The Access Question

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Access to journal content has been central to the open access (OA) debate. The European Commission has focused on ‘access and preservation’ in its planning for Horizon 2020; in the UK the Department of Business, Innovation and Skills (BIS) has set up the Finch Group (an independent working group that emerged from discussions at a round table meeting on transparency with the Rt Hon David Willetts in March 2011) to look at and report on widening access; while in the USA the Office of Science and Technology Policy (OSTP) has addressed public access.

Over the past few years, a number of surveys and other studies have solicited feedback from academics, researchers, and other scholarly communication stakeholders in various countries and regions about access to research journals and/or data. These include two surveys carried out by the European Commission (EC); one by CIBER, which was commissioned and funded by JISC, the Publishing Research Consortium (PRC) and the Research Information Network (RIN); another by Outsell, commissioned by the libraries of the Australian Group of Eight Universities (Go8); and, most recently, the two Requests for Information (RFI) on public access to scholarly journals, issued by the US Office of Science & Technology Policy (OSTP).

This article is an attempt to identify the common themes across all five studies, to address some seemingly contradictory findings, and to suggest some best practices for future surveys of this kind – especially important given that their findings are increasingly used to inform policy decisions which may have a major impact on some or all scholarly communication key stakeholders.

POINT OF VIEW

The access question

Alice MEADOWS, Robert CAMPBELL and Keith WEBSTER

Overview of the surveys and studies

1. Online survey on scientific information in the digital age

In 2012 the EC intends to adopt a communication and recommendation on access to and preservation of scientific information in the digital age, which will set out actions that the Commission intends to take on OA in the context of EU-funded research. The recommendation will detail specific actions to be taken at the Member State level. The consultation process, open to all included an online survey (open from 15 July 2011 to 9 September 2011), which collected comments on the state of play, barriers, and potential policy actions in the area of access to and presentation of scientific results in the EU.

There were 1,159 responses to this survey, from 42 countries, 1,140 of which were received via the online survey. About two-thirds of the survey responses were from individuals (identified either as researchers – 37% of total responders or citizens – 27%).

The other main groups represented, each with around 4–8% of responses, were universities and research institutes, libraries, other (mainly NGOs, industry, charities, learned societies, and other non-profits), publishers, and international organizations. Belgium (36%), France and the UK (both 11%), and Italy (8%) had the most respondents.


The EC also plans to propose an European Research Area (ERA) Framework in 2012, with supporting measures to remove obstacles to mobility and cross-border operation. Public consultation on these issues ran from 13 September 2011 to 30 November 2011 and the outcome will help the Commission decide on priorities when preparing the ERA framework proposal.

Most responses to the consultation (590) were received via responses to an online questionnaire, open to all, and there were also 101 ad hoc contributions from a wide range of stakeholders. Once again, about two-thirds of respondents to the online questionnaire were individuals (primarily researchers, who comprised 51% of the total responses, and citizens – 12%). Other groups represented included universities and other higher-education institutes (9% of the total), other (7% – mainly learned societies and other non-profits), private organizations (7%), public research organizations (5%), international organizations (4%), research funding organizations (3%), and national governments (2%). Thirty-four countries were represented in the online questionnaire, topped by Spain.
(13%), France (12%), Germany (9%), Ireland (7%), and Belgium (6%).

3. Access to scholarly content: gaps and barriers

This report – the third in a group of three studies on transitions in scholarly communications – investigated and quantified the extent to which members of different communities in the UK can gain ready access to formally published scholarly literature, in particular, journal articles and conference proceedings. It was carried out by CIBER – an independent research group formerly located at University College London. The sample frame comprised a mix of UK journal authors (randomly selected from Elsevier’s Scopus database) and lists of Elsevier’s personal UK pay-per-view customers and subscribers. Invitations were sent to 20,000 individuals; 13.2% responded (2,645 completions). 42% of the respondents were from universities or colleges, 10% from hospitals or medical schools, 28% were from industry or commerce, and 5.5% from research institutes.

4. Australian Go8 Libraries cost–benefit study

In 2009, the libraries of the Australian Group of Eight Universities (Go8: www.go8.edu.au) commissioned Oustell to conduct a cost–benefit study on information resources provided free at the point of use for their teaching and research communities. Respondents to the survey were asked about their awareness of funding levels, then told of the correct level of funding. 1,175 valid responses (8.5%) were collected from a population of 13,807 active researchers in three of the Group’s member universities. Note that this survey was conducted at the height of preparations for the 2010 research assessment exercise, when OA was part of the government’s agenda and, therefore, fairly visible in the press.

5. US Office of Science and Technology Policy Requests for Information on Public Access to Scholarly Journals and Data

In late 2011, the OSTP issued two RFIs, open to the general public, on the issue of public access to scholarly journals and data. 377 responses were received for the RFI on access to journals, of which nearly half (45%) were from universities and libraries (note, though, that it is not always clear whether the respondents were replying on behalf of their institutions or as individuals). A further 21% were from learned societies (13%) and other non-profits (8%), 19% were unaffiliated individuals, 5% companies, 4% each publishers and trade associations, and 2% other (mainly representing individual journals). There were many fewer responses to the RFI on access to data – 118 – comprising universities (41%), societies and other non-profits (28%), unaffiliated individuals (16%), publishers, US government offices, and companies (4% each), and trade associations (3%). Note that the Research Works Act (RWA), which attempted to prohibit mandated OA in the US, was introduced to the US House of Representatives in December 2011, while responses to the RFIs were in progress.

Summary of the findings

Although each survey had a somewhat different focus, there were several common themes, in particular around the issues of access to content and/or data and OA, and yet there are a number of inconsistencies in the surveys’ findings.

Access to journal content

Responses to questions on this issue ranged from the EC survey on scientific information in the digital age, in which almost 84% disagreed or disagreed strongly with the statement, ‘There is no access problem to scientific publications in Europe’, to the Go8 Oustell survey where, in response to the question, ‘How do you rate the ease of access to information resources, both print and electronic?’, for journals, 1,272 out of the 1,175 respondents (91.2%) answered ‘Meets my needs very well’ (772) or ‘Meets my needs adequately’ (300). However, it should be borne in mind that the eight universities involved are relatively well funded.

Similarly, the CIBER survey found that 93% of respondents in universities and colleges believe research papers are easy or fairly easy to access, while the equivalent figure in industry and commerce was 79%. CIBER also found that most researchers (71%) in the case of universities and colleges, 58% in the case of industry and commerce) believe that access to journal articles has improved over the past five years. Conversely though, when asked by CIBER which of a range of resources they would most like to see access improved a large majority (38.5%) in the case of universities and colleges) identified journal articles as their first choice; clearly expectations around the availability and accessibility of journal articles run very high. As the CIBER study authors point out, ‘For many researchers, “easy” access to most of the journal literature is not good enough.’

Barriers to access

It is clear from both the EC survey on scientific information and the OSTP RFI on access to scholarly journals that the high price of journal subscriptions and shrinking library budgets (85%) are widely seen as the most important barriers to access. 89% of respondents to the EC survey cited journal subscription prices as a barrier, and 85% cited library budgets; many comments in the OSTP RFI responses made the same point. The CIBER survey likewise found that making ‘a payment for access to the desired content at a level which the user considers disproportionate to the anticipated benefit’ was a barrier to access, along with ‘a burdensome purchasing process’.
These were by no means the only barriers noted; others included lack of awareness of available resources (cited in both the CIBER and ERA surveys), CIBER also identified VAT on digital publications, format and IT problems (including digital rights management issues), and lack of membership of a library with access to content as problems. In the ERA survey, under the heading ‘Difficulties of private firms in finding public research results or compensated’, a large share of respondents stressed the need for more networking opportunities and more OA publications, highlighting the fact that small and medium-sized enterprises (SMEs) may find it more difficult to access scientific publications and data than universities and other large organizations. The EC survey on scientific information also identified a lack of strategy by government, and a lack of interest in and incentives for researchers, as problems.

Conversely, however, when asked in the Go8 survey how they would rate the value for money represented by the range, depth, and ease of access to information resources made available to them by their university after being informed on the cost, Australian researchers overwhelmingly answered ‘excellent’ (437), ‘very good’ (432) and ‘good’ (206), a total of 1025 (91.5%) out of the 1,175.

Open access

In the EC survey on scientific information, 90% of respondents supported the idea that publications resulting from publicly funded research should, as a matter of principle, be available through OA means. Self-archiving (‘green OA’) or a combination of self-archiving and ‘gold OA’ were identified as preferable ways of increasing the number and share of scientific publications available in OA. Green OA with a six-month embargo period was favoured by 56%, although 25% disagreed with this option.

Likewise, in the ERA survey, the section on OA spurred high interest among all: out of the total of 590 responses, 69% of respondents replied on average to the questions related to Open Access and 62% considered Open Access as one of the most important gaps to be filled to achieve ERA. … There is widespread support on the online questionnaire for enhancing the circulation of scientific knowledge in the European Research Area, both in the form of scientific data (81% of the respondents) and of scientific publications (74% of the respondents). A large majority of the respondents (88%) believe this could be achieved by offering Open Access.

Such views were supported by many European stakeholders and several Member States, including France and the UK.

In the OSTP RFI on access to scholarly journals, most academics and librarians saw a stronger need for government mandates and centralized repositories. 168 respondents (45%) believe that the government should strongly mandate public access, with a further 52 (14%) believing that government should play a strong role, but with some limits. Only 58 (15%) believed that the government has no role to play in making scholarly publications publicly available. However, there were also a number of strong dissenting opinions from academics, who worried about the impact of OA on the quality of the peer-review process currently managed by publishers. Almost everyone who responded to the RFI felt the government had some basic right to the research information generated from public funds – the real dividing line was whether or not the published version of record had to be submitted and curated by the government. There were also strong comments both for and against any embargo period, although most respondents (including some societies and publishers) felt that some embargo period was probably reasonable. Comments included,

The National Institutes of Health, as well as other funding agencies worldwide, currently use an embargo period from 0–12 months. To date no publisher has provided evidence of financial loss as a result of this policy.

Interestingly, responding to another question in the EC survey on scientific literature: ‘Do you think that open access to scientific publications can co-exist with the traditional scientific publication system?’, 71% of respondents agreed or agreed strongly, while only 17% disagreed or disagreed strongly. There was, however, some variation between groups, e.g. 88% of libraries agreed, while only 63.7% of research funding organizations agreed. This may indicate that librarians, who have historically been the main purchasers of content, are generally happier with some continuation of the current system, while funding organizations – perhaps swayed by pro-OA lobbyists – feel they have more to gain from a change to the established system.

Access to data

Two of the surveys – the EC survey on scientific literature and data, and the OSTP RFI on public access to data – specifically addressed the challenges of access to data.

In the EC survey, 87% of respondents disagreed or disagreed strongly with the statement: ‘There is no access problem for research data in Europe.’ There was strong support (90%) for research data that is publicly available and results from public funding to be, as a matter of principle, available for reuse and free of charge on the Internet.

In the US, unlike the RFI for scholarly publishing, responses to the OSTP RFI on data were not politicized by the introduction of the RWA, nor were there many ‘private citizens’ providing short and general comments on ‘the government’s right to research’. Almost all comments recognized the inherent value of sharing and curating data sets, and in making these more
available. A number of themes emerged, including privacy concerns, the practicality and usability of large data sets, the need to build on and develop existing systems and for finding flexible solutions, the introduction of mandatory data management plans, and concern over the current lack of expertise in this area.

Conclusions
Why such differences?
Although there are common themes in the findings of these surveys, there are also some differences.

For example, although the two EC surveys appear to indicate that there are significant problems with access to scholarly publications in Europe, the UK-based CIBER study and Australian-based Outsell survey tell a different story, with the vast majority of researchers and faculty seeing little or no problems with access. One explanation might be that, while most researchers know that almost all journal articles are now available in digital form and, therefore, express high degrees of satisfaction with the provision of scholarly literature, this same high level of satisfaction can lead to a strong degree of complaint when digital access becomes difficult, for example, because the researcher’s institution does not have access, or because the journal is available in print form only. Therefore, even when unmet needs are very small, concerns may still be expressed in response to statements about inaccessibility. Another contributing factor may be the differing levels of understanding and exposure to scholarly content of the respondents. It is perhaps telling that the two studies where respondents expressed the most satisfaction—CIBER and Go8—focused primarily on researchers, faculty, and authors, all of whom arguably have the most interest in and need for access to scholarly publications. A distinction therefore also needs to be drawn between those who need to access primary literature but cannot, and those who do not have access, but are untroubled because they have no desire to achieve access— this was not addressed in any meaningful way in any of the studies.

Likewise, although there appears to be a large degree of consensus about the desirability of OA across several of the surveys, there are also differences in the level of support, especially for Green OA. Support for OA was strongest by far in the EC surveys and, if this is to be applied to policy for access to scientific information (articles and data) we can expect OA to be adopted. Of particular concern is the fact that the possibility that Green OA might ultimately undermine journal publishing was not explained in the consultation process. As a result, policymakers might claim the findings justify OA policy with an embargo period as short as six months. These surveys also show that funders are driving OA policy (88% of librarians in the ‘digital age’ survey agreed that OA can co-exist alongside subscription/licensing models compared with only 63.7% of funders). At the session on OA at the ERA Conference on 31 January 2012 it was agreed that the development and implementation of OA models will depend on full participation from all stakeholders— funders should therefore be urged to work with other stakeholders to balance their own desired outcomes with the need to ensure a sustainable and well-regarded scholarly publishing system. Running a survey with an obvious bias against publishers will not help this cause.

How useful are the results?
But just how accurate are the results of surveys like this? Given the increasing involvement of governments around the world in scholarly communications policy, and their increasing use of studies and surveys to support changing legislation, surely it is of the utmost importance that these studies and surveys properly reflect the views of those most likely to be impacted by these changes?

On this basis, the studies and surveys reviewed here are something of a mixed bag. First, the groups represented in the surveys vary. In its ‘What Is a Survey?’ pamphlet series, the Survey Research Methods Section of the American Statistical Association states that the word survey ‘is most often used to describe a method of gathering information from a number of individuals, a “sample,” in order to learn something about the larger population from which the sample has been drawn’. In the cases of the EC and OSTP studies, however, there is no frame or listing of units from which a sample has been selected— anyone was free to respond. Even more importantly, instead of identifying a well-defined larger population of units from which inferences can be made, these studies mix respondents of groups/organizations with individuals. As a result, they cannot realistically be called surveys, meaning that, arguably, the resulting estimates cannot be generalized to any population because there is no sample frame or target population per se. The OSTP has not yet issued any report based on respondents to its RFIs, but the EC reports resulting from its surveys do include percentages of respondents and appear to attempt some sort of ill-defined inference despite the lack of response rates or other survey quality measures.

Conversely, the Go8 and CIBER surveys have a clear focus on academics and researchers. In the case of the CIBER survey, for example, the sampling frame of 20,000 included published authors and knowledge workers from UK universities and colleges, medical schools and health providers, industry and commerce, and research institutes from lists provider by a publisher, with a response rate of about 13% (apparently sampling errors were computed, although these are not presented in the report).

Second, the methodology of most of the surveys is open to criticism. For example, although the CIBER survey was more carefully constructed, some will dismiss the findings on the
grounds that the names were provided by a commercial publisher. The impact of this is difficult to evaluate; the online survey materials are not provided so it is not possible to assess, even superficially, whether the sponsorship of the publisher might be producing response effects. However, no such criticisms can be made of the Go8 survey, which produced almost the same result and, in the case of the CIBER survey, the authors are very clear about how they constructed the frame and are transparent in terms of who is represented, which is very positive. Likewise, from a review of the CIBER survey questions, it is clear that these do not display any bias in terms of the wording. Conversely, neither the EC surveys nor the OSTP RFIs made any attempt to create a sampling frame, so standard measures of quality such as response rates and precision of the estimates are not included in the report, and it is not possible to evaluate the estimates along these lines. There are also issues with respect to measurement error, since the wording of at least some of the items appears to be leading. For example, one question asks respondents to respond to the statement, ‘There is NO problem with access to scientific publications …’, where the word NO is capitalized, which invariably leads to high levels of agreement (is there really NO problem with anything?). Bradburn, Sudman and Wansink have discussed the issue of ‘loaded’ questions.

Finally, the way in which the surveys allowed stakeholders to identify themselves may also be significant – for example, neither of the EC surveys differentiated learned societies as a key stakeholder group, despite their vital contributions to scholarly communications, nor has the EC actively solicited input from these sorts of associations. As a result, it is possible that the views of learned societies are less well represented than they should be.

Going forward
The poor methodology (including loaded questions) of most of the surveys described above indicates a motivation to achieve a certain result rather than sound evidence for informing policy. This is ironic as the ultimate objective is to develop a better system for access to the peer-reviewed outcome of research. Perhaps such surveys in the future should themselves be properly peer reviewed. Until then those that quote figures from these surveys should do so with care and an understanding of how these findings were produced.

Our recommendation is that, where governments and others involved in public policy for scholarly communications wish to seek input from stakeholders regarding potential changes to legislation or policy issues, they should hold themselves to the same high standards for data collection and analysis as those used by the scholarly and scientific community itself. This includes, for example, employing best practices in the design of the survey, ensuring that there is a clear and representative sample population, and using standard survey methodology to assess and evaluate the results.

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