

The one that got away? Institutional reporting changes and open access in Australia

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Abstract

The voluntary uptake of institutional repositories by academics has been disappointing. This paper describes the repository situation in Australia, and looks at the mandates in place for academics to use them. It then explores the inherent conflict between the institutional requirements of reporting and the 'invisible college' – the allegiances academics hold with their research colleagues. It argues that by forcing academics to report in a fashion at odds with their natural flow of work and community, the potential for widespread uptake of repositories as a method of achieving open access is unlikely to succeed.

The introduction in Australia of a new scholarly output reporting system in 2008 has the potential to increase the awareness and use of digital repositories across the academic community. There are, however, two potential problems with using reporting as a vehicle for promoting open access; the system has been developed with limited consultation or consideration of the way different disciplines conduct their work, and the reporting requirement means the papers that must be uploaded into repositories will need to be the publisher's versions. The new system will result in academics complying with the minimum reporting requirements, and ignoring the wider open access opportunities it offers.

Introduction

The open access debate has been raging now for over a decade. It is generally understood that there are two main 'roads' to open access, the 'gold' road of publishing in an open access journal (such as this one), or the 'green' road, that of self-depositing¹ articles in digital repositories. (Harnad et al., 2004b) This paper will be discussing the use of repositories in Australia as a means of increasing open access. For some time the expectation appeared to be that the main difficulties would be in building repositories, but it has been the filling of repositories that has proven to be the greatest challenge. (Foster & Gibbons, 2005) Currently the levels of voluntary self-deposit in repositories sits at between 10-15% (Sale, 2006c) and one argument is that the only way to increase this is to mandate self-deposit. (Sale, 2007)

The paper will use concepts from the sociology of knowledge literature to argue that disciplinary differences are being ignored in arguments about how best to encourage deposit in institutional repositories. It will continue with a description of the new Australian reporting system, the Research Quality Framework (RQF), which requires papers for assessment to be submitted via a repository, and how this is working counter its ideal of increasing accessibility. The RQF partly stems from government policy that aims to increase accessibility of academic output. The paper will conclude

¹ This paper will use the expression self-deposit rather than the commonly used but inaccurate self-archive, as the depositor does not have any control over the long-term archiving or not of the item.

that institutional repositories in themselves are a flawed way to achieve a high uptake of open access. Repositories will only succeed if they are linked into the information seeking behaviour of researchers, and this is more likely to be the case if the repository has been built by the community rather than institutions.

This paper incorporates early findings from the empirical component of a PhD looking into the research and publishing practices of Australian researchers in different disciplines. This has consisted of a series of 42 interviews with members of two Australian universities, the University of New South Wales, and the Australian National University. Three disciplines were chosen: Chemistry, Computer Science and Sociology. The three disciplines represent three of the four areas described by Becher (1994); hard pure/abstract reflective, hard applied/abstract active and soft pure/concrete reflective respectively (p152). These disciplines have distinct publishing practices, with Chemistry almost exclusively publishing in journals, Computer Science publishing in conference proceedings and some journals, and Sociology publishing a mixture of books and journal papers.

The interviews were conducted between October 2006 to April 2007, each lasting approximately one hour. The interviews were semi-structured and based on the same set of questions, but the questions were adjusted to respond to the answers given. The questions centred around the interviewee's interaction with the literature, from the perspective of a researcher, an author and a referee. The interview ended with questions about their awareness of, and activities in, open access publishing methods.

Repositories – build it and they will come?

Encouraging academics to deposit their work in repositories has proved to be a difficult challenge. Some repository managers have adopted the 'build it and they will come' approach. "At one end of this debate are the technological determinists, who argue that once a machine has been invented, its ability fundamentally to transform social relations is only a matter of time." (Walsh & Bayma, 1996, p662) This approach, not surprisingly, has been unsuccessful.

Several case studies have offered different methods for obtaining material for the repositories, from trawling researcher websites with material and asking permission to transfer these to the repository, (Andrew, 2003) to creating personal web profiles for individuals (Foster & Gibbons, 2005). Other suggestions include finding out which journals allowed the self-deposit of articles, and tracking which academics at the institution have published in those journals. (Mackie, 2004). Developing communities for appropriate groups with their own work-flow has been another approach. (Chan, 2004)

All of these suggestions are human resource intensive. An ideal situation is one where academics voluntarily deposit their work with minimal involvement of the repository management staff. One alternative method is to use the repository as a way of reducing administrative duplication. The University of Melbourne has developed their ePrints Repository (UMER) to tie in with the finance, human resources and reporting software. This means there is a single source of data on people, publications and research that is re-used across the systems. In addition rather than insisting researchers place their material into this repository, UMER will point to an item that has been deposited in a subject based repository. (O'Brien, 2006) This paper will now take a brief look at the wider Australian repository situation to explain the baseline scenario for the upcoming reporting changes.

Repository situation in Australia

Of the 38 universities in Australia, approximately half have active, online, repositories that carry current research documents. One listing gives the figure as 19 repositories. (Sale, 2006a) The OpenDOAR² website paints a slightly different picture, listing 52 repositories for Australia. Of these, 24 are digital theses repositories, four institutions have more than one repository listed, one was a pilot and two were for public libraries, leaving 21 institutional repositories at Australian universities.

Looking at the number of items in these repositories demonstrates that in Australia, uptake of the repositories has been slow. There are six repositories with fewer than 200 entries, and eight with between 200 and 1000 items. Four repositories have between 1000 and 5000 items. These findings reflect a slight improvement on a 2004 survey of 45 repositories world-wide, that found the average number of items was only 1,250 per repository, with a median of 290. (Ware, 2004)

The three remaining Australian repositories have high numbers; Adelaide University with 14,618 items, Griffith University with 10,208 items and the Australian National University (ANU) with over 46,500 items. While this last figure seems very high, the OpenDOAR website points out that “the high number of items listed on this site is by a large part due to the inclusion of a large collection of single page document images and photographs within the repository.” The ANU repository was the first OAI compliant institutional repository in Australia, established in September 1991.

Open access is supported

This apparent lack of interest in repositories is not due to a philosophical objection on behalf of the researchers, it is more likely to be a lack of awareness, which was highly evident in the people interviewed. By and large, Australian academics are in favour of the principles of open access, even if they have not heard the term, as the following interview responses indicate:

Open Access? I think it's a good idea in principle. I don't think knowledge should be owned. Once published its out there, it has a life of its own, it shouldn't have strings attached. – Sociology

I try to favour society journals over commercial journals. Because they put something back. – Chemistry

What's science for if you don't have things available? – Computer Science

This support for open access principles offers an opportunity for those trying to encourage use of repositories, but there are also some valid concerns of the researchers that would need to be addressed. A study undertaken in 2005 which looked at 13 countries including Australia, concluded that academics were not using repositories for several reasons including; their lack of awareness, concern about copyright, scholarly credit, perceiving OA content to be low quality and a lack of mandatory policies. (van Westrienen & Lynch, 2005) Interview responses supported this finding.

I have a concern about plagiarism. - Sociology

² <http://www.opendoar.org>

I don't see any harm in depositing in an IR, but don't see any use in it either. – Chemistry

It's easy for me to maintain a website. I make datasets available as well - they wouldn't know what to do with data. It will take 6 months for them to update it. – Computer Science

The question then arises, is the solution to force people use the repositories?

Australian mandates

Several commentators in the open access movement argue strongly for the need to mandate self-depositing at a national or institutional level, rather than relying on individuals to make the decision to do so. (Sale, 2007) (Harnad et al., 2004a) (Law, 2006)

There are currently two institutional mandates in place in Australia. The Queensland University of Technology (QUT) has had a mandate that academics place a copy of their research into QUT ePrints, “the open-access archive of QUT research literature”³ in place since 1 January 2004. (QUT, 2004). With the exception of the School of Computing at the University of Tasmania, no other Australian university or university department has a mandatory deposit policy (Sale, 2006c). The QUT repository holds just under 5,000 items at the time of writing.

In addition, two major funding sources in Australia have recently requested the placement of scholarly output into repositories. Australian research is generally funded through two bodies, the Australian Research Council (ARC) and the National Health and Medical Research Council (NHMRC). The new ARC and NHMRC policies both “encourage 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).” (National Health and Medical Research Council, 2007) (Australian Research Council, 2007, p13)

This statement has been welcomed by commentators (Sale, 2006b) however there are various points of concern. The soft wording used (such as ‘encourage’ and ‘consider’) could not be described as a mandate, and is unlikely to act as an incentive to scientists. The ARC policy goes further, saying that if the researcher chooses not to do so they must include their reasons why not in their Final Report. The NHMRC is waiting for their IT system to be updated to allow for this form of reporting before they will also include this requirement. To some observers, this requirement for a justification of non-compliance has meant “this effectively converts the request into a mandate,” (Suber, 2007) but there is evidence to show this is not necessarily the case.

Unfortunately, the need to justify non-compliance of a funding requirement has not altered researcher behaviour in the past. As an example, the same funding bodies have a clearly worded requirement that any digital data involving research relating to the social sciences should be lodged with the Australian Social Science Data Archive (ASSDA) (Australian Research Council, 2005, p23) or the Australian Consortium for Social and Political Research Inc. (ACSPRI) (National Health and Medical Research

³ <http://eprints.qut.edu.au/>

Council, 2006) for secondary use by other investigators within two years of the research. In this case too the funding recipient must include reasons for non-lodgement in their final report.

Despite these mandates, it would appear that very little sustainable data management is actually occurring. Currently there is no way of marking a grant application to indicate which studies will produce quantitative data sets, and there is no provision for the ARC to follow up whether grant recipients are depositing their data as is required by the conditions of the grant. The ASSDA archive holds approximately 3000 data sets dating back to 1942. Currently anything between 12 and 40 data sets are deposited each year⁴, representing a minimal sample of the ARC funded projects completed each year.

The lack of institutional mandates and the ineffectiveness of the funding bodies' requirements mean there is little imperative for Australian researchers to place their work in repositories. This paper will now analyse one of the major arguments used to increase incentive for researchers to use repositories.

The “increased visibility” argument and information seeking behaviour

There is ample evidence to show that having work freely available in an open access format increases citations. (Lawrence, 2001) (Hajjem, Harnard, & Gingras, 2005) (Kurtz et al., 2005) (Brody et al., 2004) The ‘increased visibility’ argument puts forward these findings as an incentive for academics to self-deposit in repositories. However, this is not a simple case of cause and effect, the higher citation counts may be due to reasons other than that they are open access.

When profiling people who do voluntarily self-deposit, it appears that some self-selection is occurring with evidence to show that items deposited in repositories tend to be higher quality articles that have appeared in top journals. Papers from higher impact journals and more recent articles are more likely to be deposited. (Bergstrom & Lavaty, 2007) (Wren, 2005) This phenomenon has raised the possibility that the increased citations of freely available work is not simply because it is open access, nor even that it is early access, but because of a self-selecting bias. (Kurtz et al., 2005) (Eysenbach, 2006)

The difficulty with the ‘increased visibility’ argument is it ignores one aspect of the transmission of ideas from one area to another, the information seeking strategies that scientists use in their research. (Crane, 1972, p106). The PhD research reported here builds on a large body of literature looking at disciplinary differences (Whitley, 1984) (Walsh & Bayma, 1996) (Fry, 2006) (Kling & McKim, 2000) (Becher, 1981, 1994) (Sparks, 2005) (Talja, Savolainen, & Maula, 2004). There are vast differences in the way researchers organise their work groups and their collaborations, the way they search for information, where they publish and how they communicate (formally and informally). These differences affect the way individual disciplines will respond to the messages given to them by their institutions about repositories.

Information seeking strategies differ greatly between disciplines. In interview, Chemists said they generally tend to scan the contents pages of certain journals sent to them (both electronically and as paper copies). When asked about directed searches, almost without exception they stated SciFinder was their main search tool:

⁴ Information obtained in discussion with ASSDA on 27 September 2006

SciFinder really revolutionised the way we work with the literature. When I have an idea I like to test it out and work out what has been done in an area. I do a keyword, or author or a substructure search. – Chemistry

This tool does not search institutional (or any other) repositories. It is a “single source for scientific information in journals and patent literature from around the world” according to the home page.⁵ This information-seeking behaviour is problematic for the argument that placing pre or post prints in a repository will increase the visibility of the work. The community with whom they wish to communicate is searching for their work elsewhere.

Computer Scientists, on the other hand, make extensive use of Google as a searching tool. This means that any research placed in a repository will be located during a search. However, it is already common practice in computer science for authors to place copies of all their work onto their own web page. The computer scientists interviewed said they searched for an author’s name and went directly to their website. This gave them the added benefit of seeing what other (and possibly more recent) work that author had done. Again, there is little incentive to deposit:

I hit the web first – web pages of most academics have pretty near to full record...I look up a particular person to see what they are up to. Looking from people’s point of view is better than looking at individual articles. – Computer Science

In computer science a lot of people put their papers online. - Computer Science

In computer science we can go to author’s website. - Computer Science

Of the three groups interviewed, Sociologists are the most likely to respond to the ‘increased visibility’ argument. True to previous descriptions of members of the sociology community, (Becher, 1981) the information seeking behaviours of the Sociologists varied greatly. The following two examples are a small sample:

I read about three books a week. I’m still a book person ...I buy books out of my own personal budget – Sociology

In my area hard copy journals are obscure. The type of journals I use usually involves me going to the National Library on weekends. – Sociology

The Sociologists interviewed reflected the observation that the growth of the literature in the humanities is unstructured, and that “new developments are based upon a ‘random raiding of the entire archive of the literature’”. (Price quoted in (Crane, 1972), p 94) This haphazard method of approaching the literature allows the researcher to experience serendipitous discoveries.

⁵ <http://www.cas.org/products/scifindr/index.html>

I am a great believer in non-systematic searches. I follow footnotes, references in articles and leads given by people I know. I rely on personal networks – Sociology

When encouraging academics to use repositories, the message will need to be tailored to individual disciplines. The information seeking behaviours of that group of people will have a direct impact on their likely uptake of repositories. The 'increased visibility' argument will only be appropriate for those disciplines currently using search methods that will harvest items in repositories. It is prudent here to turn our attention to the repositories themselves and compare different types of repositories and their appeal.

Subject-based versus institutional repositories

The exceptional success of the arXiv repository is often used as an example for the 'increased visibility' argument, but this section will argue that there are flaws in comparing arXiv to institutional repositories. ArXiv is widely recognised in high-energy physics and some mathematical fields as an essential research tool, and pre-print deposit in the repository is expected by the community. This is a continuation of a long history of communication using preprints, observed in 1970. "Preprint distribution is most common in physics...this suggests that preprint distribution may be part of the culture of physics, not to be explained entirely in terms of research technology and the organisation of research groups." (Hagstrom, 1970, p104)

ArXiv is successful because physics is "a small community of people who work in harmony with each other and who know each other's reputations". (Taubes, 1993) Because this system automates what was already a 'preprint culture', there are fewer problems with the acceptance of a computerised preprint database as a medium, for scholarly communication. (Walsh & Bayma, 1996) One reason arXiv is so successful is it has become intricately linked with the information seeking behaviours of the researchers who use it, and this is predominately because it is a subject-based repository rather than an institutional one.

The availability of subject-based repositories for certain disciplines is given as a reason for individuals not using their institutional repository. In one particular study, the mathematician, engineer and high energy physicist used arXiv, the molecular biologist used PubMedCentral, the microbiologist used GeneBank, and the computer scientist used an un-identified disciplinary repository. (Davis & Connolly, 2007) What an institution is hoping to gain from the deposit of academic output into its repository often works counter to the communication needs of the individuals working at that institution. This fact has not been lost on academics:

I am hesitant to contribute to institute oriented databases ... there is a complete reorganisation of the Department or College every 1.5 years so the name of the school, environment etc changes. It is impossible to find my work in a hierarchical home page. - Computer Science

Australia is extremely parochial. Now because of the Australian Digital Thesis [project] which no-one in the US has looked at, our students are cheated on international interest in their research. – Sociology

I don't know what benefit [an institutional repository] is for me, it sounds like more work to do it. We already fill in DEST form every time we write a

paper. ...I wonder what incentive there is apart from counting articles. -
Chemistry

It is this conflict between what is beneficial to an institution and what is beneficial to the academic is what lies at the heart of the difficulty with trying to use institutional repositories as a means to a widespread uptake of open access.

Institutional needs versus academic needs

There are several conceptual models that can help frame the discussion of institutional versus academic needs. The concept that science is a commodity that can be controlled and manipulated for political goals is not new. In 1984, Whitley pointed out that, "Science Policy' has become both an area of research and a set of administrative practices as the modern sciences have developed into a major, and expensive social institution which requires 'steering' and monitoring by state agencies who are assisted by a variety of research groups and units."(Whitley, 1984, p2)

In modern academic life, particularly in Australia, directives originate in government, and are carried out by university administrators. "Goals are set by the administrative hierarchy in much industrial research but work processes are, usually, decided by scientists on the basis of their training" (Whitley, 1984, p18) The difficulty that researchers face is they often have a greater loyalty to their research community than they do to their institution. "When asked about which community they associated more strongly with, all faculty described an international community of researchers working in a narrow discipline. Given the choice of associating one's work with an institution or a research community, all chose the research community." (Davis & Connolly, 2007)

Despite the observation that, "external status tends to be more important than immediate employment status for many scientists and, indeed, often determines it in the public sciences." (Whitley, 1984, p16), practitioners are having to adjust the way they would naturally work to fit the administrative requirements of the institution in which they are based:

I'm much more interested in writing books...I have to write articles too – it's the way you get ahead. To me it's a waste of time. The average article is read by very few people. – Sociology

We tend to salami slice our publications because of the assessment problem. We are tending to publish thinner papers than we would if we published at our leisure. – Chemistry

This is particularly pronounced for Computer Scientists who publish peer-reviewed papers at conferences. While they also publish in journals, this is more for archival purposes than for communicating findings. Unfortunately, administrators at the institutions I conducted by interviews at do not seem to recognise this and are asking the researchers to increase their journal publication. This creates a conflict between how the researchers wish to interact with their community, and how they need to fulfil their work obligations:

They want me to put more in core computer science journals. I'm not sure how highly regarded BioMed Science journals are. They are not computer science journals so its not as highly regarded. - Computer Science

[Publishing] counts for performance and promotion etc. ... My promotion committee feedback is you should try more journal publication. - Computer Science

It's the way your work is perceived. If you are published at conferences it carries a lot more weight [in your community]. – Computer Science

We typically don't go for national conferences...for quality reasons, we want to be internationally known. We get criticised for not supporting national conferences. - Computer Science

Some Chemistry interviewees expressed doubt as to whether having material in a repository would be of any benefit to them as researchers, given their communities:

I think it's probably a waste of time in my field. If people are looking for my research they will probably find it through an online journal. It is unlikely they will look to see if my university would have it. Mostly people in my field use PubMed and ISI. My research community is more independent of institutions in that sense. – Chemistry

[An institutional repository] doesn't give me an advantage. All colleagues in the same fields as I do have access to searching tools and copies of work through the library. It wouldn't project me any further than I do now. – Chemistry

I think all of these things [repositories] are not taken seriously – not by colleagues overseas. It will never be an alternative. – Chemistry

In Australia a large percentage of academics are employed in contract positions rather than tenure positions, and certainly early career researchers tend to be mobile. This again works against the concept of putting research outputs into an institutionally based repository. Unfortunately there appears to be little recognition of this situation on behalf of the administrators and policy makers. Given this lack of consideration of how scholarly fields adopt and shape technology, the risk is that,

resources [are] committed to projects that are not self-sustainable, that wither, and that do not effectively improve the scientific communication system of the field. The consequences may not only be sub-optimal use of financial resources, but also wasted effort on the part of individual researchers, and even data languishing in marginal, decaying, and dead systems and formats. (Kling & McKim, 1999, p1307)

This brings the discussion to the implementation of the Research Quality Framework (RQF) in Australia, and whether it too runs the risk of not improving scientific communication.

The Research Quality Framework (RQF)

This paper has attempted to demonstrate the difficulties in relying on institutional repositories as a means for a large-scale increase in depositing papers for open access by looking at disciplinary differences and the conflict between the needs and

behaviours of academic community and the needs of the institutions. The remainder of the paper will describe the upcoming RQF in Australia and demonstrate that despite appearing at first glance to support the concept of increasing accessibility of scholarly outputs, the logistics of the reporting process will work counter to this goal.

The Federal Government has recently introduced the RQF for the allocation of research funds, replacing the metrics system used since 1995. (The Council for the Humanities Arts and Social Sciences, 2005) The RQF will cover all publicly funded research conducted in Australia by Australia's universities and publicly funded research agencies. Once the RQF is implemented in 2008, "funding allocated to institutions on the basis of the RQF should take the form of block grants for which institutions have discretion to determine their internal distribution." (The Expert Advisory Group for the RQF, 2005b, p9)

Each institution will determine their own 'research grouping', which may reflect the departments, but could also reflect different cross-disciplinary projects. These groupings will provide an 'evidence portfolio' with a 'context statement' detailing the type, composition and focus of the research grouping, the four 'best' outputs of each of the eligible researchers, a full list of research outputs produced in the six year production period, and statements of early impact. (The Expert Advisory Group for the RQF, 2005a, p7 with detail p20). It is intended that these outputs are deposited and made available to the assessors through a repository.

Why the RQF works against the natural research behaviour of academics

These new reporting requirements are likely to affect the way researchers conduct their work. Several interviewees indicated that they already 'play the game' with the current system, and this is likely to continue under the new regime:

[Your publishing rate] obviously has implications if you want an ARC grant. You need a minimum of 30 pages in the last 5 years. – Chemistry

I am guessing that most successful grant receivers average about 6 papers a year. - Chemistry

What drives me to publish is requirements for getting grants. – Chemistry

Others expressed frustration with the process they currently have to follow:

My research is textual – not interviews, but I will be interviewing people because of the demands of [the ARC grant]. How can you fit a model alien to the actual needs of your research? - Sociology

I'm not a person for publishing everything. I think there is too much emphasis with grants needing publishing and without grants you can't do the research. – Chemistry

[I publish for a] track record to get grants. It's a major reason. I would publish less if it was not the case or would wait to publish in a bigger paper. – Computer Science

People don't read anymore – grants are about getting another totally useless publication out. I have lost the desire to be associated with that sort of process. - Sociology

There is nothing to indicate that things will improve under the RQF, and in some cases they may deteriorate. The UK Research Assessment Exercise (RAE) offers some clues as to how the RQF may affect the behaviour of academics in Australia. There is an argument that rather than merely being a measure of output, quantifying systems such as these end up directing the output. "It is important to recognise that the RAE does not just measure but also determines publishing behaviour in universities. Institutions and their authors behave in ways that they believe will maximise their RAE scores." (Pinfield, 2004, p308)

This argument has empirical support. Australian academics have been required to submit evidence of their research output (publications) to qualify for research funding from 1993. In the period after 1993 the publication output of universities has jumped dramatically. This is a double-edged sword, as the largest increase has been the publication of articles in journals allocated to the bottom two quartiles. This situation is easily explained, in Australia the relevant criteria is publication in a refereed journal, the quality of the journal is not important. (Butler, 2003)

A practical problem with the proposed RQF is the sheer volume of material each assessment panel will be expected to look at. The reality is the assessors won't be reading and assessing each paper on its merits, so decisions will be made on 'soft' criteria, such as their familiarity with the person or their work, whether they know the journal (or its impact factor) and whether they have read the abstract.

Impact factors are a flawed measure. They are heavily influenced by subject field, document type and journal size, numbers of citations and research level, shifting fashions and publication policy as well as quality. (Steele, Butler, & Kingsley, 2006) They are also only applicable to those journals listed in Thomson ISI index – a very small proportion of the whole number of journals, as they supposedly represent the 'core' journals in a field.

Australian journals are very badly represented in these listings, meaning a likely result of the RQF will be a shift to publishing in ISI journals. This would represent a situation where academics are not publishing in the journals they would like to publish to communicate with their colleagues, rather their choices would be determined by those policy decision makers who have given them an arbitrary publication goal. This represents a further gulf between what is the natural behaviour of the academics and their communities and what is being asked of them to comply with their institutional needs.

The OA mirage

The RQF will have substantial administrative implications for universities reporting their outputs. The development of the RQF has occurred in parallel (and as a tangent to) the Accessibility Framework, which is intended to improve access to research information, outputs and infrastructure. (Australian Government Department of Education Science and Training, 2007) Many of the projects funded through the Accessibility Framework are establishing and linking electronic digital repositories. The recommendation for the RQF is to create a management system which "should be designed to work with the development of research repositories and standardisation of data acquisition, whilst also recognising that research repository

and reporting systems in the sector are evolving.” (Australian Government Department of Education Science and Training, 2006, p25)

At first glance, creating a system which effectively mandates the development and use of repositories is a positive step towards opening up access to Australian research, however there are pragmatic issues which will work against the Federal Government’s own stated goal of increasing the accessibility of Australian research. While a large percentage of publishers permit researchers to deposit either a pre- or a post print of their work into a repository or onto their own website (SHERPA RoMEO, 2007), it is a breach of copyright agreements to use the publisher’s pdf.

Many researchers are either unaware of, or choose to ignore, this copyright restriction. Of those economists who self-archive, about 10% have posted the publisher-prepared pdf. (Bergstrom & Lavaty, 2007) In the social sciences, self-archiving rates for journals that do not permit archiving is sometimes higher than that for those that do. (Antelman, 2006) The Sociologists I spoke to were generally unaware of copyright rules.

Copyright - I’m ignorant of it. If want to reprint I suppose it’s OK. If I didn’t officially have permission, I’d do it anyway. So far it hasn’t stopped anything. – Sociology

Copyright – I have a pretty vague understanding. The system protects me from people exploiting me and people photocopying excessively. I don’t understand the nitty gritty. - Sociology

In the computer sciences it is common practice to place copies of work onto a personal website. While some individuals took great care not to contravene their copyright agreements, many simply place the publisher’s pdf up on their sites in flagrant disregard for them.

We can put one up on our home page (I heard that). The pdf I use is sometimes home grown and sometimes the publisher’s version... I haven’t asked permission [to put pdfs on my site] but I have had no problems. – Computer Science

I guess most publishers of work retain copyright over material. All the stuff on the web probably contravenes the lettering of copyright...Publishers aren’t bothered about you putting up papers on website as long as that’s all. – Computer Science

The publisher’s pdf is preferred simply because it has the imprimatur of the journal. “Without the contextual branding of a journal or pagination, such a document is not, according to the norms of most disciplines, citable.” (Antelman, 2006, p87) The researcher’s trust in the legitimacy of the work is central to the use of a report. (Kling & McKim, 2000) Post-prints, regardless of whether they are the final version or not, do not have the same level of trust. "97% of respondents saw an archived copy of the publisher's final PDF as an acceptable substitute for the journal, but this fell to 39% for a post print and only 9% for a pre print" (Ware, 2006, p228)

This is the hub of the problem. For the same reasons that individual researchers prefer to deposit and see the publisher’s version of the work, panel assessors will

also require this version. The only solution is to place the publisher's version into the repository and making it a 'dark' item, where it is closed access except to those with a password.

A likely outcome of the RQF implementation is that researchers (or their administrators) will deposit the publisher's version of their chosen four publications into their institutional repository and nothing else. It is extremely unlikely that researchers will deposit their work a second time, as the post print version. This does not encourage academics to use the repository as a permanent record of their work, it works against it.

The timing of the implementation of the RQF is marred by uncertainty. There will be a federal election in Australia before the end of January 2008. If the Federal Opposition wins government they have stated that they will not continue with the RQF, but replace it with a new Research Quality Assurance System. (Illing, 2007)

Conclusion

Australia is approaching the issue of open access in a somewhat haphazard way. While some institutions have mandated deposit into repositories, the funding agencies have simply suggested this. The upcoming RQF has the potential to move Australia closer to a greater uptake of repository use. But the RQF alone will not provide the open access solution, as the reporting requirements will need a closed access version of the submitted work. One benefit of the RQF will be that every institution in the country will have a repository, so the opportunity to self-deposit will be available to every researcher. This is the opportunity that institutions will need to recognise and grasp. By considering the work practices and needs of each discipline, institutions can prepare an awareness program with an appropriate 'sales pitch' for each group, offering benefits and assistance and allaying concerns and fears to these groups to encourage them to self-deposit. Let's not let this opportunity slip away.

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