

## ACADEMIC KNOWLEDGE, OPEN ACCESS AND DEMOCRACY

### SYNOPSIS

This recommendation provides an evidence-based case for Open Access to address economic growth and social and commercial innovation through dissemination of academic knowledge in the digital age. It shows that Open Access (gold or green) could and should be properly mandated and monitored so that publicly-funded research is freely available to the tax-payer. This non-legislative measure will fulfill the government's commitment to transparency and openness, ensure that British universities can compete in the changing European and global context, provide greater return on investment for the funding councils and enable fairer access to knowledge across society as a whole. Our recommendations are supported and undersigned here by many of the country's leading creators, users and distributors of academic knowledge.

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British universities have world-class reputations and are crucial to our social and economic future. Higher education is the single greatest producer of original intellectual property in the UK. UK researchers constitute 3.3% of the global research base, and they produce up to 8% of academic journal articles globally.<sup>1</sup> However, the value and resources of universities, governments and funders are being adversely affected by the current academic publishing models. It is imperative to rethink academic publishing – particularly with regards to the arts, humanities and social sciences - in the digital age.

We are currently spending a huge amount of British taxpayers' money to access research that the same taxpayers have already paid to create. In 2008, UK libraries spent £235m of taxpayers' money on subscriptions and access to journals<sup>2</sup> - 10% of the total quality-related research (QR) funding that higher education receives.<sup>3</sup> The current publishing models mean the tax-payer is paying twice: once to create research (for example, through Research Council funding) and then again to buy back the research through journal subscriptions. Under current commercial publishing models, annual journal price inflation runs far above inflation. Between 1991 and 2001 journal prices in the UK rose by 158%.<sup>4</sup>

Although inflation rates tend to be higher for science, technology and medicine journals than for arts and humanities journals, it is clear that the British tax-payer is badly served by these models and university library budgets are put under impossible strain.<sup>5</sup>

By supporting Open Access (OA) to research published in journals, the British government can promote a transparent and open society by ensuring that tax-payer funded academic research is available to all, providing more equitable routes to higher education and learning. We must, with government support, seek to create viable and sustainable academic publishing models for an ever more digital future.

As shown by a recent DEMOS report, OA enables British world-class universities to thrive in the modern world by harnessing new technologies for ideas, knowledge and innovation.<sup>6</sup> We have seen great progress made in the UK in terms of OA to publicly-funded research – most notably through UK PubMed Central, which is funded by the Wellcome Trust and other UK biomedical funders.<sup>7</sup> We would like to see the same benefits to researchers and the public through greater access to research generated in all disciplines, especially in the arts, the humanities and the social sciences.

We, the undersigned, believe that the measures proposed here are low-cost, progressive and high impact towards this end. They will increase the reputation of UK universities, encourage foreign investment, honour the coalition government's pledge to freedom of access to data and revitalize the publishing industry.

## RECOMMENDATIONS TO GOVERNMENT

- Strengthen the UK Research Council and other government funding agency mandates for disseminating research through Open Access. This can be achieved by closing the loop-holes that can delay OA by mandating that research outputs must be made OA as soon as possible and in any event within six months of publication. This would be implemented in the following fashion:
  - The funder will mandate in its grants that an author/researcher must publish in an OA publication or deposit in an appropriate OA repository. If funding to

pay OA fees is granted, then the article must be made available at the time of publication under an open licence.

- An author is free to choose where to place their research for publication as long as wide dissemination through OA is enabled. Funders or the authors' institutions need to take responsibility for paying author-fees where appropriate. Such funds could be part of an institution's indirect costs under the Full Economic Costing, or – as in the Wellcome Trust's model – accepted by the funder as part of its investment as a legitimate research cost.
- Should an author choose not to make the work Open Access through an OA publication (the 'Gold' model), then they must ensure deposit of the final version of the author's peer-reviewed manuscript in an appropriate OA repository (the 'Green' model).
- We do not feel that an 'opt-out' clause is acceptable when funding comes from the public purse. Researchers who accept public funds enter into a voluntary contract and academic freedom is not therefore an issue. Moreover, there is evidence that virtually all journals in which researchers funded by the NIH and Wellcome Trust have published now operate in compliance with their OA mandates.<sup>8</sup>
- Government must ensure OA policy is enforced through the research councils' formal monitoring of compliance. Although each of the research councils has signed up in principle to OA, there is no sustained enforcement or compliance, and adherence is still determined by publisher agreement. Since a recent study of OA publishing shows that 90% of authors wish to make their outputs available through an OA model, evidence suggests that they are primarily impeded by a lack of funding for author-pays publication, especially in the arts, humanities and social sciences. Dissemination costs must be understood as part of research costs.<sup>9</sup> Government, through the research councils, should therefore set up appropriate mechanisms to underwrite reasonable publication charges for articles written by researchers it funds in cases where a publisher provides a full, OA option in line with the Bethesda Principles.<sup>10</sup>

Over 62% of journals explicitly permit authors to self-archive their articles.<sup>11</sup> For example, at MIT, an opt-out waiver is possible for professors wishing to publish in

journals that will not accept articles made available on OA. Only 1.5% of MIT articles are protected by a waiver from OA and very few publishers have requested such waivers. Similarly, at Harvard, the opt-out waiver figure is about 5% of the total numbers of articles otherwise available through OA. In Europe the particle physics laboratory, CERN, has a mandatory policy on OA and its own repository. Nearly 90% of articles published by CERN scientists are now made available to all. The School of Electronics & Computer Science at the University of Southampton has over 90% of its published articles self-archived in its repository, thanks to its own mandatory policy.<sup>12</sup> These results are not typical, and it is therefore crucial that the funding councils take issue with the question of compliance. For OA to be fully implemented rather than a laudable principle, it needs to be well regulated and monitored.

- Government should actively encourage the development of alternative academic publishing models for the arts, humanities and social sciences along the lines of those represented by PloS and BioMed Central in the sciences, Co-Action Publishing in the social sciences and Sage Open in the arts and humanities.<sup>13</sup> There is evidence that modernizing publishing will not jeopardize the industry but enable it to evolve to meet the needs of the digital age. There is evidence that small and medium sized publishers will be disproportionately impacted by university library journal subscription cuts and we believe alternate academic publishing models could support and sustain these smaller publishers in a digital environment.

## RATIONALE

OA is a democratizing tool that equalizes standards and expectations between lesser and greater institutions of learning, regardless of social rank or geographic location: journalists, MPs, business people, media professionals, school teachers, commercial authors, amateur scholars and many more can benefit from OA. Moreover, studies show that researchers consider it a top priority to report their results to a broader readership so that others can read and build upon them. They wish to make an impact.<sup>14</sup>

For centuries, those who wished to have access to research had to pay for a printed copy. The web has fundamentally revolutionized the economics of research dissemination by reducing costs at every stage in funding, performing, publishing, disseminating and preserving

research. As a result, when wide distribution and readership with high levels of re-use, citation and discussion is the key objective, universal free access via OA is a natural model from the point of view of the academic and of society.

The actions recommended in this letter will ensure tax-payer funded research becomes publicly available, for anyone to use and build on. Existing, effective policies have been developed at institutional and funder level, such as Harvard University's Office for Scholarly Communications and MIT's institution-wide OA mandates. OA publishing is emerging as an ever more effective model as a critical mass of OA literature becomes available in one place. A crucial example from the life sciences is UK PubMed Central which is funded by the Wellcome Trust and other biomedical funders, and which provides quick and easy access to a large collection of biomedical and health research literature funded by members of the UKPMC funders Group, including the Medical Research Council and the Biological and Biotechnology Sciences Research Council. There is no reason why the arts, the humanities and the social sciences should not be subjected to the same principle of OA: as stated by David Willetts in his recent speech to the British Academy: "Quite simply, the humanities and social sciences are essential to a civilized country. They bring deep fulfillment to us personally. They often give meaning and shape to our lives".<sup>15</sup> They are a public good that must be shared.

The benefits of OA as a principle for a progressive and open society are therefore unarguable. The funds to pay for OA are already in the UK higher education system. Not only is the money already there, but less would be needed. Improved access to scholarly content makes research and teaching easier, faster and more productive. The gains for research and society are plain, in economic terms and through a general enhancement of the knowledge base.

With Government support, UK higher education can transition to publishing models that save the tax-payer money whilst enhancing our standing in the international research community.

The world of publishing has changed with the growth of the internet, and yet access to knowledge falls far short of what is possible. Much important and original research material is hidden from public use, including an unknown quantity of 'grey data', whose copyright status is uncertain.

Some commercial publishers are using outmoded business models to deal with the world of e-publishing. Newer models would be good for universities, for the public, and for

publishing. This is especially relevant to sustaining small and medium sized publishers. There are many alternative models that need governmental recognition and endorsement, including UK effort to develop OA publishing houses and library consortia keen to reduce costs.

The British Government must engage with and encourage these discussions in order to make university education more affordable and equal at all social levels and geographic regions, and to meet the needs of civil society in the internet age.

## ANTICIPATED BENEFITS

1. OA mandates will save British research and universities money: today, higher education gives research for free to commercial publishers, (and provides peer review services worth between £110 million and £165 million per annum free of charge to those publishers), who then sell it back to those same universities at inflated rates.<sup>16</sup> The UK as a whole would benefit from considerable economic savings from an Open Access-based system of scholarly communication. One study demonstrated that in an OA ‘Gold’ world (i.e. led by OA journals rather than repositories), UK universities would each save from £0.53m to £3.38m per annum by being able to access for free the journal articles they currently purchase.<sup>17</sup> Even at the ‘green’ level of OA through repositories, universities would make considerable savings at a time of economic crisis.<sup>18</sup>
2. OA will bring broader dissemination and greater utilization of research results, plus higher global citation rates. Although value for money, return on investment and public access to publicly funded research are perhaps the most important concerns, there is evidence that OA may also increase the number of high value overseas students who wish to attend UK universities (and pay higher tuition fees). Moreover it seems to be bestowing an impact advantage to universities. Some international universities, such as Asian universities with an OA mandate, continue to rise in world university rankings. This threatens UK university rankings. Strong OA mandates might therefore promote higher levels of citation and wider dissemination of British research. Enhancements in citation counts for OA articles vary from 17% to 250% above that for non-OA publications.<sup>19</sup> The vast majority of studies which measure citation rates, moreover, show this advantage.<sup>20</sup>

3. As well as the citation impact argument, OA facilitates much better knowledge transfer (from universities and research institutes to the innovative small and medium enterprise (SME) sector) and to other sectors outside of universities: the professional and practitioner sectors, education and the interested lay public. In the case of arts and humanities research Open Access facilitates this knowledge transfer to the museums and libraries sectors, to the education sector for use in secondary schools and in further education, and to the interested public, enriching the cultural experience of all and providing for a better-informed and knowledgeable society. The outreach enabled by Open Access thus increases the value of the research and enhances the return on investment to the taxpayer.

Open Access is *solely* concerned with the literature that is intended for publication so research outputs that are classified or commercial-in-confidence are exempt from OA without any special action by government. Current regulatory frameworks, conditions of grant and other funding, and research protocols automatically protect such research from being opened to the public. The US Department of Defense has published unclassified research on OA whilst protecting its classified research from the public eye. OA is not a threat to national, military or commercial interests.

## SIGNATORIES

- Bev Acreman – Commercial Director, BioMed Central
- Jo Andrews – Director, Ariadne: Human Rights Funding Network
- Paul Ashton – Co-founder, Open Humanities Press
- Peter Baldwin – Professor of History at UCLA and co-founder of Arcadia
- Fay Bound Alberti – Senior Research Fellow at Queen Mary University of London and Head of Philanthropy and Grants Management at Arcadia
- Michael W. Carroll – Professor of Law and Director, Program on Information Justice and Intellectual Property, American University, Washington College of Law
- Barbara Cohen – Steering Committee member, Open Humanities Press

- Steve Connor – Academic Director, London Consortium, Birkbeck College London
- Darius Cuplinskas – Director, Information Programme, Open Society Foundation London
- Tony Curzon-Price – Editor-in-Chief of [www.opendemocracy.net](http://www.opendemocracy.net)
- Robert Darnton – Carl H. Pforzheimer Professor and Director of the Harvard University Library
- Nicholas Ferguson – Chairman of the Institute for Philanthropy and Chairman of SVG Capital plc
- Jean-Claude Guédon – Professor, Université de Montréal
- Gary Hall – Research Professor of Media and Performing Arts, Coventry University and Steering Committee member, Open Humanities Press
- Martin Hall – Chair of Open Access Implementation Group and Vice-Chancellor University of Salford
- John Harris – Lord Alliance Professor of Bioethics, Institute for Science, Ethics and Innovation, the University of Manchester
- Bill Hubbard – Head of the Centre for Research Communications, University of Nottingham
- Anne Jarvis – University Librarian, University of Cambridge
- Brewster Kahle – Founder and Digital Librarian, Internet Archive
- Lord Lester of Herne Hill – QC
- Clare Matterson – Director, Medical Humanities and Engagement, The Wellcome Trust
- John Naughton – Professor of the Public Understanding of Technology, the Open University.
- David Ottina – Steering Committee, Open Humanities Press

- Mark Patterson – Director of Publishing, Public Library of Science (PLoS)
- Stephen Pinfield – Chief Information Officer, University of Nottingham
- David Price – Professor of Mineral Physics in the Department of Earth Sciences and Vice-Provost of Research at UCL.
- David Prosser – Executive Director, Research Libraries UK (RLUK)
- Andrew Puddephatt – Director of Global Partners and Associates and Trustee of the Sigrid Rausing Trust
- Lisbet Rausing – Senior Research Fellow at Imperial College London and co-founder of Arcadia
- Sigrid Rausing – Anthropologist, publisher and founder of the Sigrid Rausing Trust
- Dame Alison Richard – Vice Chancellor Emerita, University of Cambridge
- Lord Rothschild – Chairman of Yad Hanadiv and Honorary President of the Institute for Jewish Policy Research
- Professor Sir John Salston – Chair of Institute for Science, Ethics and Innovation, University of Manchester
- Stuart Shieber – Director, Harvard Office for Scholarly Communication
- Deborah Shorley – Director of Library Services at Imperial College, London
- Graham Stone – United Kingdom Council of Research Repositories (UKCoRR)
- Peter Suber – Senior Researcher at SPARC and Faculty Fellow at the Berkman Center for Internet & Society at Harvard University
- Barry Supple – Emeritus Professor of Economic History, University of Cambridge
- Alma Swan – Consultant in Scholarly Communication and Director of Key Perspectives Ltd
- Simon Tanner – Director, King's Digital Consultancy Services, King's College London

- John Tuck – Director of Library Services at Royal Holloway, University of London
- Dafydd Tudur – Rights and Information Manager, National Library of Wales
- Martyn Wade – National Librarian and Chief Executive, National Library of Scotland
- Jimmy Wales – Co-founder and promoter of Wikipedia
- William Warner – Professor of English, UC Santa Barbara and Board member, Open Humanities Press
- Paul Webley – Director and Principal, School of Oriental and African Studies (SOAS), London
- Lord Winston – Professor of Science and Society at Imperial College, London

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John Houghton, *Open Access – What are the economic benefits? A comparison of the United Kingdom, Netherlands and Denmark*, Knowledge Exchange, June 23, 2009.

Research Information Network, *Communicating knowledge: How and why UK researchers publish and disseminate their findings*, Report to the Research Information Network and JISC, September 2009.

**For further details on this proposal, please contact Dr Fay Bound Alberti, Head of Philanthropy and Grants Management at the Arcadia Fund:**

**Email: [Fay.BoundAlberti@nyland.org.uk](mailto:Fay.BoundAlberti@nyland.org.uk)**

**Tel: +44 20 7361 4907 or +44 7715 699 688**

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## END NOTES

<sup>1</sup> Cambridge Economic Policy Associates, *Activities, costs and funding flows in the scholarly communications system in the UK*, Report to the Research Information Network, May 2008.

<sup>2</sup> Cambridge Economic Policy Associates, *Activities, costs and funding flows*.

<sup>3</sup> Research Libraries UK, Press Release: RLUK Calls for Journal Pricing Restraint, London, 25 November 2010.

<sup>4</sup> David C. Prosser, 'Reassessing the value proposition: towards a fair(er) price for scholarly journals', seminar presentation, 16 June 2010:

<http://www.jibs.ac.uk/events/workshops/work2gether/programme.htm>

<sup>5</sup> See <http://www.earlham.edu/~peters/writing/apa.htm>

<sup>6</sup> P. Bradwell, *The edgeless university: why higher education must embrace technology* (Demos, 2009), [www.demos.co.uk/publications/the-edgeless-university](http://www.demos.co.uk/publications/the-edgeless-university)

<sup>7</sup> <http://ukpmc.ac.uk/classic/funders/>

<sup>8</sup> At least 95% of Trust-funded research is published in journals which have a OA policy that meets the needs of the Wellcome Trust (i.e. they have a gold model - in which they agree to make the article available from PMC/UKPMC at the time of publication and attach a re-use licence -OR they have a green model - in which they allow the author to self-archive the authors manuscript (the version after peer review) and make that available within 6 months. See Robert Kiley, <http://ukpmc.blogspot.com/2009/05/funder-mandates.html> (slide 14) and [http://oad.simmons.edu/oadwiki/Publisher\\_policies\\_on\\_NIH-funded\\_authors](http://oad.simmons.edu/oadwiki/Publisher_policies_on_NIH-funded_authors)

<sup>9</sup> <http://project-soap.eu/>

<sup>10</sup> The Bethesda principles were established in 2003 and provide a generally accepted definition of Open Access publication. <http://www.biomedcentral.com/openaccess/bethesda/>

<sup>11</sup> SHERPA Project at the University of Nottingham (Sherpa/RoMEO list): [www.sherpa.ac.uk/romeo](http://www.sherpa.ac.uk/romeo)

<sup>12</sup> Swan, 'The Open Access citation advantage'.

<sup>13</sup> Sage Open is a relatively new platform for publishing in the arts, humanities and social sciences. Based on an author-pays model it has a relatively low fee scale for authors at less

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than \$700 per article. This kind of outlay needs to be considered part of the legitimate research costs borne by the funding councils where the author-pays model is in place at the author's chosen place of publication. See <http://www.uk.sagepub.com/sageopen.sp>

<sup>14</sup> A. Swan, 'The culture of Open Access: researchers' views and responses'. In N. Jacobs, Ed. *Open Access: Key strategic, technical and economic aspects* (Oxford: Chandos, 2006), pp. 52-59.

<sup>15</sup> <http://www.britac.ac.uk/> accessed 1 March 2011.

<sup>16</sup> Sue Sparks and Hugh Look (2010) The value of UK HEIs' contribution to the publishing process <http://www.jisc-collections.ac.uk/News/Value-of-HEIs-to-publishing/>

<sup>17</sup> A. Swan, *Modeling scholarly communications options: costs and benefits for universities*, Report to the JISC, February 2010

<sup>18</sup> Swan, 'The Open Access citation advantage'.

<sup>19</sup> Swan, *Modeling scholarly communications options*.

<sup>20</sup> A. Swan, 'The Open Access citation advantage: Studies and results to date (2010) at <http://eprints.ecs.soton.ac.uk/18516/>