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8 February 2012

HOUSE OF COMMONS SCIENCE AND TECHNOLOGY COMMITTEE INQUIRY: IMPROVING THE COMMERCIALISATION OF RESEARCH

A RESPONSE FROM THE PUBLISHERS ASSOCIATION

Introduction

1. The Publishers Association ('the PA') is the representative body for the book, journal, audio and electronic publishers in the UK. Our membership of 120 companies spans the academic, education and trade sectors, comprising small and medium enterprises through to global companies. The PA's members annually account for over £4bn of revenue, with £3.1bn derived from the sales of books and over £1bn from the sales of learned journals.
2. The PA welcomes the Committee's timely inquiry into the commercialisation of research, following on from publication of the Department of Business, Innovation and Skills' Innovation and Research Strategy. The debate about the commercialisation of research runs in parallel with the debate about access to research outputs and role that this may play in fostering innovation.
3. Publishers are committed to the widest possible dissemination of and access to the scholarly publications in which we invest and we support any and all sustainable access models that ensure the integrity and permanence of the scholarly record. It is these *sustainable* access models that facilitate the commercialisation of research, as we make clear below. Making available the peer-reviewed archive-quality records of funded research to the widest possible audience is an essential element of onward exploitation of the public investment made in the original research.

Access to research outputs – A UK success story

4. The UK's academic and professional publishing industry is the most successful in the world, home to 10% of the 2,000 scholarly publishers worldwide. Around 400,000 research articles are published from the UK each year, in upwards of 5000 UK-based journals.
5. The UK's success in producing research outputs is demonstrated through the following statistics¹ of scholarly publishers:

¹ Given the scale and global nature of the industry, of necessity some of these figures are estimate. These figures relate to journals, although many journal publishers will also be publishers of scholarly monographs.

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- ex-UK turnover is in excess of £1bn, of which 80% derives from overseas subscriptions and licences
- UK research authors were responsible for 114,000 articles in 2009, 6% of the global total
- The UK publishing industry including all books and journals in print and electronic form (but not magazines or newspapers) has a turnover of around £5bn.
- Journal publishers employ 10,000 staff in the UK

Quality of research

6. Publishers play a crucial role and make substantial investment in ensuring research outputs are edited, peer-reviewed and prepared for publication and archiving. There is an entire publishing ecosystem built around this function.
7. Globally 2.5million+ referees contribute to the peer review process of the 3million+ article submissions received each year. Accepted submissions are edited and prepared by 125,000 editors and 350,000 editorial board members. The final outcome of this process is publication, in a scholarly journal, which is then disseminated worldwide.
8. Without the investment of publishers, research outputs would be neither as trusted nor as accessible to the research community and beyond. Publishers manage both quality control through peer review and version control, ensuring that the Version of Record deriving from scholarly publication is the version that is used for access and consultation. It is this trusted, quality Version of Record that forms the basis of further exploitation and commercialisation.
9. The journals in which research articles are published represent an assurance of quality, provenance and community recognition for the research communities that they serve. 14.4% of the world's most highly cited outputs are from UK-based researchers.²

Access to new markets

10. Science is global, and scholarly publishers have a global reach. Through partnerships, and the application of technology, publishers are able to make available the peer reviewed journal articles that derive from the results of research, throughout the physical and scientific world to all those who need it. This global reach maximises the potential for further exploitation and commercialisation of publicly funded research.
11. It is no coincidence that a 3-4% growth in the number of articles and journals published between 1996 and 2007 correlated with a 3-4% annual growth in R&D funding, and a 3-4% annual growth in the number of R&D workers. This increase in R&D is partly due to the export of Versions of Record, and the journals they are part of.
12. By reaching the widest possible audience and with their mark of quality, journals also act as a 'calling card' for UK excellence: partly as a result of a strong tradition of academic and scholarly publishing in the UK, our share of global funding for science

² Royal Society, "the Scientific Century" 2010

research is 3%; home to only 1% of the global population, the UK is clearly punching above its weight.

Stimulating new research

13. Publishers also invest in essential services for researchers that enhance efficiency and bring significant gains in productivity. For example, scholarly publishers work together on common standards for interoperability, search and analysis, especially through CrossRef, an operation founded by publishers, which developed the DOI identifier that delivers seamless navigation across the scientific literature and which is also providing the basis for supplier-neutral analysis of usage and for open discoverability.
14. Scholarly publishers potentially have a valuable role to play in assisting access to research datasets. Significant amounts of data are already made available as supplements to scholarly publications. Several publishers are already linking articles to various datasets, and are willing to work with funders to develop further identifiers that can link articles to primary datasets.
15. Publishers strive to extend access through further innovations, including many variants on the producer-pays 'Gold open access' model, one of which is cited as an example of good practice in the Innovation and Research Strategy for Growth, discussed in further detail below.³ Publisher engagement with the work of the Finch group has played a valuable role in bringing stakeholders together to evolve a practical solution to expanding access both to UK research globally and to global research in the UK.
16. In addition to making current publications accessible, publishers have made significant investment in digitizing the whole canon of scientific literature from 1665 onwards for researchers to consult.
17. A UCL study has shown how e-journal usage drives productivity and commercialisation.⁴ For example, research grants and contract income has increased 324% as downloads of journal articles have doubled.

Data and Text Mining

18. Content mining, or text and data mining (TDM), is a fast developing technology which enables the automated exploratory analysis of large volumes of digital content to extract information and to identify previously unrecognised relationships.
19. TDM is providing scientific, medical and other researchers with exciting new opportunities for analysing the huge volume of research outputs available in digital form and the potential to make new discoveries amongst current and historic bodies of research.
20. Publishers are at the very heart of this development. As the curators and in most cases owners of the publication rights to the journals, monographs and content databases which comprise the work to be copied and mined, publishers are

³ Innovation and Research Strategy for Growth, p77

⁴ "E-journals, their use, value and impact", 2009 RIN/Ciber

investigating and investing in the technology necessary to support TDM, such as converting content to a format which can be understood by mining tools and maintaining the platforms and providing on-going support to content miners.

21. This potentially symbiotic relationship between publishers and researchers (be they academic, commercial or public sector) ensures that managed access to copyright works for TDM purposes operates to the benefit of all parties. A recent study by the Publishing Research Consortium into Journal Article Mining found that 90% of respondents routinely permit requests for DTM from academic researchers, with 60% doing so in all cases.⁵ Only 12% of requests are turned down, on the basis of questionable bona fides of the applicant.
22. Other potential collaborations to extend access to and the functionality of scholarly publication datasets are being explored, including metadata linkages between publisher and funder sites, and access via rental models.

BIS Innovation and Research Strategy for Growth

23. As described above, publishers are committed to the widest possible dissemination of and access to the scholarly publications that we publish and we support any and all sustainable access models that ensure the integrity and permanence of the scholarly record. It is disappointing that statements included in the Innovation and Research Strategy are misleading, and appear to pre-empt the findings of the independent Finch Working Group.
24. The crucial element here – particularly for the purposes and process of commercialisation – is the *sustainability* of access models. Unfunded free access to research articles – far from raising the prestige of UK research and encouraging technology transfer – will instead undermine the financial base on which the UK's strong scholarly publishing industry stands. And, without sustainable funding to support the value chain that publishers work within, the entire ecosystem of publishing, commercialisation and reinvestment in research and innovation will be destabilised.
25. We strongly dispute the statement that “research is often difficult to find and expensive to access” when dramatically more research is now available at historically low cost. As stated above, access has continued to improve supported by a variety of business models that ensure the integrity and continuation of an ecosystem dedicated to dissemination of scholarly outputs that inform the commercialisation of research.
26. The notion that Research Councils expect the researchers they fund to deposit published articles or conference proceedings in an open access repository at or around the time of publication is misleading at best and fails to address key issues such as how Research Councils make funding available through grants to enable publication. It is important to note that whilst Research Councils fund research projects and the reports produced by their researchers, they do not fund the final peer-reviewed, archival-quality outputs from that research in the form of journal articles. These articles are the subject of considerable investment by publishers and those with whom we work and require funding accordingly. It is this issue that gold open access publication models in particular are seeking to address.

⁵ <http://www.publishingresearch.net>

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27. It is also unclear how unfunded access will stimulate commercialisation of research. As well as being unsustainable in and of themselves, the contribution of publishers to the Version of Record process, the export of and expanded access to respected and recognised journals, and the tools publishers invest in to aid further research all point to the crucial role that publishers play in the exploitation and commercialisation of research.

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8 February 2012