

# Viewpoint

## *Smiler with a knife?*



*“Ther saugh I first the derk ymaginyng  
Of felon ye, and al the encompassyng  
The Cruel Ire, reed as any gleede;  
The pykepurs, and eek the pale Drede;  
The smyler with the knyf undre the cloke”*  
Geoffrey Chaucer, *The Knight’s Tale*

RCUK (Research Councils UK) has recently published its position<sup>1</sup> on the dissemination of and access to UK research outputs. It is an exemplar of muddled thinking and obfuscation, and many of us in the publishing business — in both the commercial and not-for-profit sectors — see it for what it is: a thinly-veiled attack on the publishing industry as a whole.

“Oh well,” I can hear you say. “She is a publisher, so she would say that.” So let’s take a closer look and see how RCUK’s position actually puts at risk the very system they say is so important.

RCUK’s position is founded on four fundamental principles. The first of these states *‘Ideas and knowledge derived from publicly-funded research must be made available and accessible for public use, interrogation, and scrutiny, as widely, rapidly and effectively as practical.’*

Well, so far, so uncontroversial. Indeed the Biochemical Society’s flagship journal, the *Biochemical Journal*, has for years made the PDFs of its accepted articles available free online the same day they are accepted for publication. However, the final definitive versions of the articles, containing the

value that we add as publishers, are only available to subscribers for the first 6 months after publication. Thereafter, articles are freely available via the Journal back archive (which is also accessible via PubMedCentral).

However, the *Biochemical Journal* publishes 24 issues per year in a fairly fast-moving field of research and in 6 months has published more articles than many other less-frequent publications. No single mandated embargo period will fit all journals and those in slower-moving or smaller fields — or different fields altogether, e.g. archaeology, may be much at risk. Maximizing access must be achieved in ways that will not undermine the journals or the societies whose publishing surpluses, ‘the science dividend’, are used to support the science base. The societies and their publishers are the best judges of this.

Indeed, the National Institutes for Health (NIH) in the USA has addressed this concern by delaying, for up to 12 months after publication, the point at which deposited material becomes freely accessible. NIH carried out an extensive consultation with society — and other — publishers before arriving at this decision, and even the Wellcome Foundation, which has not consulted with publishers as a whole, recognizes the need for some sort of embargo, albeit only 6 months.

RCUK should also respect the wishes of some publishers to impose an embargo of up to a year before public deposit.

Many, if not most, publishers already make their back archives free after 12 months and most allow some form of self-archiving, although the detailed provisions with regard to the version which may be deposited, and where and when, varies from publisher to publisher. Many publishers already voluntarily deposit their content in PubMedCentral and it is clear that a system of free access is already happening to deliver science to the taxpayer in a very cost-effective manner.

### What is RCUK saying?

Not content with advocacy in order to advance its agenda, and in the absence of any evidence about the effects or long-term financial implications of such a policy, RCUK has opted to mandate deposit for those of you who hold their grants. So what are they mandating, when are they mandating it and where?

### What and where?

*‘Where research is funded by the Research Councils and undertaken by researchers with access to an open-access e-print repository (institutional or subject based), Councils will make it a condition*

by Rhonda Oliver  
(MD, Portland Press  
Limited)

*for all grants awarded from 1 October 2005 that a copy of all resultant published journal articles or conference proceedings (but not necessarily the underlying data) should be deposited in/or accessible through that repository, subject to copyright and licensing arrangements. Such repositories should be OAI-PMH<sup>2</sup> compliant...’.*

RCUK ‘believes’ it would in general be preferable for published material to be deposited in an institutional e-print repository, where such exists.

Initially, however, the choice of whether to deposit their published material in institutional or subject-based e-print repositories will be left up to authors, but individual Councils will review their policies in the light of developments.

In the understatement of the year, RCUK acknowledge that the development and use of e-print repositories will ‘impose some costs’. The Joint Information Systems Committee (JISC) has already stated that the funding available to it ‘is not sufficient to allow all institutions to establish and maintain repositories... or to establish a coherent network of institutional repositories, as recommended in the [Select Committee’s]<sup>3</sup> report...’. JISC also state that ‘...Significant additional funding will be required from government for a sustainable initiative...’. The Government has made it clear in its response to the Select Committee that no new money will be forthcoming.

### **The version problem**

When RCUK stipulate ‘published journal articles’, it is not entirely clear which version of the article they mean.

NIH has stated that authors

should deposit the final accepted version of their manuscript, but this is not necessarily the final, value-added, definitive version.

Even in disciplines, such as physics, where e-print archives have been around for a long time, the majority of authors want the final, definitive version of their article published in a peer-reviewed journal with the highest impact.

RCUK recognize that version control is an issue and they state that there must be ‘an absolute distinction... between articles not yet peer-reviewed (pre-prints) and those that have (post-prints) — and also between different pre-print versions’.

However, there are currently no agreed semantic standards relating to version control. ‘Post-print’ may not necessarily mean what RCUK might intend it to mean. At one level, it merely means after print — but all post-print versions are not equally acceptable.

The Association of Learned and Professional Society Publishers (ALPSP) have helpfully started work with the US standards organization, NISO, to set up a working group with the aim of establishing a naming convention and accepted standards for self-archiving, but this working group have yet to report.

In the meantime, the increasing availability of variant versions of authors’ work in repositories — and elsewhere — should be a major cause for concern. Google Scholar enables a searcher to find multiple versions of an article, with no clear indication of the status of each version or its relationship to the final, definitive publisher version.

One daft suggestion is that learned societies could help develop

a ‘kite mark’ to indicate document integrity and authenticity. Well hey! Wake up RCUK! This is already supplied by publishers in spades, it is called journal BRAND!

Ensuring the long-term preservation of data, on the other hand, is something that everyone would welcome. The British Library is already working with publishers in the UK, and elsewhere, to discover the best way of implementing legal deposit of electronic journals. This will no doubt be a costly exercise, but should ensure the fourth fundamental principle that ‘*The outputs from current and future research must be preserved and remain accessible not only for the next few years but for future generations.*’

However, it is hard to reconcile the RCUK position on the establishment of institutional e-print repositories with its third fundamental principle, namely that ‘*the models and mechanisms for publication and access to research results must be both efficient and cost effective in the use of public funds.*’

What possible justification can there be in spending public funds on the establishment of repositories (whether subject or institutional) of non-definitive versions of articles? Why is an institutional repository in every UK university a better cost-value proposition than a subject repository?

Surely, it would be a much better use of public funds to increase support for the British Library to facilitate its work on long-term digital preservation, particularly when RCUK goes on to state with breathtaking insouciance that ‘it should not be presumed that every e-print repository through which published material is made available in

the short or medium term should also take up itself the responsibility for long-term preservation' ... 'efficient'? 'cost-effective'? Have I missed something?

## When?

*'...Deposit should take place at the earliest opportunity, wherever possible at or around the time of publication, in accordance with copyright and licensing arrangements'.*

Publishers add real value and what we do is important:

- provision of fair, thorough and fast peer-review
- development of costly web-based online submissions and peer-review systems
- support for editorial boards;
  - financial, e.g. £225 000 per annum for the *Biochemical Journal* (meetings, travel and accommodation, honoraria, and consumables)
  - administrative, e.g. manuscript-tracking systems.
- deliver recognizable, searchable content
  - free abstracts, development of search and discovery tools, e.g. CrossRef, establish standards and methodologies for digital preservation
- provide a recognizable 'brand', implying quality and integrity, e.g. reputation and reliability
- commitment to long-term digital preservation.

For learned societies, this value is recouped in surpluses that flow back into science and for the Biochemical Society this amounts to ~£1 million/annum of designated funds to support science [made up from income from Portland Press and investments (accrued from past publishing

activities)].

In addition, all publishers add value by commissioning (often paid for) editorials, reviews and commentaries (which give context to research articles). They all devote considerable time and money to ensuring maximum visibility of their journal content and, as a result of this considerable investment, publishers are understandably less than enthusiastic about making their 'value-added' versions freely available in open-access repositories immediately 'at or around publication'.

## Pay-to-publish

RCUK will ensure that applicants are allowed, subject to justification of cost-effectiveness, to include in the costings of their projects the predicted costs of any publication in 'author pays' journals. Such charges will be one of the elements of Full Economic Costs.

RCUK acknowledge that the adoption of an 'author pays' publication model is likely to lead to some shifts in costs, although it is extremely coy about the long-term financial implications and completely silent as to how 'justification of cost-effectiveness' will be measured!

RCUK admit that the costs to research-led universities and institutions could prove significant, but sees no need to set up a fund to which researchers could apply to meet any author charges.

Research<sup>4</sup> currently being carried out by ALPSP [in conjunction with the American Association for the Advancement of Science, (AAAS), and HighWire Press] suggests that 41% of existing open-access journals do not cover their costs.

To operate viably, journals must not only cover their costs, but must make enough profit to cover overheads and fund future developments.

Published estimates of the per-article cost of publication (including overheads and minimal profit) range from \$2250 to \$4375<sup>5</sup> and this will depend on the rejection rate, degree of editorial value added and subject area. These costs will be concentrated on research-intensive organizations and their funders, while industry will get a free ride. It has been reported that industry represents 75% of the readership, but only 25% of authorship of scientific articles.

Organizations such as ALPSP believe that 'considerable further research and experimentation is needed before it can be stated with any certainty that open-access is a viable business model'.

In addition to whether the pay-to-publish model is financially sustainable, there are plenty of other problems with this model (see Table 1).

**Table 1 Problems with pay to publish model**

- Does not work for conference proceedings, review articles or other commissioned content
- Perversely only authors of accepted work pay
- 'Waiving fees' for scientists without access to funds is a fudge. This is bound to be an arbitrary percentage or the system would go bust!
- 'Re-routing' money from subscriptions back into the overall system is wishful thinking — in addition to the loss of the contribution from industry, other significant revenue streams would be lost (e.g. sales of off-prints and reprints)
- There would still be libraries and added complexity will increase costs
- Who will pay for maintaining the scholarly record?
- Loss of substantial 'science dividend' from learned societies
- Likely to be less money for research

The second RCUK fundamental principle asserts that “*Effective mechanisms are in place to ensure that published research outputs are subject to rigorous quality assurance, through peer-review.*”

The ALPSP/AAAS/HighWire Press study has worryingly found that 28% of open-access journals, while claiming to carry out peer-review, in fact do this entirely within the editorial office rather than using external, anonymous referees as is standard practice and custom.

Different journals have varying rejection rates with some being much higher than others (for the *Biochemical Journal* it is currently around 60%). In a pay-to-publish scenario, there is a risk that standards may be lowered in favour of revenue.

Loss of subscriptions from obligatory public deposit and open access is likely to destroy the viability of journals such as the *Biochemical Journal*. This in turn would mean the loss of the support to fund the peer-review necessary to deliver the rigorous quality control so prized by RCUK.

### Effect on publishers

Freely accessible repositories, when combined with interoperability tools, such as OAI-PMH and cross-searching technologies, such as Google Scholar, could lead to a ‘tipping point’ when the extent of freely available articles leads to widespread cancellations of the journals that supplied the articles in the first place, i.e. the parasite kills its host.

### Effect on ‘UK plc’

According to the DTI, the UK has the second largest publishing industry in Europe. The sector has a turnover of at least £18.4 billion,

with its 8000 plus companies employing around 164 000 people. Publishing companies, and STM publishers in particular, are key players in the information age, as drivers of the e-economy.

One wonders what the DTI’s take is on the impact of RCUK’s position on such major contributors to the UK’s economy. For investors, ‘perception’ is important and they do not have to have empirical evidence to undermine publishers’ share prices (with the knock-on effects on the economy, not to mention our pensions) — any more than RCUK appears to need any empirical evidence on which to base its position.

One is left to conclude that the denizens at RCUK must have bought into the view, pedalled by the open-access extremists, that all publishers are the enemy of scholarship to have taken such a potentially damaging position... damaging to the long-term maintenance of the scholarly record and damaging to UK plc.

### Effect on learned societies: ‘Thou shalt not kill but needst not strive officiously to keep alive?’

RCUK graciously acknowledge that learned societies are key members of the research community and say they will discuss with them ways in which they can adapt to and exploit new models of publication.

While it is good news that RCUK intend to consult with learned societies to assess the impact on them of its proposed policy — actually listening to them for a change would be good!

It should also respect the wishes of some publishers to vary their

embargo period (up to 12 months before public deposit).

RCUK should postpone the introduction of any mandate to authors until some understanding of the consequences has been reached.

It is highly irresponsible for the organization responsible for ‘supporting and promoting the activities of a research base that is vibrant, productive and sustainable...and increasing the contribution it makes to the benefit of the UK’s society and economy’ to mandate such far-reaching changes without any analysis of the costs or long-term implications.

The *Biochemical Journal* is about to celebrate its 100th birthday in 2006. I hope you will join us in celebrating a century of rigorous quality-assured, efficient, and extremely cost-effective research outputs. If RCUK get their own way, will it still be around for the next 100 years? Your guess is as good as mine.

*The views expressed herein are solely those of the author, so if you do not agree with them please save your wrath for her and do not get cross at the Biochemical Society.*

### References and URLs

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4. Variations on Open Access <http://www.alp.org/openacc.htm>
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