

# Chapter Five

## The Open Access Advantage for Researchers – Reflections on Experience and Challenges

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### Introduction

In considering the Open Access (OA) advantage for researchers, the perspective that I am adopting is that of a university, one that developed a positive view about the advantages of Open Access from an institutional point of view over ten years ago. That university is the Queensland University of Technology (QUT), in Australia. It pioneered OA as a preferred practice in one of Australia's fastest-growing universities in terms of research profile.

In reviewing the way that OA has developed, it is interesting also to consider the context, particularly the way that OA as a practice has gradually found expression in public policy. Sometimes public policy imperatives can have a challenging and retarding impact on OA advantages, as in the case of nationally developed research assessment and reward regimes which support conventional journal title hierarchies based on imperfect metrics such as journal impact factors.

By 2014, QUT had developed considerable practical evidence about improved recognition and impact as a consequence for researchers of adopting OA. This paper considers those consequences as well as some areas of institutional and sector wide activity where new leadership and innovation is likely to result in even greater rewards for those whose outputs are "in the open"

### The QUT story

#### *The initial idea*

One of the challenges, sadly even today, is the

problem of definition. The OA lexicon is full of confusables, perhaps the prime example of which is that OA can only be achieved through action by OA publishers, attracting an article processing (input) fee. A rich source on such confusables is to be found in the Global Open Access List, (GOAL, 2015), where there are numerous postings on the distinction between green (author initiated) and gold (publisher initiated) forms, as well as the different economic models of gold OA. (This is further discussed later in this paper under the heading "Green or Gold?"). So to go back to basics, and to retrace what Queensland University of Technology actually did, the definition describing OA that most clearly fits the initial action is that it is concerned with research outputs as found in published journal articles in the traditional subscription literature. Writing in the Times Higher Educational Supplement, in November 2009, Zoe Corbyn stated:

Open Access is simply, the idea that research articles should be freely, immediately and permanently available online to anyone, rather than locked away in subscription journals as many currently are (Corbyn, 2009).

The push at my own institution began in 2003, and it is interesting to note that, by then, the worldwide discussion of the possibility of faster dissemination of research was more than ten years old. As we considered the main drivers for introducing an OA approach we reviewed three influences. These were firstly, that the tech-

nology that made it possible to imagine immediate and universal access had now been in place for some years; secondly, that the economic distortions of the scholarly publishing business (in the case of Australia made worse by exchange rate problems for the Australian currency), had been widely discussed and documented; and thirdly, that researcher motivation aligns well with the quest for recognition and/or impact which is enhanced by being more widely visible.

The institution's first steps in developing the approach were cautious. It is fair to say that the technology and economic imperatives together were front of mind, and that some of the evidence of research advantage developed later. With hindsight, the policy designers and implementers may have more strongly argued the research advantage, but it is also the case that the evidence had still to develop. As part of managing risk, it was a fundamental tenet of the approach that OA would be provided and developed only for the "giveaway literature", that is the scholarly output for which authors and referees get no monetary return.

### ***The institutional journey***

In late 2003 the University embarked on its OA journey. To do this it first developed policy which required approval through the University's governance mechanisms, particularly the University Academic Board. Simultaneously the implementation, including choices of technology and areas of responsibility and funding, had to be considered. The University had one advantage in this, which was that the policy proposals were crafted and advocated by the divisional organisation which contained the library, which had responsibility for the implementation.

At the core of university policy (from its inception onwards), has been the following statement:

*Material which represents the total publicly available research and scholarly output of the University is to be located in the University's digital or "E print" repository, subject to the exclusions noted. In this way it contributes to a growing international corpus of*

*refereed and other research literature available on Open Access, a process occurring in universities worldwide." (Queensland University of Technology, 2013).*

From the beginning, the focus was on the high quality research output, in other words refereed research articles and conference papers. The policy as it evolved mandated the inclusion of these in the institutional repository together with theses at the post peer review stage. Additionally the institutional repository may receive submitted manuscripts with corrigenda added, unrefereed research literature, books and book chapters, creative research works, datasets and their descriptions.

Importantly the policy also laid out from the beginning, provision for excluding or exempting materials from its effect, specifically those the subject of commercial and confidence agreements or which in other ways contain confidential material not suitable for published exposure. It is important to understand that the main intent of the policy is to place into the institutional repository material which is already placed into public view in the more restricted world of traditional subscription journals.

For some years the statement of the policy was to couple availability with the time of publication rather than acceptance, though in practical implementation of the policy, deposit on news of acceptance has been widely practiced and encouraged, including within Faculty practice. The QUT policy also specifies that requests for embargoes of more than 12 months should be referred to the Deputy Vice Chancellor (Technology Information and Learning Support). This is one area where there has been a significant development of complexity as OA has become a tenet of public policy in various jurisdictions, and the publishing world has responded with a variety of proposed embargo periods applying to the provision of OA.

A significant part of the institutional journey has been to develop a university wide Intellectual Property (IP) policy which reflects an institutional

commitment to openness, as well as the other important provisions that a properly framed IP policy should address, including clarity about the relationship between institution and its staff and students on the ownership of IP, and the necessary protections to allow, in appropriate circumstances, for commercialisation. The development of these policies is often a fraught and complex process, and QUT's inclusive approach has been a strong and effective one, allowing the crafting of policy addressing the full spectrum of requirements.

### ***Refinement of the approach – the motivation of researchers***

Over a period of more than ten years, the implementing team has been able to develop tools to attract researchers to the sense and logic of self-archiving behaviour. This had its roots in an early and inspired technique, which was to provide the institution, and the world, with statistics on the top 50 authors, and top 50 papers, in terms of download traffic over given intervals. It did not take long for these real-time statistics to provide the basis for some interesting and enriching feedback to researchers, not to mention some friendly competitive rivalry.

These tools have been refined so as to provide information on downloader location, and to allow not only authors but research centres and administrators to be aware of these *prima facie* indicators of interest and impact. Furthermore, as widely available tools measuring research impact in the journal literature, such as Scopus and Web of Science, have been complemented by the emergence of measures such as those provided through altmetrics, the repository has been able to provide correlations of these as shown in Figure 1.

As the metadata generated by the institutional repository can be harvested in the open, discoverability properties in the big search engines become important. There is nothing more gratifying to a researcher than to return a first

page result from a very large number of hits, (perhaps over one million), from a simple search on Google or similar search engine.

### **Correlations between bibliometric indicators and availability in the open**

As the institutional repository grew and practice matured alongside the availability of an increasing array of research metrics, one of the most interesting and gratifying results for the institution has been the demonstrable increase in citation impact that seems to accompany the availability of the research articles in the open. There are many examples where a researcher observes increased citation impact associated with the comprehensive uploading of full text copies of published articles. Conversely researchers with less consistent use of the repository (and here it should be mentioned that whether there is a mandate in place or not, universities are not known as places of coercion), show a less consistent increase in their citation impact. Figure 3 shows this effect in the case of a researcher in the area of environmental health.

### **Observed benefits**

So, in recent times, researchers within the University have reported not only greater visibility through the institutional repository, but also satisfaction with the impact on bibliometrics in the literature. They also report new contacts and readers who generally come from environments outside those which conventionally have access to the subscription journal literature reporting their research. From these contacts new opportunities to consult, and thus, to have an impact within an industry or government arena, have arisen.

Furthermore, at least one faculty has reported that new research students, (i.e. higher degree research students), have been attracted to the faculty by being able to find reports on faculty research "in the open", and have accordingly gone on to enrol at the University, to mutual benefit.

Figure 1: Downloads and bibliometrics (Cochrane, 2014)

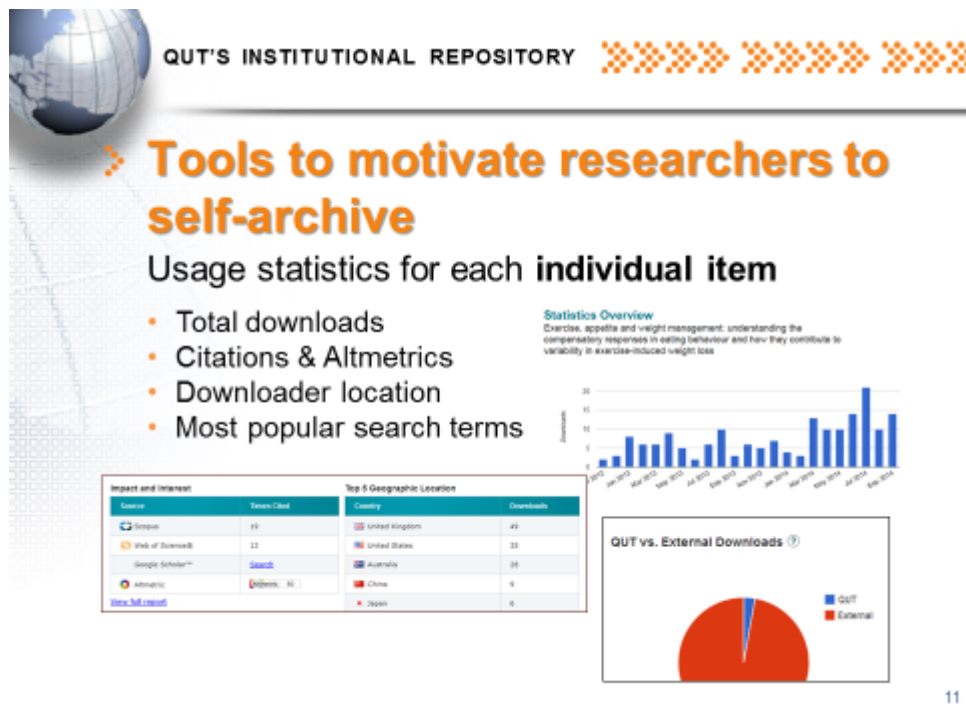
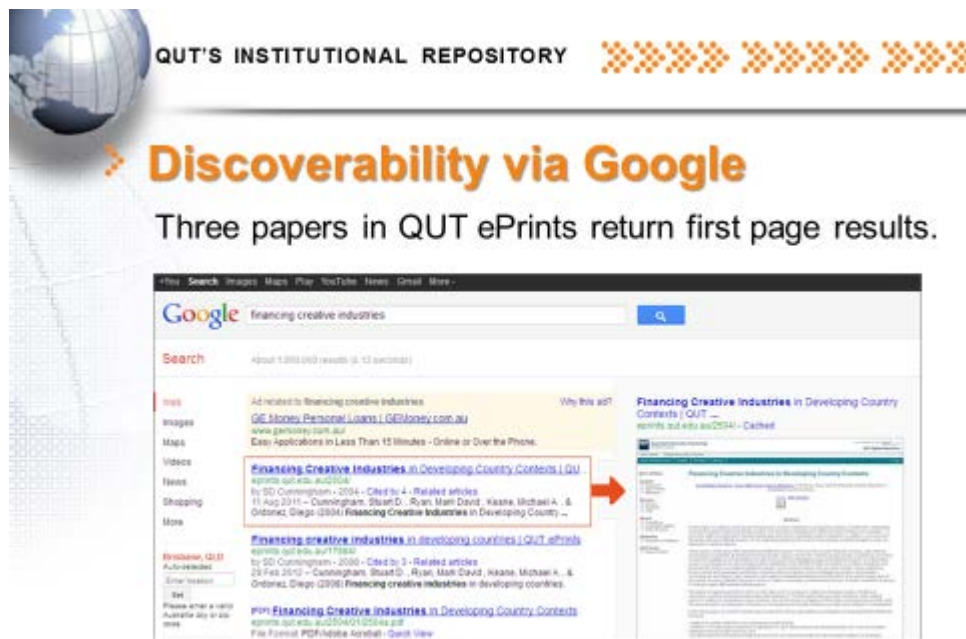
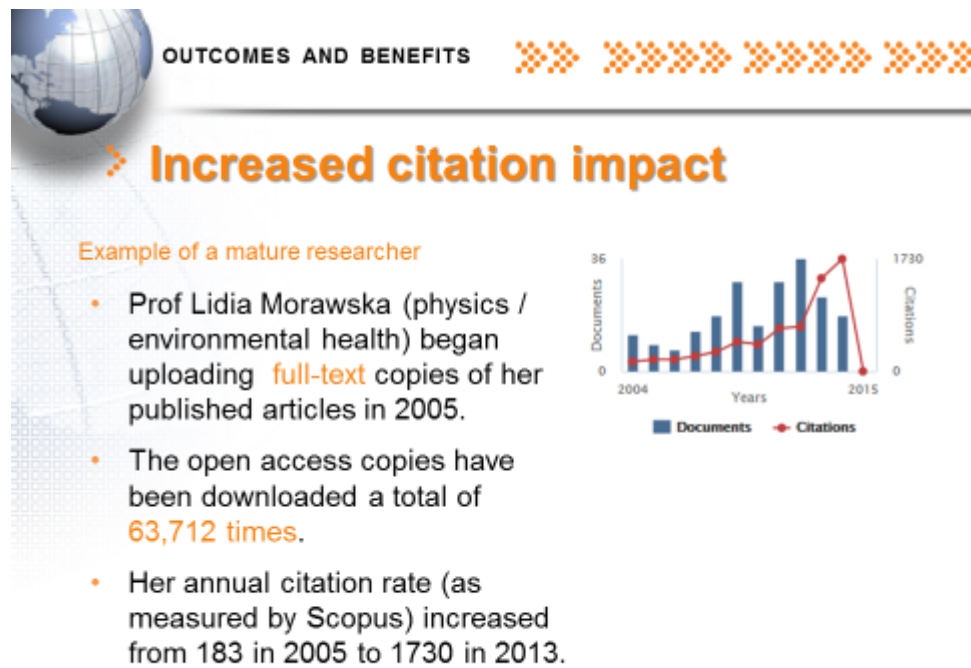


Figure 2: Discoverability via Search Engines (Cochrane 2014)



A search for information on financing creative industries returns over 1.8 million hits.

Figure 3: Correlations between download incidence and citation rates (Cochrane, 2014)



15

### Beyond the institution – some Open Access issues worldwide

This description turns now from the experience of one university which has been an early mover in this field, to some more general observations about the advantages of OA, breaking through some of the limitations of format to which it has so far applied, and some topical issues developing in 2014/15.

#### The Open Access advantage

The phrase, “the Open Access advantage”, has been in use in the literature of OA for some years. Essentially advantages can be traced from at least six perspectives.

- from the point of view of *fundors*, whether government or private research foundations, the greater visibility of the outcomes of research that has been funded by them is an immediate and obvious advantage. The Wellcome Trust articulated this over a decade ago, citing in particular the need to bring the benefits of medical research to professionals working in areas of the world without access to published research outputs in the subscription (toll-gated) journal literature;

- from the point of view of *institutions* the possibility of increasing the profile and impact of the research carried out at that institution brings with it clear advantage;
- from the point of view of *researchers* themselves, as described above, the value of increases in the visibility of their work, and impact on the metrics that matter to them in their careers, are clear;
- from the point of view of *communities*, particularly those that might benefit from work carried out in research institutions that have hitherto had more obstacles in gaining access to it, the benefit is clear;
- from the point of view of *government*, and as a principle of public policy, it can be seen that public funding of research deploying as it does taxation revenue, deserves the immediate and public accessibility of research findings once they have been quality certified through the peer review processes associated with publication;
- and finally, from the point of view of *disciplines*, it can be argued that new techniques in dissemination can have an enliv-

ening effect, – and this argument is further pursued in relation to monographs in the humanities and social sciences, below.

### **Green or gold?**

Anyone familiar with OA debates will be aware of the often described “two roads” to OA. Because there is significant confusion, and to some degree mischief, generated by misunderstanding these, it is worth reviewing them here.

The green road to OA involves initiation at the level of the author, either as an independent party, or as activated by them within an institutional setting. It involves the act of “self-archiving”, and in its optimum form involves lodging a copy of the manuscript in an institutional or discipline-based repository at the time of acceptance for publication. As it has grown, and as publishers have become more inclined to act to preserve an advantage of exclusive exposure, the notion that its availability in the open can be subject to a period of embargo has become more common, and the proposed periods extended. A compromise position in “green” practice has evolved, in which a requested embargo period may be observed while at the same time providing a requester who has come across the article (in a reference in the open) to use a so-called “request a copy” button so that they may be sent the full text of the article in advance of the end of its embargo period.

A key point about the green road is that it is a practice that has commenced and coexisted with the subscription journal literature. In effect, it has no influence on the actual process and techniques of publishing, nor so far, any reported impact on subscriptions.

The gold road to OA involves initiation by the publisher. It is the publisher that acts to make the work available in the open. There are a range of economic and business models for this. Quite commonly a publisher may be an organisation large enough to provide its material in the open as part of its overall mission, and there is no individual cost associated with each output. An example of this is the World Bank. The most often

cited model however, and one which is frequently confused as being the only way of providing the gold road is one where the business model depends on input revenue in the form of article processing charges, (“APCs”). Some very well-known large-scale gold journals have developed on this basis, such as the Public Library of Science, (PLOS).

Any conversation or debate about OA must be clear about not only the two green and gold paths, but also the varieties of the gold path in particular.

### **The case of the monograph**

As some institutions and individuals developed stronger OA practices over a period, it was found crucial to distinguish between the giveaway and the non-giveaway research literature. Accordingly, in the case of QUT, it was decided that any longer form of scholarly publishing which is traditionally sold with the possibility of royalty to the author (and here it is emphasised that this is possibility rather than actuality in many cases), would be excluded from the scope of the policy.

But over an extended period certain kinds of scholarship (which have a stronger relationship with longer form publishing as a way of giving expression to the research work in their fields, particularly the humanities), have experienced decline. A particularly pernicious aspect of this has been the decline of publishing of good research because of the decreasing likelihood that publishers could earn an income from such publishing. Indeed in some jurisdictions there has been pressure from some publishers to seek government support to continue older models of publishing.

It is important, in fact critical, to understand that using the word “publishing” is insufficient to understand and analyse what possibilities are available for the provision of OA. A more granular approach is required. The fact is that long form publishing in the humanities often represents economically exactly the same deal as publishing

an article in science – i.e. it is absolutely a give-away process on the part of the author. However a key difference is that publishers often add significant value through the work of assigned editors.

In this context new business models have developed with exciting prospects. The reason for the excitement is that not only do they offer the achievement of OA for certain categories of monograph, but also the business model in its early phases indicates that some humanities scholarship may be published which was previously locked out because of the economic logjam in scholarly monograph publishing. Knowledge Unlatched is perhaps the best-known example in the English-speaking world of this development and OA advocates are watching its development as a gold model based on new forms of cooperation between the academy and publishing houses with great interest (Knowledge Unlatched, 2015).

### **Contemporary issues**

As well as new possibilities for the dissemination of scholarship in the open based on these unprecedented forms of collaboration (i.e. the Knowledge Unlatched example), there are significant and accelerating developments affecting the way OA is growing and is provided. These include developments in public policy mandating both research assessment and OA; complex policy changes by publishers (a recent example from Elsevier in April 2015 is a case in point), and fresh perspectives from young researchers. Finally international perspectives have become more widely understood, particularly from developing economies with research and innovation aspirations which are challenged by the economic structure of scholarly publishing, based as it is, in Western publishing houses.

As government develops more definite policy on OA it may be necessary to support and advise those with the responsibility of thinking how government policy will be implemented. Experience has already shown that this is likely to involve assisting with the understanding of OA as

having a green form as well as a gold form, identifying and seeking support for the notion of the institutional repository as an important element of institutional profiling, providing advice on how research assessment regimes might be implemented in future, including ways in which OA can support understanding of impact, (as well as potentially improving quality as measured by traditional bibliometrics), and engaging in active and continuing dialogue with government about the increasingly multichannel ways in which research can find an audience beyond its traditional scholarly base.

New developments demand different and imaginative thinking in terms of new business relationships in scholarly communication. It is incumbent on those responsible, for example directors of libraries in universities, to think about the business model introduced by initiatives such as Knowledge Unlatched in terms of a willingness to think outside traditional approaches to acquisitions budgets. Certainly many university libraries have experimented with e-presses and e-publishing, but there may be a tendency by administrators to regard these as a small-scale cottage industry style innovation rather than a significant and permanent shift in the way libraries invest to support scholarly communication. It is also important to understand that publishing is not a monolith, as mentioned before, and to identify *scholarly* publishers who are willing to innovate with new models.

As research funders have moved to mandate OA as a principle in optimising the reach of taxpayer funded research, so too we have seen vigorous publisher responses including a desire to move in to help manage processes, to change embargo practices to steer the OA policy options towards gold, to delay deposit times for articles, and to change policy in a complex setting with sometimes astonishing rapidity.

In the face of these publisher responses, it is imperative for institutions to think clearly about the role and function of institutional repositories. They should pursue the imperative of seeing that

articles are deposited when they are accepted for publication, configure and implement the request-a-copy procedure, and respond in a thoughtful way to new policy developments, such as those mandating similar (OA) approaches to data. They should contribute to and support further thinking about the exploitation of research in new ways, particularly re-use.

Such thinking necessarily involves deciding on positions about copyright licensing. As world-wide conversations about open content licensing, particularly Creative Commons develop, it is essential that universities consider the policy options, decide on preferred advice for their own research communities, establish the necessary expertise to advise, and above all devise an appropriately comprehensive institutional IP policy covering all of the aspirations of the University including the optimum access to the full text of its research outputs.

Finally, recent trends have included a greater engagement by young researchers, including undergraduates, in the issues involved, as well as understanding how citizens may simply demand greater access to research than they have traditionally had.

One of the most dramatic divides is that between universities and research institutions in nations with developed economies, and those in emerging, dynamically growing economies. Erin McKiernan, a US trained neuroscientist living and working in Mexico has developed a powerful articulation of the issues involved. Challenged in recent months by a publisher who queried her statement about a lack of access to research outputs published in the traditional toll-gated literature she responded to the question – *Who does*

*not have access?* – forcefully, as follows. In her open letter to the President of the Council of Scientific Society Presidents she stated that those lacking access include:

- citizens whose tax dollars pay for research;
- patients who want to research their own medical condition;
- educators who would like to incorporate the latest scientific discoveries into their curricula; and
- scientists at institutions who cannot afford journal subscriptions (McKiernan 2014).

## Conclusion

For many of its advocates OA has had too long a history of piecemeal and fragmented implementation. But in the last three to five years the principles have found support at an increasing number of institutions, and significantly, at government policy levels. Powerful commercial interests are of course threatened, as is the case with any traditional business model which meets new disruptions arising from the Internet. It requires skill and tenacity together with clear-headed thinking for research communities collectively to seek and implement what we all deserve, a world in which research outputs are available and accessible universally, as soon as they have been accepted as warranting promulgation and publication (i.e. quality certified), and further for those outputs to be the basis for dynamic re-use and further research as the world demands greater productivity from its research sector in meeting the great challenges of coming years in the solving of problems, both globally and locally.

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