The Open Access Advantage

John Bacon-Shone\textsuperscript{d}, Edwin Cheng\textsuperscript{c}, Anthony Ferguson\textsuperscript{d}, Carmel McNaught\textsuperscript{b}, David Palmer\textsuperscript{d}, Ah Chung Tsoi\textsuperscript{a}
\textsuperscript{a}Hong Kong Baptist University
\textsuperscript{b}The Chinese University of Hong Kong
\textsuperscript{c}The Hong Kong Polytechnic University
\textsuperscript{d}The University of Hong Kong

October 3, 2008

In Hong Kong, the University Grants Commission (UGC) recently asked universities to respond to a letter on how best to assess research quality and impact (UGC, 2008), making reference to a UK paper on research assessment that proposes the use of bibliometrics for evaluating research in laboratory-based disciplines, with the possibility of developing suitable bibliometrics for non laboratory-based disciplines in future (Evidence Ltd., 2007; Van Raan et al., 2007)\textsuperscript{1}. Clearly, this will ensure that universities look carefully at how to maximize the measurable impact of their research. One possibility is to encourage open access publication. In addition, UGC is now reviewing how best to measure and increase Knowledge Transfer (KT) in Hong Kong universities. For any reasonable definition of KT, increasing public access to research done inside universities clearly increases KT and should be encouraged, which suggests another reason to encourage open access publication.

In the US, the National Institutes of Health (NIH) has announced that it will require that all of their full or partially funded investigators submit to PubMed Central an electronic version of their final, peer-reviewed manuscripts no later than 12 months after the official date of publication (SPARC, 2008). Since this mandate took effect on 7 April 2008, it will give public access to the approximately 80,000 NIH articles published every year, substantially increasing the number of high quality papers available through open access. This mandate was a response to the very low submission rates under the previous voluntary policy (LibraryJournal.com, 2008) and has shown more than doubling of the submission rates.

Although the specific policy details vary, the Canadian Institute for Health Research (CIHR) in Canada, the National Institute of Health in Italy, the Wellcome Trust in the UK, all of the Research Councils UK (RCUK)\textsuperscript{2}, the Irish Research Council and several individual universities worldwide including Harvard (Guess, 2008) have created policies mandating the deposit of the final publication into an open access online repository, usually within six months of date of publication. Australia’s Australian Research Council (ARC) and National Health & Medical Research Council (NHMRC) have a weaker version where they ask their investigators to attempt to do the same, and if not, explain why this cannot be done.

\textsuperscript{1} This UK paper is already outdated and the plan is now to use a combination of bibliometrics and expert panels for all disciplines in the UK (see reference).

\textsuperscript{2} HK’s RGC began a joint research scheme (JRS) with the RCUK’s Economic and Social Research Council (ESRC) in 2007. Because of the ESRC’s open access policy, RGC investigators in Hong Kong funded through this JRS presumably will be required to comply and deposit publications in open access repositories.
The Scientific Council of the European Research Council (ERC) announced in January 2008 a similar policy of mandated deposit within six months of publication (ERC, 2007). Both the ERC and the Wellcome Trust are prepared to provide financial support to allow researchers to pay extra fees to journals so that their publications can be placed in open access (such as in institutional repositories (IRs) or self-archiving), even if the journal does not provide open access (Wellcome Trust, 2008). The ERC also requires that data sets used to support the research, such as nucleotide/protein sequences, be deposited.

While the motivation for these moves by research funders is often the principle of maximising public access to and public benefit from research findings, open access has broader advantages. There is now good research showing that it increases citations across disciplines (e.g. MacCallum & Parthasarathy, 2006). Arguably the most methodologically advanced paper on this subject is by Eysenbach (2006), who looked at the Proceedings of the National Academy of Sciences (PNAS) and concluded that the Open Access Advantage (OAA) includes three elements, namely (1) increased citation counts, (2) increased access by end users, and (3) increased cross-disciplinary fertilization. All three of these advantages relate directly to the missions and strategies of the UGC institutions. An earlier paper by Hajjem et al. (2005), although less sophisticated methodologically, covers a much wider range of disciplines and concludes that the OAA can be replicated in ten disciplines covering all the RGC panels, with the advantage ranging from 25% to 250%. Another paper by Harnad (2005) claims that for Australia alone, the missed benefit from not going OA is AUD425 million per year (compared to ARC’s expenditure of AUD0.55 billion per year and the NHMRC expenditure of AUD0.5 billion per year). There is still some argument as to how much of the OAA benefit is due to earlier publication rather than increased total citations (Moed, 2007; Hajjem & Harnad, 2007; Davis et al., 2008) for disciplines where OA is already common practice, but that does not seem critical to the argument, given that most disciplines still have strong financial barriers limiting access to papers.

While it is possible to argue with some elements of the methodology of the earlier papers, there is no question that the OAA does exist. It is also clear that the present policies of journals combined with the new policies of funding agencies will usually allow self-archiving of the author’s publication in one form or another. Many journals, such as Cambridge Journals3, allow posting of the article to online repositories after publication4. Most other journals that do not allow this will allow a pre-print, or a post-print (after peer review) to be self-archived. Other journals will allow one of these actions if an extra fee is paid. Funding agencies such as the ERC and the Wellcome Trust have agreed to pay these fees.

3Cambridge Journals, For Authors. http://journals.cambridge.org/action/forAuthors?page=copyright

“The [author has the] right to post the definitive version of the contribution as published at Cambridge Journals Online (in PDF or HTML form) on their personal or departmental web page, no sooner than upon its appearance at Cambridge Journals Online, subject to file availability and provided the posting includes a prominent statement of the full bibliographical details, a copyright notice in the name of the copyright holder (Cambridge University Press or the sponsoring Society, as appropriate), and a link to the online edition of the journal at Cambridge Journals Online”.

4 See the Appendix for a list of publishers known to allow self-archiving of the published paper.
This paper focuses primarily on journal publications, but for some disciplines, books provide the primary means of dissemination and the OA process for books is much less well developed. One example of what might happen is Open Access Publishing in European Networks (OAPEN, 2008), which consists of six European university presses, which are all scholarly publishers predominantly active in Humanities and Social Sciences (HSS) and book publishing. Jointly the members have digital publishing programmes, conduct experiments with OA, make use of digital repositories, publish in different European languages, have a worldwide distribution network (including the USA), and cooperate closely with university libraries. Their proposed OA model aims to create an OA-publishing platform in combination with an online library, that can be used by academic publishers and research funding institutes, based on their respective needs, which has the potential to greatly increase access and visibility of academic humanities and social sciences books. Clearly, it will be wise to track developments in this area, but for books and book chapters that do not have a royalty agreement, it is already worthwhile to try and seek the right of publishing some version of the materials in open access.

The key question is how to encourage Hong Kong authors to use OA. All HK universities have now established an open access IR. For example, HKU Library is contacting HKU authors one by one to ask permission for inclusion of their articles. How can we create a system whereby Hong Kong authors will pro-actively self-archive into an IR? Funding agencies, such as those listed above, have mandated that authors deposit into an OA repository. In a policy similar to the one by the Wellcome Trust, the University of Nottingham has set up a Central Open Access Fund to support staff across the university in achieving OA (BioMed Central, n.d.). Recently (on 12 February 2008), Harvard University’s College of Arts and Sciences announced a decision to place their academic papers online in open access, unless the author opts out. Harvard’s School of Law followed with a similar decision on 1 May 2008. The University of Oregon Faculty Senate adopted a resolution recommending that faculty include an “author’s addendum” in negotiation with publishers, that they might keep their rights to self-archive their articles on their own web pages and the university’s IR. Clearly Hong Kong could consider these options together with an associated policy of encouragement and administrative support and a suitable impact evaluation process.

**Specific proposal**

As the majority of research in Hong Kong is funded by the RGC/UGC, their policies are critical. We would like to propose the following specific actions for the RGC/UGC’s consideration:

a) State clearly that all researchers funded by an RGC grant should aim to publish their results in the highest quality journals or books so as to maximize the influence and impact of the research outcome and that to achieve this when publishing research findings:
   i. Researchers should look for suitable OA journals so that, where there is a choice between non OA and OA journals that are equally influential and high impact, the choice should be to publish the results in an OA journal.
   ii. When a comparable OA journal does not exist, they should send the journal the Hong Kong author’s addendum (University of Hong Kong,
2008), which adds the right of placing some version (preprint or postprint) of the paper in their university’s institutional repository (IR). If necessary, seek funds from the RGC to pay open access charges up to an agreed limit; perhaps US$3,000, which is the fee agreed with the Wellcome Trust for most Elsevier journals (Elsevier, 2007).

iii. For books and book chapters that are published without a royalty agreement, send the publisher the Hong Kong author’s addendum to seek the right of placing some version in their university’s IR.

iv. Deposit all published papers in their IR, unless the journal refuses in writing. If the published version is refused, deposit the preprint or postprint, as allowed in number ii above.

v. Must provide evidence to the RGC in their progress report that the above steps have been undertaken.

b) For existing RGC grant holders, set aside some money to cover the publication of papers in OA according to (a) (ii) above, where necessary.

c) Add a notional element, to a set maximum limit, to all new successful RGC grant applications (similar to the existing conference component of the grant) to cover open access charges.

d) Write to the other major research funders in Hong Kong (e.g., Food and Health Bureau, Commission for Innovation and Technology, Croucher Foundation) to encourage similar strategies.

In the meantime, we also hope that universities in Hong Kong will play their role in encouraging researchers to place all output, not just that funded by RGC, in their local IRs, and also help pay open access charges where appropriate to maximize the output placed in the IR.

References


Davis, P.M. et al. (2008). Open access publishing, article downloads, and citations: randomised controlled trial, BMJ 337, a568.


University of Hong Kong, Hong Kong Author’s Addendum. Retrieved September 18, 2008 from http://lib.hku.hk/scholarly_communication/conf/hkadendum pdf.

University Grants Committee (UGC). (2008). Letter to institutions on future methods of assessing research quality and impact, dated February 18. (unfortunately not in open access!)

Van Raan, A., Moed, H., & van Leeuwen, T. (2007). Scoping study on the use of bibliometric analysis to measure the quality of research in HK higher education.
Appendix

1. Partial list of publishers who allow the published version to be self-archived on the author’s web page or the IR of the author’s institution

A S M International
Academia Sinica, Institute of Statistical Science
Acoustical Society of America
American Academy of Pediatrics
American Association of Australian Literary Studies
American Association of Veterinary Laboratory Diagnosticians
American Astronomical Society
American Institute of Biological Sciences
American Institute of Physics
American Mathematical Society
American Physical Society
American Phytopathological Society
American Society for Cell Biology
American Society for Clinical Investigation
American Society of Animal Science
American Society of Tropical Medicine and Hygiene
Anistoriton
Anton Melik Geographical Institute
Arkat USA, Inc
Asociacion Cuadernos de Economia
Asociacion de Economia Aplicadad
Australasian Society for Computers in Learning in Tertiary Education (ascilite)
Australian Physiotherapy Association
B M J Publishing Group
Beech Tree Publishing
Berkeley Electronic Press
Biodiversity Science
BioMed Central Ltd
Biophysical Society
Butterworths Asia (HK)
Cambridge University Press
Carnegie Bosch Institute
Center for Economic Research and Graduate Education, Charles University (CERGE)
Channel View Publications
Company of Biologists Ltd
Council for the Development of Social Science Research in Africa
Department of French and Italian, Vanderbilt University
Department of Geology, Universitatis Babes-Bolyai
Duke University Press
E D P Sciences
Economics Institute, Academy of Sciences of the Czech Republic (EI)
Electrochemical Society, Inc
European Communities Studies Association - Austria
Evolutionary Ecology Ltd
Florida Entomological Society
Heldref Publications
Hindawi Publishing Corp
Hong Kong College of Family Physicians
Hong Kong Medical Association
I E E E
I E E E, Computer Society
I E E E, Computer Society, Learning Technology Task Force
I E E E, Education Society
Institute Nacional de Consumo
Institute of Biology
2. Partial list of publishers who allow the postprint version (after refereeing) to be self-archived on the author’s web page or the IR of the author’s institution

Aboriginal and Torres Strait Islander Studies Unit
Academic Press
Academic Publishers
AEAweb
AlphaMed Press, Inc
American Anthropological Association
American Association for the Advancement of Science
American Association of Physics Teachers
American College of Sports Medicine
American Dairy Science Association
American Diabetes Association
American Economic Association
American Geophysical Union
American Library Association
American Meteorological Society
American Psychological Association
American Society for Biochemistry and Molecular Biology, Inc
American Society for Microbiology
American Society of Civil Engineers
American Society of Hematology
3. Partial list of publishers who offer a fee-based open access option for publication.

AlphaMed Press, US$2,000 per article
American Chemical Society, US$3,000 per article
American Institute of Physics, “Author Select Fee”, US$1,500 – $1,800
American Physical Society, “Free to Read”, US$975, $1,300 per article, letter, respectively
American Society for Biochemistry & Molecular Biology, “Author Choice Option”, $1,500 members, $2,000 non members
Arnold Publishers, “Sage Open”, US$3,000 per article
Association of Learned and Professional Society Publishers, “ALPSP”, US$2,500 members, $3,000 non-members
Biophysical Society, “Biophysical Journals Open Access”, US$1,000 per article plus page & colour charges
Blackwell Publishing, “Online Open fee”, US$2,600
BMJ, $2,200 or $3,145 depending on journal
Elsevier, “Sponsorship Option”, US$3,000 per article
Oxford Journals, “Oxford Open”, $1,500 for an institution that subscribes, or, $2,800 for a non-subscribing one.
Portland Press, “Opt2Pay”, US$3,000 per article, $3,500 without institution subscription
Professional Engineering Publishing, “Engineering Open Choice”, £1,700 per article
Royal College of Psychiatrists, US$4,500 per article
Royal Society, “Exis Open Choice”, £150 – 225 per article plus page charges
Sage Publications, “Sage Open”, US$3,000 per article
Springer, “Open Choice”, US$3,000 per article