subject-based repositories (for example, for high-energy physics⁶) have been in existence for a number of years. Several universities in Scotland have already established institutional repositories (which include theses, departmental reports, conference papers, etc as well as journal articles), and plans are underway to enable other Scottish research institutions to deposit their own research output appropriately. It should be noted that a growing majority of publishers, but not yet all, expressly permit self-archiving of the final version of an article.

Conclusion. There is mounting evidence to suggest that open access increases the reach and impact of research. More people can and do view and read open access articles, and there are indications that these articles are cited more frequently and earlier than is the case for articles not available in this way.⁷

Open access publishing therefore provides a more cost-efficient means of disseminating the outputs of research funded from the public purse than does the current system which requires that public money be paid over to external bodies in order to gain restricted

² *Berlin Declaration on Open Access to Knowledge in the Sciences and Humanities*, October 2003 [<http://www.zim.mpg.de/openaccess-berlin/berlindeclaration.html>] - signed by research organisations from Germany and other European countries

³ *Bethesda Statement on Open Access Publishing*, April 2003 [<http://www.earlham.edu/~peters/fos/bethesda.htm>] - signed by a number of US learned societies

⁴ *Scientific publishing: a position statement by the Wellcome Trust in support of open access publishing*, September 2003 [<http://www.wellcome.ac.uk/en/1/awtvispolpub.html>]

⁵ The House of Commons Science and Technology Select Committee is currently investigating Scientific Publications, including Open Access, and is due to report shortly. The Press Release giving details of the investigation is at http://www.parliament.uk/parliamentary_committees/science_and_technology_committee/scitech111203a.cfm; and uncorrected transcripts of Oral Evidence are at <http://www.publications.parliament.uk/pa/cm/cmsctech.htm>

⁶ *arXiv.org e-Print archive* [<http://www.arxiv.org/>]

⁷ See, for example, Hitchcock, S. et al ‘The impact of OAI-based search on access to research journal papers’, *Serials* Vol 16, No 3, November 2003, 255-260 [<http://opcit.eprints.org/serials-short/serials11.html>]

access to the same research outputs. In the light of these developments, and recognising the huge potential gains to Scotland in terms of impact, comparative advantage, and return on public investment if open access to our research can be established quickly, we will use our best endeavours to ensure that research carried out in Scotland is published in an open access format, recognising that a transition phase may be necessary in some areas.

Action. The signatories to this declaration endorse the general principles of open access, and commit themselves to implementing as and when possible the following actions, thereby ensuring a national commitment to the free-est and fullest access to scholarly information:

Research funders

- Require as a condition of grant that publications resulting from funding are available on open access, either by means of self-archiving or through publication in an open access journal.
- Allocate funds for fees for publication within research grants.
- Encourage traditional research publishers to offer open access publishing streams with fair pricing.

Universities/research institutions

- Set up institutional repositories, and/or liaise with other organisations to establish a joint repository.
- Encourage, and where practical mandate, researchers to deposit copies of their outputs (articles, reports, conference papers, etc) in an institutional or co-operative repository.
- Encourage, and where practical mandate, the deposit of PhD theses in an institutional repository.
- Review intellectual property policies, to ensure that researchers have the right and duty to provide an open access version of their research.

SHEFC

- Encourage, through its funding model, the development of sector-wide policies in this area, in collaboration with Universities Scotland
- Consider open access issues when taking forward the research pooling agenda.

Scottish Executive

- Recognise the benefits to society as a whole of wide access to knowledge.
- Endorse implementation of open access within broader initiatives such as Smart, Successful Scotland and Openscotland.
- Take a leading role by working with other national governments in promoting open access.

Signed, on behalf of the University of

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