

## Britain aims for broad open access

But critics claim plan seeks to protect publishers' interests.

Richard Van Noorden

19 June 2012

For years, countries have been edging towards open access for research, with some funding agencies requiring that researchers make their papers publicly available within a set period after publication. A report commissioned by the UK government recommends a more radical step: making all papers open access from the start, with authors paying publishers up-front to make their work free to read.

The shift towards this 'gold' form of open access will create short-term financial burdens for research funders, the report acknowledges, but the economic and cultural benefits far outweigh the risks. Not everyone is convinced, however: research-intensive universities say they are concerned that the report plays down potentially cheaper ways to move to open access, in favour of sustaining publishers' profits.

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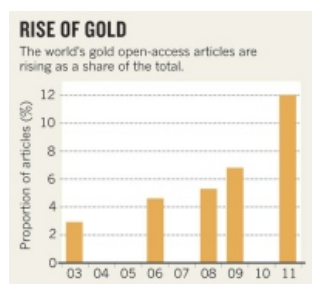
"Momentum for open access is already under way, and it's important for the United Kingdom to embrace that change, to accelerate it, and to manage it," says Janet Finch, a sociologist at the University of Manchester, UK, who chaired the panel behind the report, which was released on 19 June. It is expected to set the national agenda for open access, and influence other countries to follow Britain's lead.

"The ultimate goal is to have a system where the full costs of research publication are met in advance," says Martin Hall, another member of the panel and vice-chancellor of the University of Salford in Manchester. Globally, the number of gold articles is growing by about 30% each year, aided by the rise of journals such as *PLoS ONE*. But they still make up a minority of the world's output — comprising about 12% of research articles indexed in Elsevier's Scopus database in 2011, according to preliminary estimates by Mikael Laakso and Bo-Christer Björk at the Hanken School of Economics in Helsinki (see 'Rise of gold'). UK researchers tend to publish in higher-impact selective journals, so only 5% of their articles are gold open access, according to data collected by Yassine Gargouri, a informatician at the University of Quebec in Montreal, Canada (see 'Open access in the UK').

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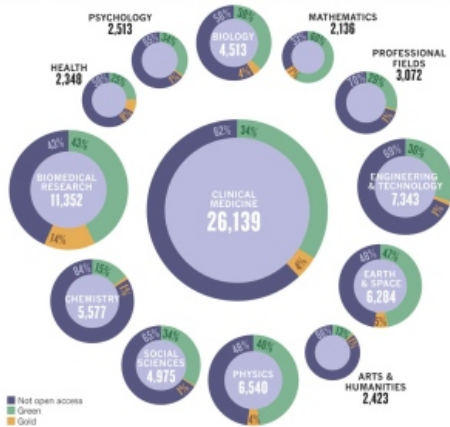
As that proportion rises, the report notes, authors' open-access costs will grow — but university libraries will still have to subscribe to most of the journals that currently line their shelves. Subscription costs will fall substantially only when most research articles are freely available. During the transition period, gold and subscription models will exist side by side, potentially increasing the overall costs of access. The report also recommends subsidising subscription licences for health and business users to give them better access. Overall, the panel estimates that these transitional costs will amount to roughly £50 million–60 million (US\$78 million–94 million) per year, on top of the country's existing annual spending of about £175 million to publish and access research. If the costs were to be met by research funders, they would total about 1% of Britain's annual science budget.

The report does not recommend a figure for the cost of a gold article, but notes that the UK Wellcome Trust, a major biomedical research funder, last year paid an average of £1,422 per paper on behalf of the scientists it supports. Costs could be greater in more selective journals — *Nature's* editor-in-chief Philip Campbell says that the journal would have to charge more than £6,500 for gold open-access articles.

Universities and funders will have to work out how to transform their payment systems under a gold regime, with each institution likely to set up a central publishing fund supported by a percentage of every research grant. Whatever the solution, academics will be much more aware of the costs of publishing. This could, in turn, modify their behaviour, with researchers submitting papers to the journals they can afford to publish in, or trying to publish fewer, broader articles.

#### OPEN ACCESS IN THE UK

Of the 86,215 research papers published by UK academics in 2010 (as indexed by Web of Science), around 9% were gold open access, whereby authors pay for open publication. Another 25% were green open access — published behind a pay wall and then put in a free repository. However, the proportion varied between disciplines.



Source: Thomson Reuters/Y. Gargouri

#### Going green

An alternative open-access model is already thriving around the world, and particularly in the United Kingdom. Under green open access, research funders can require that peer-reviewed papers be made openly accessible in online repositories, without the author paying a fee. This usually happens some months after publication, a time period that allows publishers to sell access to the paper for long enough to turn a profit. Researchers can also post pre-publication versions of their papers in institutional repositories.

Paul Ayris, director of library services at University College London, says that scaling up green publishing would be a cheaper short-term route to expanding open access, together with a nationwide scheme to pay for researchers' access to subscription journals en masse. "The gold route does nothing about publisher profits, which many commentators feel are already too high," he says.

Open-access advocate Stevan Harnad, a cognitive scientist at the University of Montreal, is even more critical of the report's overt support for gold access.

"Some publishers seem to be successfully persuading some politicians that what is at issue is protecting their current revenue streams and modus operandi from the threat of green open access," he says.

But the Finch group says that it was expressly asked to find sustainable ways to grow open access, which it says only a gold route can provide. "It's not in the interests of UK scholarship to make recommendations which undermine the sustainability of the publishing industry," says Philip Sykes, another Finch group member and a librarian at the University of Liverpool. Universities can use their collective lobbying power to drive down both subscription and gold costs, he adds. Gold open access will eventually result in lower incomes for publishers anyway, Finch members note, by making the research-publishing market more transparent and competitive.

That's particularly worrying for learned societies, because they rely on subscription publishing for much of their income. The London-based Institute of Physics, for example, earns some £10 million each year — more than 60% of its total income — from publishing, which it spends on activities such as science education and outreach, says its president Peter Knight. "The mood of the community is to get costs down — but if scientific publishing only just covered its costs, an awful lot of our programmes would be in jeopardy," he says.

What matters now is how the agencies that support UK scientists require them to make their research freely available. Existing open-access mandates have been spottily enforced. The Wellcome Trust has only 55% compliance, although it will soon make grant funding conditional on open-access publishing. A similar condition from the US National Institutes of Health currently has 75% compliance.

In March, Research Councils UK (the umbrella body for the United Kingdom's seven government-funded grant agencies) released a draft policy that suggested it, too, would toughen up on open access. The Higher Education Funding Council for England, another major research funder, could go the same way. But the devil will be in the detail, says Hall. "If research funders go soft on open access, the Finch report will be of only academic interest."

Most uncertain of all is how rapidly the United Kingdom's efforts might drive other countries towards open access. British scientists produce 6% of the research papers published worldwide each year, and the country could find itself paying to make its research free for others' benefit. But there is growing momentum internationally. The European Commission hopes to push for an open-access mandate in its 2014–20 research-funding programme Horizon 2020, and the newly formed Global Research

Council — a forum for funding-agency heads worldwide (see *Nature* **485**, 427; 2012) — has open access on its agenda for its second meeting next year in Berlin. As the report concludes, “measures to promote open access need to be ... international in scope if they are to achieve their full potential”.

*Nature* **486**, 302–303 (21 June 2012) doi:10.1038/486302a

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Duncan Rowe • 2013-04-09 07:03 AM

It's interesting that gun control laws have a positive correlation with gun violence, and CO2 has a positive correlation with temperature increase, over the past 30 years. I think gun factory stock holders didn't cheer on Obama because he was pro-gun rights. They cheered him on because of the massive sales produced out of fear that Obama will "take meaningful action". Their fears seem warranted.



dent adrian • 2012-07-06 11:34 AM

So, given that we know where the CO2 is coming from and where it's going, what do we know about human involvement in the heating up of our world? Are we guilty? What human activity is THE most responsible? What can we do to save civilization and all life on earth without having to destroy civilization to survive? Am I stating the question well?

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Ian Walker · 2012-06-25 02:46 AM

"making all papers open access from the start, with authors paying publishers up-front to make their work free to read"

ye gods!

A fundamentally broken business model. Nothing less than misuse of taxpayer funds. By all means publish on paper &#8211 just let the publisher profit by advertising. And that is it!

Taxpayer funded research and other scholarly works predominantly funded by public monies should be accessible for free. And there are obvious modes via which this can be realised. Libraries. Government publishers.

Why is this even debated?

The real issue is the format &#8211 should such works even be in 'paper' format. Perhaps the issue is that not only is the traditional model of publication of scholarly works fundamentally broken, that the actual production of such works is now outmoded. And the real ghost in the machine is that once the corpus of knowledge is properly represented and stored, who gets to run the AI over it?

Who gets credit for the machine generated new stuff, garnered by mining the old stuff?



Isra Wahid · 2012-06-21 02:52 AM

The ideal is a no fee publication submission, with an open access published papers. We can start from the anial statement of this article, that I completely agree upon : "making all papers open access from the start, with authors paying publishers up-front to make their work free to read".



Stevan Harnad · 2012-06-19 03:04 PM

FINCH REPORT, A TROJAN HORSE, SERVES PUBLISHING INDUSTRY INTERESTS INSTEAD OF UK RESEARCH INTERESTS

1. The Finch Report is a successful case of lobbying by publishers to protect the interests of publishing at the expense of the interests of research and the public that funds research.
2. The Finch Report proposes to do precisely what the (since discredited and withdrawn) US Research Works Act (RWA) failed to do: to push "Green" OA self-archiving (by authors, and Green OA self-archiving mandates by authors' funders and institutions) off the UK policy agenda as inadequate and ineffective and, to boot, likely to destroy both publishing and peer review &#8212 and to replace them instead with a vague, slow evolution toward "Gold" OA publishing, at the publishers' pace and price.
3. The result would be very little OA, very slowly, and at a high Gold OA price (an extra 50-60 million pounds per year), taken out of already scarce UK research funds, instead of the rapid and cost-free OA growth vouchsafed by Green OA mandates from funders and universities.
4. Both the resulting loss in UK's Green OA mandate momentum and the expenditure of further funds to pay pre-emptively for Gold OA would be a major historic (and economic) set-back for the UK, which has until now been the worldwide leader in OA. The UK would, if the Finch Report were heeded, be left behind by the EU (which has mandated Green OA for all research it funds) and the US (which has a Bill in Congress to do the same &#8212 the same Bill that the recently withdrawn RWA Bill tried to counter).
5. The UK already has 40% Green OA (twice as much as the rest of the world) compared to 4% Gold OA (less than the

rest of the world, because it costs extra money and Green OA provides OA at no extra cost). Rather than heeding the Finch Report, which has so obviously fallen victim to the publishing lobby, the UK should shore up and extend its cost-free Green OA funder and institutional mandates to make them more effective and mutually reinforcing, so that UK Green OA can grow quickly to 100%.

6. Publishers will adapt. In the internet era, the research publishing tail should not be permitted to wag the research dog, at the expense of the access, usage, applications, impact and progress of the research in which the UK tax-payer has invested so heavily, in increasingly hard economic times. The benefits to research, researchers, their institutions, the vast R&D industry, and the tax-paying public of cost-free Green Open Access to publicly funded research vastly outweigh the evolutionary pressure natural, desirable and healthy to adapt to the internet era that mandated Green OA will exert on the publishing industry.

If the UK %Gold is currently lower than the current %Gold globally [as measured by Laasko/Bjork's latest estimates -- we have not yet checked that directly] then the likely explanation is that where cost-free Green is mandated, there is less demand for costly Gold.

That makes sense: it shows why paying for Gold, pre-emptively, now, at today's asking prices, while still locked into subscriptions, instead of just providing cost-free Green is a foolish strategy --and it makes the recent recommendations of the Finch report even more counter-productive. The time to pay for Gold is when global Green has made subscriptions unsustainable, forced publishing to downsize to peer review alone, and released the subscription cancellation funds to pay for it on the Gold OA model. Then, and only then, will Gold OA's time have come.

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Stevan Harnad • 2012-06-19 02:59 PM

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