Institution: Loughborough University

Unit of Assessment: D36a Communication, Cultural and Media Studies, Library and Information Management

Title of case study: Influencing policy and practice for Open Access to scholarly and scientific publications

1. Summary of the impact

Research at LU carried out from 2003 to 2011 has made a significant impact on the practical realisation of Open Access (OA) to scholarly publications at an international level. Research into publisher's Copyright Transfer Agreements underpinned the development of the SHERPA/RoMEO service, widely used by repository managers across Europe [impact 4.1]; a cost-benefit model of scholarly publishing in relation to the main routes to OA influenced the publishing industry, and research strategy amongst UK funding agencies [impact 4.2]; further research influenced Research Councils UK (RCUK) policy in relation to mandates [impact 4.3], and the work of the European Commission in the development of its digital agenda [impact 4.4].

2. Underpinning research

Four strands of research at LU since 2003 have contributed to shaping scholarly communication policy and practice:

2.1)   Research into OA began with the Jisc-funded RoMEO project (Rights of Metadata for Open Archiving) **[G3.1]** led by Professor Charles Oppenheim (1998-2009) and Dr Steve Probets (Lecturer; 2001 to date), which investigated stakeholder needs with regard to the specification of the intellectual property of research articles deposited in OA repositories. Publishers' copyright transfer agreements (CTAs) were analysed which identified the range of conditions and restrictions specified by publishers and how these could affect an author's right to deposit their work in an OA repository. Eight journal articles based on the project have been published, three focussing on the analysis of CTAs **[3.1]**. In 2004, complementary research **[G3.2]** by Dr Fytton Rowland (Senior Lecturer; 1995-2008), Probets, Dr Ann O'Brien (Lecturer; 1987 to date), Oppenheim and Dr Adrienne Muir (Senior Lecturer; 2000 to date) investigated technical models, preservation, and political/cultural issues affecting OA repositories. This Jisc-funded project was undertaken in association with Cranfield University and consultants Key Perspectives, and concluded that a distributed model for OA repositories should be adopted in which content was maintained in institutional repositories with metadata harvested to support a range of additional services **[3.2]**. This model provides a sound technological basis to underpin self-archiving.

2.2)   In 2006, Oppenheim and Dr Eric Davies (Director, LISU, 1994-2007) collaborated with Outsell UK **[G3.3]** to prepare an evidence-based analysis of data concerning scholarly journal publishing, for the Research Information Network (RIN), RCUK and the Department of Trade & Industry. Their Baseline Report identified gaps in the evidence base **[3.3]**, which served to focus further research into OA. In 2007-08, Claire Creaser (Director, LISU, 1994 to date), Oppenheim (lead investigator), and Professor Anne Morris (Professor, 1985 to date) collaborated with Professor J. Houghton (University of Victoria, Australia) on a project commissioned by Jisc **[G3.4]** investigating the economic implications of alternative scholarly publishing models. The aim was to inform policy discussion and enable stakeholders better to understand the institutional, budgetary and wider economic and social implications of the three emerging models of scholarly publication - subscription journals, open access journals and self-archiving in repositories. The costs and benefits of each were described, and a functional operational economic model created **[3.4]**.

2.3)   Also in 2007-08, Creaser was PI for the LU's contribution to a research project **[G3.5]** led by a commercial partner for RCUK, investigating the effects and impacts of OA on publishing models and institutional repositories in light of national and international trends **[3.5]**. The report concluded that the impact of the Research Councils' open access mandates had been limited, and led to action by the Research Councils to strengthen their policies on open access to

research outputs.

2.4) Subsequent research includes a two year project **[G3.6]**, completed in 2011, funded by the Europe-wide Publishing and the Ecology of European Research (PEER) consortium, to inform their members (including the International Association of Science, Technical and Medical Publishers (STM) and the European Science Foundation) about author and reader behaviour towards journals, with a specific focus on self-archiving articles on a European level **[3.6]**. Led by Dr Jenny Fry (Senior Lecturer, 2007 to date), Probets and Creaser, this project combined existing expertise in the research group with new expertise in the disciplinary shaping of scholarly communication contributed by Fry.

3. References to the research

3.1. Jenkins, C., **Oppenheim, C.**, **Probets, S.G.** and Hubbard, W., "Romeo Studies 7: creation of a controlled vocabulary to analyse copyright transfer agreements", *Journal of Information Science*, 34(3), 2008, 290-307. DOI: 10.1177/0165551507084141
('Peer-reviewed international journal of high repute', ranked amongst the top-third of information and library science journal titles (2011 Journal Citation Reports), Altmetrics rank score of 9 – placing article in the top 25% of all articles by attention (LU institutional repository stats 11/06/13).

3.2. Swan, A., Needham, P., **Probets, S.G.**, **Muir, A.**, **Oppenheim, C.**, **O'Brien, E.A.**, **Hardy, R.** and **Rowland, J.F.B.**, "Developing a Model for e-Prints and Open Access Journal Content in UK Further and Higher Education", *Learned Publishing*, 18(1), 2005, 25-40. DOI: 10.1087/0953151052801479
('Major international journal', peer-reviewed, submitted to RAE 2008, cited 7 times in Scopus (LU institutional repository stats 11/06/13) and 5 times in Web of Knowledge (19/06/13)).

3.3. Electronic Publishing Services (in association with **Professor Oppenheim** and **LISU** at LU), UK Scholarly journals: 2006 baseline report. An evidence-based analysis of data concerning scholarly journal publishing, Report for the Research Information Network, Research Councils UK and the Department of Trade and Industry, 2006. Available at http://rinarchive.jisc-collections.ac.uk/our-work/communicating-and-disseminating-research/uk-scholarly-journals-2006-baseline-report (accessed 14-9-12)

3.4. Houghton, J, Rasmussen, B, Sheehan, P, **Oppenheim, C, Morris, A, Creaser, C, Greenwood, H, Summers, M** and Gourlay, A, *Economic implications of alternative scholarly publishing models: Exploring the costs and benefits,* London: JISC, 2009. Report available at
http://www.jisc.ac.uk/media/documents/publications/rpteconomicoapublishing.pdf
(accessed 14-9-12)
(Submitted to REF 2014, Cited 77 times (excl. self-citations) according to Google Scholar (11/06/2013)

3.5. **Creaser, C**., "Open access to research outputs – institutional policies and researchers' views: results from two complementary surveys", *New Review of Academic Librarianship* 16(1) 2010, 4-25 DOI**:** 10.1080/13614530903162854
(Peer-reviewed, submitted to REF 2014, cited 8 times (excl. self-citations) according to Google Scholar and 3 citations (excl. self-citations) in Scopus (19/06/2013).

3.6. **Fry, J**., **Probets, S.G.**, **Creaser, C**., **Greenwood H.R.**, **Spezi, V.C.L.** and **White, S.U.**, "PEER Behavioural Research: Authors and Users vis-à-vis Journals and Repositories. Final report"', PEER, 2011. Available at
http://www.peerproject.eu/fileadmin/media/reports/PEER_D4_final_report_29SEPT11.pdf
(accessed 14-9-12)
(Reviewed by the PEER Executive, a subsequent article has been published in the *Journal of Documentation* (DOI: 10.1108/JD-01-2012-0008), which is an international peer-reviewed journal article, submitted to REF 2014)

Grants Awarded:

G3.1. Oppenheim; *Machine Readable Rights Metadata (in response to JISC's C1/02 Focus on*

Access to Institutional Resources); JISC; August 2002 – July 2003; £66,930 (competitive tendering process)

G3.2. Rowland*; Delivery, Management and Access Model for Eprints and Open Access Journals within Further and Higher Education*; JISC; April 2004 – June 2004; £29,962 (competitive tendering process)

G3.3. Davies; *Evidence-based analysis of data concerning scholarly journal publishing*, Electronic Publishing Services Ltd, 2006, £8,200 (commissioned project)

G3.4. Oppenheim; *Economic Implications of alternative scholarly publishing models*; JISC; November 2007 – November 2008; £100,000 (commissioned project)

G3.5. Creaser; *Study on open access to research outputs*; RCUK; December 2007 – August 2008; £32,600 (competitive tendering process)

G3.6. Fry; *Behavioural research: Authors and users vis‑à‑vis journals and repositories*; PEER; April 2009 – June 2011; €186,000 (competitive tendering process)

4. Details of the impact

The underpinning research described above has contributed to improved services to the scholarly publishing community and influenced national and international OA policy decisions regarding investment in institutional repositories - by June 2013, 172 institutions worldwide had mandates for research publications in place compared to fewer than 10 in 2003, and fewer than 50 in 2008 (source: ROARMAP - http://roarmap.eprints.org/).

4.1)   The research described in 2.1 contributed to the acceptance and development of distributed OA repositories, which have been widely adopted in the UK academic community - ROAR (the Registry of Open Access Repositories - http://roar.eprints.org) reports the creation of 197 UK repositories since 2005. In outlining publishers' conditions for uploading articles to distributed repositories, the RoMEO project was critical to the development of the institutional repository infrastructure, providing the foundation for the Sherpa Romeo service http://www.sherpa.ac.uk/romeo/faq.php?fIDnum=|&mode=simple&la=en#operators) **[5.1]**. This service provides a search interface to CTA data based on a rigorous controlled vocabulary, and is widely used by authors and repository librarians to determine the conditions by which articles can be self-archived. It also provides a good 'snapshot' of the current state of publishers' acceptance of self-archiving, having been extended and exploited by Sherpa and now used internationally; for the period 2010-11, there have been 457,629 visits, of which 85,493 are from the UK, 64,293 from the USA and 32,032 from Australia, and a total of 2,176,548 page views **[5.2]**.

4.2)   Research described in 2.2 made a major contribution to understanding the potential benefits of OA and was recognised as having driven the JISC's OA policy forward **[5.3]**. RCUK commented: "RCUK welcomes this substantial and interesting report. It will be of great use to the Research Councils as we develop our future policies in relation to publishing and in particular open access" **[5.4]**. The Open Access Implementation Group described its impact as "profound" in that it generated discussions between scholarly publishing stakeholders, provided a method for costing OA, was cited in the Finch report to support its conclusions that OA is beneficial to the UK, and substantially influenced the RCUK's policy on OA **[5.5]**. The significance of the contribution of this work to the HE sector and to the UK economy is also evidenced by the national media coverage generated **[5.6]**. The report, and subsequent research inspired by the economic model presented therein, sparked animated discussions with the commercial publishing sector. The research generated a forum for discussions between the Publishers Association, the ALPSP (Association of Learned and Professional Society Publishers), and the STM Association on the one hand and the JISC on the other, over issues of immediate importance to the UK HE sector and the UK economy, including two specific points: how can the dissemination of research outputs be made more effective through the internet and Web technologies; and why are subscription costs continuing to rise at rates above inflation? **[5.7]**

 4.3) Research described in 2.3 outlined a way forward for the UK Research Councils in relation to OA, building on the extensive activities already supported through repositories such as UK

PubMed Central and ESRC Society Today. In response to the study, the Chief Executives of the Research Councils agreed that, over time, the UK Research Councils will support increased open access, by:

- building on their mandates on grant-holders to deposit research papers in suitable repositories within an agreed time period, and;

- extending their support for publishing in open access journals, including through the pay-to-publish model.

This was taken forward by the Research Councils and HEFCE, and open access to research outputs is now mandated by all UK Research Councils **[5.8]**.

4.4)   The research described in 2.4 provided a deeper understanding and a fuller picture of author and reader attitudes towards OA, and particularly self-archiving, for the scholarly publishing industry and the OA community. The findings have been discussed at length, for example **[5.9],** and enabled the research community, including publishers and research institutions, to engage in an open discussion of OA. The multiform evidence base gathered, as well as specific findings of the Behavioural strand led by Fry, is influencing the work of the European Commission in the development of its digital agenda **[5.10]**.

The impact of this group of studies is significant in that access to published scholarly material has been broadened out to those end-users who otherwise might not be able to access such material due to financial constraints. This has been achieved through development of end-user services, informing policy on Open Access mandates, and contributing to the empirical evidence to support wider discussion on Open Access publishing at the International level.

5. Sources to corroborate the impact

5.1.   Letter of support, Chair of the UK Council of Research Repositories(UKCoRR)

5.2.   SHERPA/RoMEO usage figures, via email from SHERPA Technical Development Officer dated 21.06.12

5.3.   JISC, *Open Access for UK research. JISC's contributions*, 2010. Available at: www.jisc.ac.uk/media/documents/publications/programme/2010/jiscoamainbrochure.pdf

5.4.   RCUK website – support statement Available at www.jisc.ac.uk/news/stories/2009/01/houghton.aspx (PDF provided)

5.5.   OAIG letter of support, from Programme Director, Digital Infrastructure (Information Environment), JISC.

5.6.   Times Higher Education, 5 Feb 2009, *Analysis backs open-access path for scholarly publishing*, Available at: www.timeshighereducation.co.uk/ story.asp?sectioncode=26&storycode=405222 (PDF provided)

5.7.   A series of letters are linked from: ALPSP, *ALPSP Statements & Position Papers*, 16.04.2010. Available at: www.alpsp.org/Ebusiness/Aboutalpsp/ALPSPStatements/StatementDetails.aspx?ID=98 (PDFs provided)

5.8.   RCUK website, 2012. Formerly available at : www.rcuk.ac.uk/research/Pages/outputs.aspx [accessed June 2012] (PDF provided)

5.9.   Times Higher Education, 5th July 2012, *Gold or green: which is the best shade of open access?*, Available at: www.timeshighereducation.co.uk/story.asp?sectioncode=26&storycode=420454 (PDF provided)

5.10. Opening speech of the PEER end-of-project conference, Brussels, 29th May 2012. Available at commentneelie.eu/speech.php?sp=SPEECH/12/392 (PDF provided)