

Open Access to Research: An Innovation Priority

Review of the National Innovation System - Submission

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SUBMITTED 30 APRIL 2008

**To: Review of the National Innovation System – Submission
Secretariat to the Expert Panel**

**Review of the National Innovation System
Department of Innovation, Industry, Science and Research
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The OAK Law Project



Declaration of Interests and Affiliations

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- Employed at the Queensland University of Technology as a Research Officer for the OAK Law Project (<http://www.oaklaw.qut.edu.au/>) and the Legal Framework for e-Research Project (<http://www.e-research.law.qut.edu.au/>);
- I work with Professor Anne Fitzgerald who also works for the OAK Law project and the Legal Framework for e-Research project. She is a member of the broader reference group which the Review Panel has convened as part of the review process.

Professor Brian Fitzgerald:

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- Project Leader Open Access to Knowledge (OAK) Law Project www.oaklaw.edu.au;
- Project Leader Legal Framework for e-Research Project www.e-research.law.qut.edu.au;
- Co-Project Leader Enabling Real Time Access to Government Data - Cooperative Research Centre (CRC) for Spatial Information www.crcsi.com.au;
- I have had professional connections with a number of members of the Review Panel and my sister and close colleague Professor Anne Fitzgerald is a member of a broader reference group Dr Cutler has convened as part of the Review process.

Mr. Anthony Austin:

- Employed at the Queensland University of Technology as a Research Officer for the OAK Law Project (<http://www.oaklaw.qut.edu.au/>) and the Legal Framework for e-Research Project (<http://www.e-research.law.qut.edu.au/>);
- I work with Professor Anne Fitzgerald who also works for the OAK Law project and the Legal Framework for e-Research project. She is a member of the broader reference group which the Review Panel has convened as part of the review process.

Open Access to Research: An Innovation Priority

A Submission to the Review of the National Innovation System

By Ms. Kylie Pappalardo, Professor Brian Fitzgerald and Mr. Anthony Austin

The OAK Law Project

Queensland University of Technology

Open Access to Australian research is an important consideration in the innovation system as it promotes greater dissemination of knowledge and thereby increases the potential for innovation.

The key question for Australia in this context is:

How should Open Access be implemented in order to promote innovation throughout the country?

This in turn requires us to consider and map out (amongst other things):

- 1) An Australian Access Strategy;
- 2) The extent to which Open Access should be mandated by Institutions and Funders?; and
- 3) The ways in which Open Access can be fully and effectively implemented in the Australian research sector?

What is Open Access?

Alma Swan, a prominent open access advocate, defines open access as:

It is the free (gratis) online availability of the research results that scholars give away themselves (peer-reviewed journal articles and conference papers, mostly), provided by authors upon acceptance for publication and made permanently available without restrictions on use.¹

One of the primary principles underlying open access is that wide dissemination of and access to research and scholarly material is desirable so that later work can be informed by the earlier work of others. This prevents duplicative research and advances intellectual development and collective learning.

Avoiding duplicative research also means that the same research is not funded again and again. This is particularly pertinent where publicly funded research is concerned. Open access helps recognise where tax-payers' money can be used to fund new and more progressive research rather than duplicative research with no further public benefit.

A related principle is that the public should have open access to the research that it has funded. It is considered unfair to require the public to pay twice – first to fund the research itself and then again to gain access to the research results.

Research Impact

Research impact has been defined as:

An article's research impact is the degree to which its findings are read, used, applied, built-upon, and cited by users in their own further research and applications. Research impact is a measure of progress and productivity of research. That is the reason why researchers' careers (their salaries, promotions, tenure, funding, prestige, and prizes) depend on their impact; it is also why their universities (which cobenefit from the research funding, progress, and prestige) as well as their research funding agencies (which are answerable for the way they spend taxpayers' money) reward research impact.²

There is ample evidence that open access increases the impact of research work. Many studies have compared the citation rates of articles that are openly accessible with the citation rates of articles that are not (because they are behind subscription barriers), and have found that OA articles are cited significantly more than non-OA articles. In fact, Richard Poynder reports that OA papers are accessed and read three times as much as non-OA papers.³

¹ Alma Swan, "Open Access: Why should we have it?" *Key Perspectives*, 2006, <http://www.keyperspectives.co.uk/openaccessarchive/journalpublications.html> accessed on 24 March 2008.

² Stevan Harnad, Tim Brody, Francois Vallieres, Les Carr, Steve Hitchcock, Yves Gingras, Charles Oppenheim, Heinrich Stamerjohanns and Eberhard R. Hilf, "The Access/Impact Problem and the Green and Gold Roads to Open Access" 30(4) *Serials Review*, 2004, <http://users.ecs.soton.ac.uk/harnad/Temp/impact.html> accessed on 25 March 2008.

³ Richard Poynder, "Open Access: Beyond selfish interests" *Open and shut?* (blog), 20 November

The first study showing higher impact for OA articles was carried out by Lawrence, who focused his study on conference proceedings articles in computer sciences published from 1989 to 1999.⁴ Lawrence's study showed a correlation between online availability of the full-text article and citations to that article. The results indicated that OA articles in the computer sciences had a citation impact 336% higher than non-OA articles.⁵

Kurtz et al have reported similar citation impact results in astrophysics,⁶ and Odlyzko has also reported similar results in mathematics.⁷

Hajjem et al studied citation counts in 10 disciplines - administration, economics, education, business, psychology, health, political science, sociology, biology and law - for 12 years from 1992-2003. They found that open access articles had a citation impact that was 36% to 172% higher (depending on the discipline) than non-open access articles.⁸

2006, <http://poynder.blogspot.com/2006/11/open-access-beyond-selfish-interests.html> accessed on 24 March 2008.

⁴ See Ian D. Craig, Andrew M. Plume, Marie E. McVeigh, James Pringle and Mayur Amin, "Do Open Access Articles Have Greater Citation Impact?" 1(3) *Journal of Informetrics*, July 2007, 239-248, accessed the author's preprint (summary paper) at <http://www.publishingresearch.net/Citations.htm> on 25 March 2008.

⁵ Ian D. Craig, Andrew M. Plume, Marie E. McVeigh, James Pringle and Mayur Amin, "Do Open Access Articles Have Greater Citation Impact?" 1(3) *Journal of Informetrics*, July 2007, 239-248, accessed the author's preprint (summary paper) at <http://www.publishingresearch.net/Citations.htm> on 25 March 2008. See also, Stevan Harnad and Tim Brody, "Comparing the Impact of Open Access (OA) vs. Non-OA Articles in the Same Journals" 10(6) *D-Lib Magazine*, June 2004, <http://www.dlib.org/dlib/june04/harnad/06harnad.html> accessed on 25 March 2008; and Stevan Harnad, Tim Brody, Francois Vallieres, Les Carr, Steve Hitchcock, Yves Gingras, Charles Oppenheim, Heinrich Stamerjohanns and Eberhard R. Hilf, "The Access/Impact Problem and the Green and Gold Roads to Open Access" 30(4) *Serials Review*, 2004, <http://users.ecs.soton.ac.uk/harnad/Temp/impact.html> accessed on 25 March 2008.

⁶ Michael J. Kurtz, Guenther Eichhorn, Alberto Accomazzi, Carolyn S. Grant, Markus Demleitner, Stephen S. Murray, Nathalie Martimbeau and Barbara Elwell, "Worldwide Use and Impact of the NASA Astrophysics Data System Digital Library" *Journal of the American Society for Information Science and Technology* (2004) <http://cfa-www.harvard.edu/~kurtz/jasist1-abstract.html> accessed on 25 March 2008; and Michael J. Kurtz, Guenther Eichhorn, Alberto Accomazzi, Carolyn S. Grant, Markus Demleitner, Stephen S. Murray, Nathalie Martimbeau and Barbara Elwell, "The Bibliometric Properties of Article Readership Information" *Journal of the American Society for Information Science and Technology* (2004) <http://cfa-www.harvard.edu/~kurtz/jasist2-abstract.html> accessed on 25 March 2008. See also Stevan Harnad, Tim Brody, Francois Vallieres, Les Carr, Steve Hitchcock, Yves Gingras, Charles Oppenheim, Heinrich Stamerjohanns and Eberhard R. Hilf, "The Access/Impact Problem and the Green and Gold Roads to Open Access" 30(4) *Serials Review*, 2004, <http://users.ecs.soton.ac.uk/harnad/Temp/impact.html> accessed on 25 March 2008.

⁷ A.M. Odlyzko, "The Rapid Evolution of Scholarly Communication" 15(1) *Learned Publishing*, 2002, pp. 7-19,

<http://alpsp.publisher.ingentaconnect.com/content/alpsp/lp/2002/00000015/00000001/art00002> accessed on 25 March 2008. See also Stevan Harnad, Tim Brody, Francois Vallieres, Les Carr, Steve Hitchcock, Yves Gingras, Charles Oppenheim, Heinrich Stamerjohanns and Eberhard R. Hilf, "The Access/Impact Problem and the Green and Gold Roads to Open Access" 30(4) *Serials Review*, 2004, <http://users.ecs.soton.ac.uk/harnad/Temp/impact.html> accessed on 25 March 2008.

⁸ Chawki Hajjem, Stevan Harnad and Yves Gingras, "Ten-Year Cross-Disciplinary Comparison of the Growth of Open Access and How it Increases Research Citation Impact" 28(4) *IEEE Data Engineering Bulletin*, 2005, 39-47, <http://arxiv.org/abs/cs.DL/0606079> accessed on 25 March 2008.

Similarly, Stevan Harnad's teams in Montreal and Southampton have developed a robot that scans the web, searching for scholarly articles that are openly accessible in full-text. They then compare citation rates between OA and non-OA articles in the same issue of the same journal to ensure that like is compared with like.⁹ As Alma Swan reports:

The data that have so far come out of this series of studies, which is ongoing, have demonstrated conclusively that open access doubles downloads and increases citations by an average of around 50% (this rate varies with discipline, from around 40% for biology to 250% for physics, so 50% is a conservative average figure).¹⁰

The results reached by Lawrence, Kurtz, Odlyzko, Hajjem, Harnad and others make sense – increased exposure results in increased downloads and citations, and therefore greater research impact. Harnad and Brody explain:

OA dramatically increases the number of potential users of any given article by adding those users who would otherwise have been unable to access it because their institution could not afford the access-tolls of the journals in which it appeared; therefore, it stands to reason that OA can only increase both usage and impact.¹¹

It is becoming increasingly easier to obtain citation records and information on which articles are being cited the most. On 11 March 2008, Scopus (the largest abstract and citation database of research literature and quality web sources)¹² released TopCited. TopCited is a free citation service that lists the most-cited recent articles in various disciplines. “Users can view the top 20 articles from the past 3, 4, or 5 years in one of 26 subject areas, and view the authors' institutions on a Google Map.”¹³ TopCited can be accessed at: <http://info.scopus.com/topcited/>.

⁹ See Alma Swan, “Open Access: Why should we have it?” *Key Perspectives*, 2006, <http://www.keyperspectives.co.uk/openaccessarchive/journalpublications.html> accessed on 24 March 2008.

¹⁰ Alma Swan, “Open Access: Why should we have it?” *Key Perspectives*, 2006, <http://www.keyperspectives.co.uk/openaccessarchive/journalpublications.html> accessed on 24 March 2008.

¹¹ Stevan Harnad and Tim Brody, “Comparing the Impact of Open Access (OA) vs. Non-OA Articles in the Same Journals” 10(6) *D-Lib Magazine*, June 2004, <http://www.dlib.org/dlib/june04/harnad/06harnad.html> accessed on 25 March 2008.

¹² <http://info.scopus.com/overview/what> accessed on 13 March 2008.

¹³ Gavin Baker, “TopCited lists most-cited papers by disciplines” *Open Access News* (blog), 12 March 2008, http://www.earlham.edu/~peters/fos/2008_03_09_fosblogarchive.html accessed on 12 March 2008.

Australian Developments

Australia has played an important role in the open access movement. An Australian university – the Queensland University of Technology (QUT) – had the first university-level open access mandate. Australian bodies have also been instrumental in formulating OA policies and developing OA tools and infrastructure.

- 1 September 2001 – The Australian National University (ANU) launched its E-Print Repository, the first OAI-compliant institutional archive in Australia.
- September 2003 – Queensland University of Technology (QUT) adopted a policy that faculty research “is to be” on deposit in the QUT open access repository. The policy took effect on 1 January 2004. This is the first university-level open access mandate.
- 25 May 2004 – The Australian Group of Eight, the country’s eight leading research universities, released a Statement on open access to scholarly information
- 17 December 2004 – The Australian Research Information Infrastructure Committee (ARIIC) issued its Open Access Statement.
- 21 February 2006 – Queensland University of Technology created an Open Access to Knowledge (OAK) Law project. The official launch took place 29-30 November 2006.
- October 2006 – The Australian government published a report on the Research Quality Framework (RQF) recommending open access to publicly funded research.
- 2 November 2006 – The Australian Government Productivity Commission released a report recommending open access to publicly-funded research.
- 3 December 2006 – The Australian Research Council (ARC) Funding Rules for 2008 ask grantees to deposit their ARC-funded work in an OA repository or explain why not.
- 9 December 2006 – Australia’s National Health and Medical Research Council (NHMRC) adopted a policy to encourage OA for NHMRC-funded research, and said it will soon ask non-complying grantees to justify their non-compliances.
- 27 March 2007 – The Australian Government Productivity Commission released a report that supported OA.
- April 2007 – The Australian Partnership for Sustainable Repositories (APSR) launched Online Research Collections Australia (ORCA), a registry and support network for OA repositories in Australia.
- 7 February 2008 – The Open Access to Knowledge (OAK) Law Project

launched the OAKList, a database of information about publishing agreements and publishers' OA policies.

(Acknowledgement: the preceding dates and listing of events (up to December 2007) come from *Timeline of the Open Access Movement* by Peter Suber, which is licensed under a Creative Commons Attribution 2.5 License.¹⁴)

Institutional Mandates

Some institutions make it mandatory for staff to deposit their research output into the institutional repository. Currently only three Australian institutions have imposed a mandate – Queensland University of Technology (QUT), University of Tasmania and Charles Sturt University.

QUT was the first Australian institution to impose a mandate, in January 2004. The School of Computing at University of Tasmania has had a mandate in place since 2006, and the University of Tasmania has been introducing a university-wide mandate in a “patchwork” fashion – department by department. On 8 March 2007, Peter Suber reported that the University of Tasmania had announced that it was preparing to implement a university-wide mandate that would require all publications from 2007 onwards to be deposited into a University of Tasmania digital repository.¹⁵ Charles Sturt University introduced an institutional deposit mandate in January 2008.

The text of the QUT mandate is:

Material which represents the total publicly available research and scholarly output of the University is to be located in the University's digital or "Eprint" repository, subject to the exclusions noted. In this way it contributes to a growing international corpus of refereed and other research literature available on line, a process occurring in universities worldwide.

The following materials are to be included:

- refereed research articles and contributions;
 - at the post-peer review stage (the accepted draft - also referred to as the postprint);
 - or
 - at the pre-peer review (preprint) stage, with corrigenda added following peer review if necessary.
- un-refereed research literature, conference contributions, chapters in proceedings, etc (the accepted draft).
- theses as prepared for the Australian Digital Theses (ADT) process.

Access to these contributions will be subject to any necessary agreement with the publisher.

¹⁴ Peter Suber, *Timeline of the Open Access Movement*, last revised 10 December 2007, <http://www.earlham.edu/~peters/fos/timeline.htm> accessed on 20 March 2008.

¹⁵ Peter Suber, “OA mandate at the U of Tasmania” *Open Access News* (blog), 8 March 2008, http://www.earlham.edu/~peters/fos/2008_03_02_fosblogarchive.html accessed on 25 March 2008.

The material is to be organised in the repository according to the same categories used for the reporting of research to DEEWR (see Office of Research Web Site).

Material to be commercialised, or which contains confidential material, or of which the promulgation would infringe a legal commitment by the University and/or the author, should not be included in the repository.¹⁶

Harvard University

One significant mandate on an international level is the mandate recently introduced at Harvard University. On 12 February 2008, Harvard's Faculty of Arts and Sciences (FAS) unanimously approved the motion put forward by Professor Stuart M. Shieber:

The Faculty of Arts and Sciences of Harvard University is committed to disseminating the fruits of its research and scholarship as widely as possible. In keeping with that commitment, the Faculty adopts the following policy: Each Faculty member grants to the President and Fellows of Harvard College permission to make available his or her scholarly articles and to exercise the copyright in those articles. In legal terms, the permission granted by each Faculty member 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, and to authorize others to do the same, provided that the articles are not sold for a profit. The policy will apply to all scholarly articles written while the person is a member of the Faculty except for any articles completed before the adoption of this policy and any articles for which the Faculty member entered into an incompatible licensing or assignment agreement before the adoption of this policy. The Dean or the Dean's designate will waive application of the policy for a particular article upon written request by a Faculty member explaining the need.

To assist the University in distributing the articles, each Faculty member will provide an electronic copy of the final version of the article at no charge to the appropriate representative of the Provost's Office in an appropriate format (such as PDF) specified by the Provost's Office. The Provost's Office may make the article available to the public in an open-access repository.

The Office of the Dean will be responsible for interpreting this policy, resolving disputes concerning its interpretation and application, and recommending changes to the Faculty from time to time. The policy will be reviewed after three years and a report presented to the Faculty.¹⁷

The Harvard FAS open access policy is important for a number of reasons. Firstly, it was a move initiated and approved by the faculty themselves. It is the faculty who sought the mandate and who by doing so, recognised that copyright is an author's right and should be managed appropriately.¹⁸ Secondly, the mandate is unusual in the way it operates. By adopting the mandate, the faculty have pre-committed themselves to grant a licence to the university in any articles that they will write in the future.¹⁹

¹⁶ http://www.mopp.qut.edu.au/F/F_01_03.jsp accessed on 14 March 2008.

¹⁷ See www.fas.harvard.edu/~secfas/February_2008_Agenda.pdf accessed on 25 March 2008.

¹⁸ This comment should be attributed to Professor Michael W. Carroll, who wrote words to this effect on the SPARC Author Rights Forum (a closed forum). Please be aware that although copyright is at first instance an author's right, academic authors may be subject to expectations from their funding body or academic institution to deal with their research and publications in a certain way.

¹⁹ This comment should be attributed to Professor Michael W. Carroll, who wrote words to this effect on the SPARC Author Rights Forum (a closed forum).

Any subsequent transfer of copyright to a publisher is subject to this licence, unless the faculty member requests that the university waive the licence in respect to that particular article (i.e. “opts-out”).²⁰ In this way, the Harvard mandate works in a similar way to funding body mandates, such as the NIH mandate. The significance of this move is that it provides faculty members with stronger grounds when negotiating with publishers – the publisher must demand that the faculty member go back to Harvard and request a waiver of the copyright licence already granted, rather than simply saying “no” when the author requests permission to self-archive their work.

As reported in the *Boston Globe*, “the open access policy presumes that the mission of academic publishing is not to make money but to create, preserve, and share knowledge.”²¹

For academic and publisher responses to the Harvard FAS mandate, see Peter Suber’s blog, *Open Access News* as at 13 February 2008 and 14 February 2008 at http://www.earlham.edu/~peters/fos/2008_02_10_fosblogarchive.html.

Funder Mandates

National Institutes of Health (NIH)

One of the strongest and most influential funding body mandates is also one of the most recent. The National Institutes of Health (NIH) is the primary agency of the United States government responsible for biomedical and health-related research.²² On 11 January 2008, NIH announced a revision to its Public Access Policy that made its application mandatory rather than voluntary. The substance of the policy is contained in five points:

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.
4. The final, peer-reviewed manuscript includes all graphics and supplemental materials that are associated with the article.
5. Beginning May 27, 2008, anyone submitting an application, proposal or progress report to the NIH must include the PMC or NIH Manuscript Submission reference number when citing applicable articles that arise from their NIH funded research.²³

NIH has estimated that approximately 80,000 articles per year arise from NIH-funded research,²⁴ meaning that the new mandatory policy is likely to make a substantial

²⁰ Ibid.

²¹ Globe Editorial, “Open access to brilliant insights” *The Boston Globe*, 19 February 2008, http://www.boston.com/news/education/higher/articles/2008/02/19/open_access_to_brilliant_insights/ accessed on 25 March 2008.

²² <http://en.wikipedia.org/wiki/NIH> accessed at 6 March 2008.

²³ See Peter Suber, “The mandates of January” 118 *SPARC Open Access Newsletter*, 2 February 2008, <http://www.earlham.edu/~peters/fos/newsletter/02-02-08.htm> accessed on 25 March 2008.

²⁴ See Gavin Baker, “NIH’s New Open Access Policy Can Benefit Everyone” *Public Science*, 28

amount of the world's biomedical and health-related research literature publicly available.

Peter Suber has argued that the advantage of the NIH policy is that:

It does not allow publishers the easy opt-out of adopting a contrary in-house rule, but only the hard opt-out of refusing to publish work funded by NIH-funded authors. Second, it makes crystal clear that the policy does not violate the publisher's copyright. NIH-funded authors will retain the right to comply with the NIH policy, even if they transfer all other rights to a publisher.²⁵

For more information on how to comply with the NIH policy, see the NIH Public Access webpage at <http://publicaccess.nih.gov/> and the SPARC/Science Commons/ARL Joint Whitepaper: *Complying with the NIH Public Access Policy – Copyright Considerations and Options*.²⁶ See also the ARL webpage: NIH Public Access Policy Guide for Researchers at <http://www.arl.org/sc/implementation/nih/guide/> and the University of Minnesota Libraries website at <http://www.lib.umn.edu/scholcom/NIHaccess.phtml>.

The Wellcome Trust

The Wellcome Trust is an independent charity that funds research to improve human and animal health. It is the United Kingdom's largest non-governmental source of funds for biomedical research.²⁷

The Wellcome Trust Position Statement in Support of Open and Unrestricted Access to Published Research, last updated February 2008, provides:

Specifically, the Wellcome Trust:

- expects authors of research papers to maximise the opportunities to make their results available for free
- 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 (UK PMC) 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

January 2008, <http://www.scienceprogress.org/2008/01/public-science/> accessed on 25 March 2008; and Kimberley K. Barlow, "NIH mandates open access to researchers' publications" 40(10) *University Times*, University of Pittsburgh, 24 January 2008, <http://mac10.umc.pitt.edu/u/FMPro?-db=ustory&-lay=a&-format=d.html&storyid=7903&-Find> accessed on 25 March 2008.

²⁵ Peter Suber, "The mandates of January" 118 *SPARC Open Access Newsletter*, 2 February 2008, <http://www.earlham.edu/~peters/fos/newsletter/02-02-08.htm> accessed on 25 March 2008.

²⁶ Michael W. Carroll, SPARC/Science Commons/ARL joint whitepaper, *Complying with the NIH Public Access Policy – Copyright Considerations and Options*, February 2008, <http://www.arl.org/sparc/advocacy/nih/copyright.html> accessed on 25 March 2008.

²⁷ <http://www.wellcome.ac.uk/aboutus> accessed on 3 March 2008.

- 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.²⁸

The Wellcome Trust deposit mandate became effective for all new projects from 1 October 2005 and for all current projects from 1 October 2006. It applies to all research funded totally or partially by the Wellcome Trust. The Wellcome Trust Grant Conditions (which also contain the deposit mandate) were amended in August 2007 and apply to all researchers whether they are located in the UK or overseas.²⁹

In a news article published on the Wellcome Trust website on 21 February 2008, it is stated, “Just eight months after launching its new open access publishing policy, the Wellcome Trust has found that over a quarter of published, Trust-funded papers are freely available through the online repositories PubMed Central and UK PubMed Central.”³⁰

Other International Funding Bodies

Many other funding bodies around the world have introduced deposit mandates into their funding policies.

From 1 January 2008, recipients of new or renewed funding from the Canadian Institutes of Health Research (CIHR) are required to deposit the publisher's version or the author's final version of any research publications into an openly accessible repository (preferably an institutional repository) or ensure that the publication is openly accessible from the publisher's website within 6 months of publication.³¹ CIHR states that its rationale for introducing this mandate is that:

CIHR believes that greater access to research publications and data will promote the ability of researchers in Canada and abroad [sic] to use and build on the knowledge needed to address significant health challenges. Open access enables authors to reach a much broader audience, which has the potential to increase the impact of their research.³²

The European Research Council (ERC) also requires that all peer-reviewed publications resulting from funded research be deposited in an openly accessible repository within 6 months of publication.³³

²⁸ http://www.wellcome.ac.uk/doc_WTD002766.html accessed on 3 March 2008.

²⁹ http://www.wellcome.ac.uk/doc_WTD004055.html accessed on 3 March 2008.

³⁰ http://www.wellcome.ac.uk/doc_WTX043341.html accessed on 3 March 2008.

³¹ Policy accessed via SHERPA-JULIET at www.sherpa.ac.uk/juliet/; see also Ian Graham, “CIHR's Policy on Access to Research Outputs is Now in Effect”, 4 February 2008, <http://www.cihr-irsc.gc.ca/e/35683.html> accessed on 25 March 2008.

³² Ian Graham, “CIHR's Policy on Access to Research Outputs is Now in Effect”, 4 February 2008, <http://www.cihr-irsc.gc.ca/e/35683.html> accessed on 25 March 2008.

³³ Policy accessed via SHERPA-JULIET at www.sherpa.ac.uk/juliet/; see also *ERC Scientific Council*

The Arts and Humanities Research Council (AHRC) and the National Environment Research Council (NERC), both in the United Kingdom,³⁴ and CERN (the European Organization for Nuclear Research) require research publications to be deposited in an openly accessible repository at the earliest possible opportunity.³⁵

The Australian Research Council (ARC) and the National Health and Medical Research Council (NHMRC)

The primary funding bodies in Australia are the Australian Research Council (ARC) and the National Health and Medical Research Council (NHMRC). To date, neither the ARC nor the NHMRC have issued deposit mandates like some of their overseas counterparts. However, both have included statements in their funding rules that encourage the deposit of research results in open access repositories.

The ARC Discovery Projects Funding Rules for funding commencing in 2009 provide:

4. Dissemination of research outputs

4.4.5.1 The Australian Government makes a major investment in research to support its essential role in improving the wellbeing of our society. To maximise the benefits from research, findings need to be disseminated as broadly as possible to allow access by other researchers and the wider community.

4.4.5.2 The ARC acknowledges that researchers take into account a wide range of factors in deciding on the best outlets for publications arising from their research. Such considerations include the status and reputation of a journal or publisher, the peer review process of evaluating their research outputs, access by other stakeholders to their work, the likely impact of their work on users of research and the further dissemination and production of knowledge. Taking heed of these considerations, the ARC wants to ensure the widest possible dissemination of the research supported under its funding, in the most effective manner and at the earliest opportunity.

4.4.5.3 **The ARC therefore encourages researchers to consider the benefits of depositing their data and any publications arising from a research project in an appropriate subject and/or institutional repository. If a researcher is not intending to deposit the data from a project in a repository within six months of the completion of the research, he/she should include the reasons in the project's Final Report.** Any research outputs that have been or will be deposited in appropriate repositories be identified in the Final Report.³⁶ [Author's own emphasis added]

Guidelines for Open Access, 17 December 2007,

http://erc.europa.eu/pdf/ScC_Guidelines_Open_Access_revised_Dec07_FINAL.pdf accessed on 25 March 2008.

³⁴ Other UK Research Councils that have mandated open access to funded research papers include the Biotechnology & Biological Sciences Research Council (BBSRC), the Economic & Social Research Council (ESRC), the Medical Research Council (MRC) and the Particle Physics and Astronomy Research Council (PPARC) – see Richard Poynder, “Open Access: Beyond selfish interests” *Open and shut?* (blog), 20 November 2006, <http://poynder.blogspot.com/2006/11/open-access-beyond-selfish-interests.html> accessed on 24 March 2008.

³⁵ Policy accessed via SHERPA-JULIET at www.sherpa.ac.uk/juliet/.

³⁶ Australian Research Council (ARC) Discovery Projects Funding Rules for funding commencing in 2009, p13, http://www.arc.gov.au/ncgp/dp/dp_fundingrules.htm accessed on 25 March 2008.

The ARC Discovery Projects Funding Rules for funding commencing in 2008 contained the same statement. Although the ARC only encourages deposit of research publications in an appropriate repository rather than mandates it, it does require researchers who are not intending to deposit to explain their reasons for refraining. This places a greater emphasis on researchers to consider the basis of their decision and whether that basis is justifiable to the ARC.

The NHMRC Project Grants Funding Policy for funding commencing in 2009 contains the following statement:

16.2 Dissemination of Scientific Results

To maximise the benefits from research, findings need to be disseminated as broadly as possible to allow access by other researchers and the wider community, in accordance with the requirements of the *Australian Code for the Responsible Conduct of Research*. The NHMRC encourages researchers to **consider the benefits of depositing their data and any publications arising from a research project in an appropriate subject and/or institutional repository wherever such a repository is available to the researcher(s)**. Any research outputs that have been or will be deposited in appropriate repositories should be identified in the Final Report.³⁷ [Author's own emphasis added].

In the sense that their policies only encourage rather than mandate deposit of funded research into an openly accessible repository, the primary Australian funding bodies lag behind key funders of research in the United States of America, the United Kingdom, Europe and elsewhere around the world in their support of open access. However, considering the very recent and much publicised mandate of NIH – one of the world's largest funding bodies – it is entirely feasible that the ARC and NHMRC will follow suit and consider introducing deposit mandates into their funding policies in the near future.³⁸ In fact, it was reported in *The Australian* on 6 February 2008, that Elias Zerhouni, a director of NIH who visited Australia shortly after the NIH mandate was introduced, had warned that a voluntary system does not always work and had urged the NHMRC to refine its message.³⁹

³⁷ NHMRC Project Grants Funding Policy for funding commencing in 2009, p23,

<http://www.nhmrc.gov.au/FUNDING/apply/granttype/projects/index.htm> accessed on 25 March 2008.

³⁸ See, for example, Steven Schwartz, "The end of the scholarly journal" *Campus Review*, 8 April 2008.

³⁹ Bernard Lane, "NHMRC urged to refine its message" *The Australian*, 6 February 2008,

<http://www.theaustralian.news.com.au/story/0,25197,23165671-27703,00.html> accessed on 25 March 2008.

Attitudes Towards Open Access

In 2007, the OAK Law Project conducted a survey entitled *Academic Authorship, Publishing Agreements & Open Access: Survey Results*⁴⁰, which obtained evidence from Australian academic authors about their attitudes and practices in relation to Open Access and the publication and dissemination of their research.

As at the date of this submission, the survey report is not yet published.

Goal of the Survey

The goal of the survey was to develop strategies to facilitate greater levels of open access repository depositing, open access journal submissions and to balance and satisfy academic author's concerns between open access and their commercial publishing interests. In particular, it examined:

- Authors' experiences in publishing periodical publications, journal articles, research papers, conference papers and book chapters;
- Author's knowledge of publishing agreements and their experience in dealing with publishers;
- Authors' awareness of the different terms and conditions in publishing agreements under which these items have been published;
- Authors' knowledge and attitude towards "Open Access" and "Open Access Journals"; and
- Authors' understanding of the legal rights and responsibilities impacting on open access to their published items⁴¹.

Survey Results

The survey results showed that:

- The majority of participants support the elements of Open Access. Over half of them stated that broader access to the results of publically funded research, distribution of information freely and without cost and the making of information available for re-use were 'extremely important'⁴²;
- The benefits of Open Access which are of greatest relevance to academic authors are: increased accessibility to research outputs, easier access to material within specialized research field(s), and improved dissemination through broader circulation of research outputs⁴³;

⁴⁰ The OAK Law Project's *Academic Authorship, Publishing Agreements & Open Access: Survey Results*, April 2008

⁴¹ Ibid

⁴² Ibid Figure 20. *Relative Importance of Elements of Open Access*.

⁴³ Ibid Figure 21. *Benefits of Open Access* : increased accessibility to research outputs (61% strongly agreeing; *mean*=4.48), easier access to material within specialized research field(s) (56% strongly

- The majority of academic authors were happy to grant institutions a limited non-exclusive license to place items in a non-commercial, publicly accessible, online institutional repository⁴⁴;
- Despite the fact that authors regarded other elements of Open Access as being of greater relevance to them, the majority of authors saw repositories as a ‘fairly’, ‘very’ and ‘extremely’ important element of open access⁴⁵ and the majority of authors would like end-users to have rights to re-use work or to distribute to others on a non-commercial basis⁴⁶;
- However, in making a decision to publish, reputation, impact and quality of peer review will be of greater relevance to an academic author’s decision to publish, then being able to deposit into a repository⁴⁷. The importance of Open Access may be lessened if an author believes that depositing into a repository or publishing in an open access journal reduces or prejudices the chances of their work being published in a subscription based academic journal of good reputation, impact and peer review;
- Despite the fact that authors regarded the retention of rights to make and distribute copies for teaching and research as being of greater relevance to them, the majority of authors saw the depositing of items into Open Access repositories as a ‘fairly’, ‘very’ and ‘extremely’ important right for authors to retain in publishing agreements⁴⁸;
- When authors were queried about why they have chosen not to deposit work into repositories, it was either because of a lack of knowledge regarding where to deposit their work⁴⁹, their concern about publishers attitudes to the depositing of work into repositories⁵⁰, the use and re-use of their works in repositories⁵¹ or because they were unsure how depositing would promote their work, profile, employment or career⁵². Other reasons why authors have not deposited into repositories (drawn from the survey comments) were because funding obligations do not support depositing and that the lack of metrics is a disincentive to deposit⁵³;

agreeing; *mean*=4.39), and improved dissemination through broader circulation of research outputs (52% strongly agreeing; *mean*=4.37)

⁴⁴ Ibid 93%. See Figure 19. *Use of Online Repositories* 47. Items were defined as being any periodical publication, journal articles, research papers, conference papers and book chapters, but excluding any monographs or entire books

⁴⁵ Ibid 92%

⁴⁶ Ibid Figure 24. *End-User Access Rights for Items Deposited into a Repository*.

⁴⁷ Ibid Figure 8. *Relevant Factors Influencing Choice of Publication or Publisher*.

⁴⁸ Ibid 63% to 73%. See Figure. 16. *Relevant Rights for Authors to Retain*.

⁴⁹ Ibid 29%. See Figure 23. *Reasons for Not Depositing an Item into an Institutional or Other Repository*.

⁵⁰ Ibid 15%

⁵¹ Ibid 17%

⁵² Ibid 11%

⁵³ Ibid

- More than half of the survey participants have never published in an Open Access journal⁵⁴. As to reasons why they have not published in an open access journal, almost one-quarter indicated that they have not published in an Open Access Journal because they were either unfamiliar with the process or they have no motivation to do so or because it is not adequately recognised or acknowledged for the purposes of promotion⁵⁵; and
- For those participants who did publish an item in an open access journal most indicated that they did so because they either had an Open Access journal in their disciplinary area or because they desired to promote Open Access principles and ideals⁵⁶.

Conclusion

Open Access to research is an important issue that has received significant global attention. There has been an enormous amount of important work done on this issue in Australia and overseas. We are very much at a critical juncture where clear policy and institutional support for the benefits and impact of Open Access are required if Australia's innovative capabilities are to be realised.

We would submit that the Committee needs to give close consideration to the issues posed at the beginning of this submission:

- How should Open Access be implemented in order to promote innovation throughout the country?;
- The development of an Australian Access Strategy;
- The extent to which Open Access should be mandated by Institutions and Funders?; and
- The ways in which Open Access can be fully and effectively implemented in the Australian research sector?

⁵⁴ Ibid 59% of respondents have never published in an open access journal

⁵⁵ Ibid 22% of respondents indicated that they have not published in an open access journal because they were either unfamiliar with the process, they have no motivation to do so or it is not adequately recognised or acknowledged for the purposes of promotion. Figure 29. *Reasons for Not Publishing in Open Access Journals*

⁵⁶ Ibid Open access journal in their disciplinary area (45%). Desire to promote open access principles and ideals (29%). See Figure 28. *Reasons for Publishing in an Open Access Journal*.

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Kylie Pappalardo holds degrees in Law and Creative Writing and is a research officer for the OAK Law Project and the Legal Framework for e-Research Project at the Queensland University of Technology, Brisbane, Australia.

Since joining OAK Law, Kylie has worked and advised on numerous OAK Law projects, including

- The Oak Law Project and Legal Framework for e-Research Project Report, *Building the Infrastructure for Data Access and Reuse in Collaborative Research: An Analysis of the Legal Context* (June 2007 - <http://www.oaklaw.qut.edu.au/reports>);
- The Queensland University of Technology and ARC Centre of Excellence for Creative Industries and Innovation Report, *Legal Aspects of Web 2.0 Activities: Management of Legal Risks Associated with Use of YouTube, MySpace and Second Life* (July 2007 – See the Queensland University of Technology Faculty of Law: Intellectual Property Knowledge, Culture and Economy Project at <http://www.ip.qut.edu.au/>);
- The Oak Law Project Guide, *Copyright Guide for Research Students: what you need to know about copyright before depositing your electronic thesis in an online repository* (August 2007 - <http://www.oaklaw.qut.edu.au/publications>);
- The OakLaw Project and Legal Framework for e-Research Project Guide, *Legal Considerations for Data Management: A Guide* (September 2007 – not yet available for public consultation);
- The OAK Law Project Guide, *A Guide to Developing Open Access through your Digital Repository* and sample repository deposit licence for publications (September 2007 - <http://www.oaklaw.qut.edu.au/publications>);
- The OAK Law Project's *OAKList*; a web-enabled database containing information about publishing agreements and publishers' open access policies (Launched 7 February 2008 - <http://www.oaklist.qut.edu.au/>);

Kylie was also one of the recipients of the Queensland University of Technology Vice-Chancellor's Award for Excellence which was awarded to the OAK Law Project team in recognition of exceptional sustained performance and outstanding achievement in research; partnership and engagement; innovative and creative practice and leadership (31 October 2007).

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Brian Fitzgerald studied law at the Queensland University of Technology graduating as University Medallist in Law and holds postgraduate degrees in law from Oxford University and Harvard University.

He is a well-known Intellectual Property and Information Technology/Internet lawyer who has pioneered the teaching of Internet/Cyber Law in Australia. He has published articles on Intellectual Property and Internet Law in Australia, the United States, Europe, Nepal, India, Canada and Japan and his latest (co-authored) books are *Cyberlaw: Cases and Materials on the Internet, Digital Intellectual Property and E Commerce* (2002); *Jurisdiction and the Internet* (2004); *Intellectual Property in Principle* (2004) and *Internet and Ecommerce Law* (2007). Over the past seven years Brian has delivered seminars on Information Technology, Internet and Intellectual Property law in Australia, Canada, China, Brazil, New Zealand, USA, Nepal, India, Japan, Malaysia, Singapore, Norway, Croatia and the Netherlands. In October 1999 Brian delivered the Seventh Annual Tenzer Lecture - Software as Discourse: The Power of Intellectual Property in Digital Architecture - at Cardozo Law School in New York. Through the first half of 2001 Brian was a Visiting Professor at Santa Clara University Law School in Silicon Valley in the USA. In January 2003 Brian delivered lectures in India and Nepal and in February 2003 was invited as part of a distinguished panel of three to debate the Theoretical Underpinning of Intellectual Property Law at University of Western Ontario in London, Canada. During 2005 Brian presented talks in Germany, India and China and was a Visiting Professor in the Oxford University Internet Institute's Summer Doctoral Program in Beijing in July 2005. In 2006 he was nominated by DEST to attend and present as an Australian expert an OECD Workshop on Research Use of Patents held in May 2006 in Spain and in February 2006 was invited as international expert to present at an OECD Workshop on Open Educational Resources in Sweden. In April 2006 Brian was also invited to speak at the Fordham University International Intellectual Property Conference in New York and the Access to Knowledge (A2K) Conference at Yale University Law School. In April 2007 Brian organised the Knowledge Policy for the 21st Century Conference with the University of Western Ontario Law School in Canada and presented at the Fordham University International Intellectual Property Conference in New York. In May 2007 he organised the Legal and Policy Framework for the Digital Content Industry Conference in Shanghai China and in June presented at the Creative Commons iSummit in Dubrovnik Croatia. In July he organised an International Conference on the Legal Framework for e-Research held on the Gold Coast Australia and also taught in the Oxford Internet Institute Summer School at Harvard University Law School.

Brian is a Chief Investigator and Program Leader for Law in the ARC Centre of Excellence on Creative Industries and Innovation and Project Leader for the DEST funded Open Access to Knowledge Law Project (OAK Law) Project looking at legal protocols for open access to the Australian research sector and the DEST funded Legal Framework for e-Research examining the legal framework needed to enhance e-Research. He is also a Program Leader for CRC Spatial Information. His current projects include work on intellectual property issues across the areas of Copyright, Digital Content and the Internet, Copyright and the Creative Industries in China, Open Content Licensing and the Creative Commons, Free and Open Source Software, Research Use of Patents, Science Commons, e-Research, Licensing of Digital Entertainment and Anti-Circumvention Law. Brian is a Project Leader for Creative Commons in Australia. He has organised numerous conferences on Intellectual Property and Internet Law in Australia, is a regular speaker at international and national conferences and has made a number of significant submissions to government in the area of Internet and IP Law.

From 1998-2002 Brian was Head of the School of Law and Justice at Southern Cross University in New South Wales, Australia and from January 2002 – January 2007 was Head of the School of Law at QUT in Brisbane. He is currently a specialist Research Professor in Intellectual Property and Innovation at QUT.

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Anthony Austin is a research officer for the OAK Law Project and the Legal Framework for e-Research Project at the Queensland University of Technology, Brisbane, Australia.

Anthony worked as a solicitor for 10 years in private practice before joining the OAK Law Project. He worked primarily in intellectual property and commercial law and has advised on:

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- *Manufacturing and distribution licenses; and*
- *Franchising systems.*

He has also worked with community legal services and is involved in a manufacturing business.

Anthony completed his Masters of Law degree at the Queensland University of Technology in 2007, focussing primarily on copyright and trademark law, patent law and commercialisation, international commercial transactions and media law.

Since joining OAK Law, Anthony has worked and advised on numerous OAK Law projects, including

- The Oak Law Project and Legal Framework for e-Research Project Report, *Building the Infrastructure for Data Access and Reuse in Collaborative Research: An Analysis of the Legal Context* (June 2007 - <http://www.oaklaw.qut.edu.au/reports>);
- The Queensland University of Technology and ARC Centre of Excellence for Creative Industries and Innovation Report, *Legal Aspects of Web 2.0 Activities: Management of Legal Risks Associated with Use of YouTube, MySpace and Second Life* (July 2007 – See the Queensland University of Technology Faculty of Law: Intellectual Property Knowledge, Culture and Economy Project at <http://www.ip.qut.edu.au/>);

- The Oak Law Project Guide, *Copyright Guide for Research Students: what you need to know about copyright before depositing your electronic thesis in an online repository* (August 2007 - <http://www.oaklaw.qut.edu.au/publications>);
- The OakLaw Project and Legal Framework for e-Research Project Guide, *Legal Considerations for Data Management: A Guide* (September 2007 – not yet available for public consultation);
- The OAK Law Project Guide, *A Guide to Developing Open Access through your Digital Repository* and sample repository deposit licence for publications (September 2007 - <http://www.oaklaw.qut.edu.au/publications>);
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- The OAK Law Project Report, *Academic Authorship, Publishing Agreements & Open Access: Survey Results* (Soon to be released);
- The Queensland University of Technology and ARC Centre of Excellence for Creative Industries and Innovation Guide, *CCI Blog, Podcast, Vodcast and Wiki Legal Guide for Australia* (Soon to be released);
- The OAK Law Project and Legal Framework for e-Research Project *Streamlining Legal Frameworks for Collaborative Innovation in e-Research* to the Australian Federal Government's Review of the National Innovation System.

Anthony was also one of the recipients of the Queensland University of Technology Vice-Chancellor's Award for Excellence which was awarded to the OAK Law Project team in recognition of exceptional sustained performance and outstanding achievement in research; partnership and engagement; innovative and creative practice and leadership (31 October 2007).