

Follow-Up Comments for BIS Select Committee on Open Access

([video](#) - [transcript](#))

Stevan Harnad

[School of Electronics and Computer Science](#)

University of Southampton

Highfield, Southampton

SO17 1BJ UNITED KINGDOM

The only barrier separating the UK and the rest of the world from Open Access (OA) to its refereed research journal article output in the online era is *keystrokes*. It is important to bear this in mind in considering the following comments. Once global policy has seen to it that those keystrokes are universally and systematically executed, not only OA itself, with all its resulting benefits for research productivity and progress, but all the other desiderata sought – the end of Green OA embargoes, a transition to Gold OA publishing at a fair and sustainable price, CC-BY, text-mining, open data – will all follow as a natural matter of course.

But not if the keystroke barrier is not first surmounted, decisively and globally.

It is in the interests of surmounting this keystroke barrier to global OA that this summary strongly supports the institutional-repository immediate-deposit mandate of [HEFCE/REF](#) proposal to complement and reinforce the RCUK OA mandate.

Embargoes: [About 60%](#) of subscription journals (including most of the top journals in most fields) affirm their authors' right to provide immediate, un-embargoed Green Open Access (OA) to the peer-reviewed final draft of their articles by self-archiving them in their institutional repositories immediately upon acceptance for publication as well as making them OA immediately. The remaining 40% of journals impose an embargo of 6-12-24+ months on Green OA.

The optimal solution is for research funders and institutions to mandate that authors deposit the peer-reviewed final draft of all their articles in their institutional repositories immediately upon acceptance for publication, set access to the 60% of deposits that are un-embargoed as Open Access immediately, and set access to the other 40% as Closed Access during the embargo.

This means that for the 40% of the immediate-deposits that are embargoed, users web-wide will still have immediate access to the bibliographic metadata (author, title, journal, abstract) during the embargo, and individual users can request an individual copy for research purposes by clicking the repository's "[request copy](#) [Button](#)"; the author receives an immediate email and can then authorize emailing the requested reprint with one click.

This compromise is not OA but "Almost-OA" and it can tide over user needs during any allowable embargo period – *as long as all the papers are systematically deposited immediately, not just the un-embargoed ones.*

Regardless of whether the author publishes in a subscription journal or a Gold OA journal, regardless of whether the OA is immediate or embargoed, regardless of how long an OA embargo is allowed, OA mandates should require immediate deposit of all papers upon acceptance for publication.

This ensures that everything is deposited, as clocked by the date of the journal acceptance letter, that 60% is immediately Green OA, and that the remaining 40% can have "Almost-OA" during the embargo.

This is a practical compromise that has already been tested and [demonstrated to be effective](#). To insist instead on mandating immediate or almost-immediate Green OA (i.e., no or almost no embargo at all), needlessly risks non-compliance by authors, who will not give up their right to publish in their journal of choice simply because the journal embargoes Green OA. The right compromise is to mandate immediate deposit, and to tolerate embargoes for the time being. Once mandatory immediate deposit with 60% immediate-OA and 40% Almost-OA becomes universal, embargoes will shrink and disappear as a natural matter of course, under global pressure from the growth and benefits of OA. But *everything must be immediately deposited first*.

An immediate institutional-deposit mandate, as proposed by [HEFCE/REF](#), will also recruit institutions to monitor and ensure timely compliance with the HEFCE mandate in order to be eligible for REF, thereby remedying the current defect in the RCUK OA mandate, which has compliance mechanisms for Gold OA compliance, but none for Green OA compliance.

Access Rights vs. Re-Use Rights (CC-BY): Online access to peer-reviewed research, free to all users, not just subscribers, is urgently needed in all fields of scholarly and scientific research. There exists no field of research publication in which access-denial is not a problem: for *users*, in terms of lost access to findings, for *authors*, in terms of lost user uptake and usage of their findings, and for the *tax-paying public* who fund the research, there is the lost return on their investment, in terms of lost research uptake, usage, applications, impact, productivity and progress.

Apart from the urgent and universal need for *access* to research findings, there are also further potential benefits from being able to *re-use* the *texts* of the articles in various ways: to text-mine and data-mine them by machine as well as to re-publish them in various new re-mixes or “[mashups](#).”

However, this further need for re-use rights, over and above online-access rights is neither urgent nor universal. In some fields, such as crystallography, certain journal-article re-use rights would indeed be very useful today; but in most fields the need for journal-article re-use rights is not pressing. Indeed many authors may not even want to allow it -- especially in the humanities, where preserving text-integrity is particularly important, but also in other scholarly and scientific fields where authors are resistant to allowing re-mix and re-publication rights on their verbatim texts:

Note that all users that can access them are of course already free to re-use the *findings* (i.e., the content of the texts) of published articles (as long as author credit is provided through citation). But *free online access already allows the re-use of findings*. Text re-mixes and re-publication are another matter.

Moreover, there is an important negative interaction between re-use rights and publisher embargoes on Green OA: If Green OA did not just mean online-access rights, but also re-use and re-publication rights (e.g., CC-BY), then publishers would understandably be much more inclined to embargo Green OA: For if they authorized immediate re-publication rights, their own opportunity to recover their investment could be undercut by rival publishers free-riding on their content immediately upon publication! So subscription publisher embargoes on Green OA (now only 40%) would multiply and lengthen if re-use rights, over and above free online access, were mandated too.

The optimal OA policy is hence to mandate only free online access, and leave it up to the publisher and the author what further re-use rights they may wish to grant.

Once mandatory Green OA prevails universally, all this will change, and authors will be able to grant whatever rights they wish. But pre-emptive insistence on re-use rights today will only serve to further retard and constrain basic access-rights and provoke author resistance and noncompliance.

Author Choice and Journal Quality: One of the most fundamental rights of scholars and scientists is the right to choose whether, when and where to publish their findings. It is a great (and unnecessary) strategic mistake – and will only generate author resistance and policy failure – to try to force scientists and scholars to choose journals based on the journal's economic model (subscription or Gold), licensing policy (CC-BY) or embargo length instead of the journal's quality and suitability.

Journals earn quality track-records on the basis of the level of the peer-review standards that they maintain. Researchers – as well as their institutions and funders – want to meet the highest quality standards they can. And users rely on them to judge what work is of sufficient quality to risk investing their scarce time and resources into reading, using, and trying to apply and build upon. Unreliable and invalid research can retard productivity and progress just as surely as access-denial can.

The only requirement of an OA mandate should be *immediate deposit of the final draft, with as short an embargo on OA as feasible, and as many re-use rights as the author can and wishes to allow. No restriction on journal choice, which should be based on journal quality-standards alone.*

Gold OA and CC-BY should be left as options for authors to choose if and when they wish. They will grow naturally of their own accord once mandatory immediate-deposit becomes universal.

Pre-Emptive Unilateral Double-Payment by the UK: The UK publishes about 6% of the world's annual research output. The majority of journals today are subscription journals. Hence the UK pays for about 6% of worldwide annual institutional journal subscriptions. Gold OA fees are additional expenditure, over and above what the UK spends on annual subscriptions, because institutional Gold OA fees are for providing OA to UK *output* (6%) whereas institutional subscriptions are for buying in access to *incoming* articles from other institutions, both in the UK (6%) – and the rest of the world (94%). So institutional journal subscriptions cannot be cancelled until not only UK articles but the remaining 94% of published articles are made OA.

Suppose the UK decides to pay Gold OA fees for all of its annual research output. That increases UK publication spending – already stretched to the limit today -- by 6%, to 106% of what it is today. Some of this extra UK expenditure (out of already scarce and overstretched research funds) will simply be extra payments to pure Gold OA publishers; some of it will be double-payments to hybrid subscription/Gold publishers. Both mean *double-payment* on the part of the UK (subscriptions + Gold); but hybrid Gold also means *double-dipping* on the part of hybrid Gold publishers.

Some hybrid Gold publishers have promised to give a subscription rebate proportional to their uptake of hybrid Gold. If all publishers offered hybrid Gold (as they can all do, easily and at no extra cost, in order to earn UK's unilaterally mandated Gold subsidy) and all gave full rebates on subscriptions, that would mean that *all subscribers worldwide* would receive a 6% rebate on their subscriptions, thanks to the UK's unilateral double-payment.

But for the UK, this would mean that the UK gets back in subscriptions only *6% of the 6%* that the UK has double-paid for hybrid Gold OA ($6\% \times 6\% = 0.4\%$ UK rebate), while the rest of the

world gets a rebate of 94% of the 6% that the UK (alone) has unilaterally double-paid for hybrid Gold OA ($6\% \times 94\% = 5.6\%$ rebate to the rest of the world).

In other words, unilateral UK hybrid Gold OA double-payments not only make UK output OA for the UK and the rest of the world, but, if rebated, they also subsidize the subscriptions of the rest of the world. (This is a classic "[Prisoner's Dilemma](#)," in which it is to the rest of the world's advantage to mandate cost-free Green, and at the same time cash in on the rebate from the UK's unilateral Gold mandate.)

The optimal RCUK policy is hence to leave it up to authors whether they wish to pick and pay for the Gold OA option, but on no account require or prefer Gold, and particularly in the case of hybrid Gold OA.

(If publishers instead gave the full Gold OA rebate to the subscribing institution, that would be tantamount to letting all subscribing institutions publish Gold OA at no cost – a "subscription" deal that publishers are not likely to be in a big hurry to make, because if it scaled it would leave "subscriptions" hanging from a skyhook! Even the premise that all hybrid Gold OA publishers would indeed faithfully refrain from double-dipping by giving a full rebate for the UK 6% Gold by reducing worldwide subscription costs by 6% is a very tenuous assumption.)

UK Leadership in OA: The UK was indeed the worldwide leader in OA from 2000-2012, thanks to the contributions of JISC, EPrints, and especially the [2004 Parliamentary Select Committee](#) that first recommended that UK funders and institutions mandate Green OA. RCUK followed this UK Green OA recommendation and it has since been followed by [80 funders and over 200 institutions](#) worldwide.

But this UK world leadership in OA ended in 2012 with the Finch Report and the resulting new RCUK policy of (1) restricting UK authors' journal choice, (2) downgrading Green OA, and (3) preferring and funding Gold OA and CC-BY, when what was really needed was only a (cost-free) [upgrading](#) of the RCUK *compliance monitoring and assurance* mechanism for Green OA.

Fortunately, [HEFCE/REF](#) has now proposed precisely the upgraded Green OA compliance mechanism that can once again earn back the UK's worldwide leadership role in OA:

In order to be eligible for submission for [REF 2020](#), all peer-reviewed journal articles must be deposited in the author's institutional repository *immediately upon publication (not retrospectively)*, regardless of whether they are published in a subscription journal or a Gold OA journal, regardless of whether their license is CC-BY, and regardless of whether OA to the immediate-deposit is immediate or embargoed.

Green OA Compliance Mechanism: The proposed HEFCE/REF immediate institutional-deposit mandate overcomes all the major obstacles and objections concerning author restrictions on journal choice, embargo lengths, sufficiency and disbursement of Gold OA funding, double payment, double-dipping, and (unavailable or unwanted) re-use rights:

All UK authors can publish in their journal of choice and no author is prevented from publishing for lack of Gold OA funds. Institutions are recruited to monitor and verify compliance with the immediate-deposit requirement for their own research output, ensuring that all deposits are made on or near the calendar date of acceptance for publication. Access is immediately Green OA (60%) or Almost-OA (40% during any allowable embargo period) (via the repository's request a copy Button), thereby remedying the RCUK policy's failure to

provide a mechanism for ensuring Green OA compliance.

OA Benefits: The primary benefit of OA is that it ensures that no would-be user of the research is denied access for lack of subscription access.

As has been demonstrated in study after study, in every scholarly and scientific field: [OA maximizes research downloads and citations](#), thereby maximizing research uptake, usage, applications, productivity and progress.

Gold OA Transitional Costs: The secondary benefit of OA is that it will eventually make publishing less costly. But for this to happen, *Green OA must be universally mandated first*. Pre-emptive double-payment (subscriptions plus Gold OA fees) by the UK, unilaterally, would just mean that the UK was paying even more than it is already paying for subscriptions, in order to make its own research output OA (Gold CC-BY). This is a highly counterproductive policy.

The UK should lead the way toward effectively mandated Green OA worldwide. Once Green OA is universal, institutional subscription cancellation pressure will force publishers to downsize and convert to Gold OA at a fair price, paid for out of institutional subscription cancellation windfall savings instead of double-paid, as with the unilateral pre-emptive Gold funding proposed by Finch/RCUK.

The worldwide network of Green OA repositories will take over the function of access-provision and archiving, [unbundling the management of peer review](#) to leave it as the sole remaining essential value still provided by peer-reviewed journal publishing and hence the sole remaining publishing cost. This “Fair Gold” will cost a fraction of the current price per article, reckoned as 1/Nth of the worldwide subscription revenue of a subscription journal publishing N articles per year today. Hence Fair Gold will cost an order of magnitude less than the £ 500- £ 5000 asking-price for Gold OA today. (Please see the evidence of [Swan & Houghton](#) on the Green/Gold transition and the relative cost/benefits of Green and Gold OA, unilaterally vs. universally.)

Brief notes on points that arose during the Committee Hearing:

HEFCE/REF mandate proposal: The proposed HEFCE/REF institutional immediate-deposit mandate, if adopted, will completely remedy the flaws of the Finch/RCUK policy.

Embargoes and compromise: An interim compromise is needed on the problem of publisher embargoes on Green OA: The optimal compromise is not to insist on double-paying for immediate Gold CC-BY today, preemptively, unilaterally and needlessly, with all its perverse consequences, but instead to mandate immediate deposit of all articles independently of whatever allowable Green OA embargo length is agreed upon.

Journal Prestige & Price: A journal’s “prestige” is based on its public track-record for quality. A journal’s quality depends on its peer-review standards. The higher the quality standards, the more rigorous and selective is the peer reviewing. The cost per accepted, published article of a highly selective, high-standard journal can be higher because the cost for the peer review of all the submitted and refereed articles that did not meet the journal’s

quality standard must be factored into the price of every accepted article. With post-Green Fair-Gold not only is the cost of peer review unbundled from the cost of access-provision and archiving, but peer review can be provided on a “[no fault](#)” basis, with each round of the peer-review service paid for, per paper submitted, irrespective of whether the outcome is acceptance, revision, or revision/resubmission and re-refereeing. This unbundling will redistribute the cost of the peer review service equitably, so the no-fault peer review fee (1) discourages authors from making unrealistic submissions to journals whose quality standards their work is unlikely to meet, as in the days when peer-review was paid for by subscriptions and hence cost-free to the author, and (2) discourages journals from accepting substandard articles in order to earn more peer review revenues, because their revenue is based on peer review rather than acceptance, and their reputation depends on their track-record for quality.

Publishing costs as research costs: It has been repeatedly stated (particularly by the Wellcome Trust) that “publishing costs are just a small part of research costs” (c. 1.5%), and hence that research funders should be prepared to pay them as such – in the form of Gold OA fees. This sounds fine from the standpoint of a research funder like Wellcome, which need only fund research. But, as noted above, most publication costs today are paid in the form of institutional journal subscriptions. Wellcome does not pay the institutional journal subscriptions of its grantees’ institutions: Those are paid by others, from other resources. Hence Wellcome payment of Gold OA fees (at today’s inflated asking-price, and often paid to hybrid subscription/Gold journals) is *double-payment*, but the double-payment is not by Wellcome. The UK government is ultimately paying for both journal subscriptions and RCUK Gold OA fees. Hence Wellcome’s motto that “publishing costs are just a small part of research costs” cannot be applied to UK governmental funding until UK subscription costs no longer need to be paid and peer review costs have been unbundled and offered as Gold OA at a fair price. In other words, after global Green OA has prevailed globally.

Disproportionate publication costs for research-intensive institutions and countries: When publishing costs are paid by the institutions that *provide* the research (in the form of Gold OA fees) instead of by the institutions that *consume* the research (in the form of subscription fees), more research-intensive institutions pay more than less research intensive institutions do. But, as [Houghton & Swan](#) have shown, both will still pay substantially less than they are paying today in subscriptions, because the price of post-Green Fair-Gold publishing (freed from double-payment and downsized -- by universal Green -- to peer-review costs alone) will be so much lower than the current price of subscription publishing.

The cost of institutional repositories: Most institutions in the UK, EU and US already have [institutional repositories](#) (for a variety of institutional purposes, including OA). Their start-up [costs](#) were low, and have already been invested. Their annual maintenance costs (a server and some sysadmin time) are low, and part of existing institutional network infrastructure. The cost per paper deposited in an institutional repository is virtually zero, yet this represents the institution’s contribution to globally distributed access-provision and archiving. (Even for a global central repository like Arxiv, the price per paper is [less than \\$7](#).) This is what will permit the current publication price per article – paid in the form of worldwide institutional subscriptions – to be reduced to just the price of peer review alone.

Finch on repositories: The Finch report, under the influence of publishers, suggested that Green OA is a failure in practise as well as inadequate in principle, so Finch accordingly recommended downgrading institutional repositories to the role of (1) data-archiving, (2) digital preservation, and (3) linking data to publishers’ websites. It should be evident now that this was a self-serving assessment on the part of publishers (as was Elsevier’s Alicia Wise’s plea during the BIS hearing not to have institutional repositories needlessly “duplicate” access-providing and archiving functions that publishers already perform: “Leave it to us!”). What institutional repositories need in order to successfully provide OA to journal articles is for funders and institutions to upgrade their Green OA mandates and compliance mechanisms to

ensure immediate deposit of all articles, as proposed by HEFCE/REF (see above).

Publisher deposit: Publishers, in an effort to retain control over as much of the transition to OA as possible, have proposed to deposit papers (in institution-external repositories), on behalf of their authors, on publishers' terms and timetables. *On no account should publishers be relied upon to ensure compliance with OA mandates: the mandates apply to researchers, not to publishers.* Publishers are happy to comply when they are paid for Gold. But it is not in publishers' interests to comply with Green -- nor are they required to do so. Authors are perfectly capable of doing the few keystrokes of self-archiving for themselves, at no cost. Once again, the optimal policy is HEFCE/REF's, which proposes mandating immediate-deposit, by the author, in the author's institutional repository, immediately upon publication. Institutions can then monitor and ensure timely compliance for their own institutional publication output, in their own institutional repository.

Complementary self-archiving mandates from funders and institutions: The RCUK/HEFCE/REF OA mandates can and should be complemented by institutional OA mandates, likewise requiring immediate-deposit, as well as *designating institutional immediate-deposit as the sole mechanism for submitting published articles for institutional performance review.* Belgium has provided the optimal [integrated institution/funder model](#) for this.

Patents, plagiarism: Both patents and plagiarism are red herrings, insofar as OA is concerned. OA concerns access to *published* articles. What authors wish to conceal, they do not publish, hence OA is moot. Plagiarism is possible with all published work, OA or non-OA. OA merely makes the words accessible to all users, not just subscribers. And inasmuch as copyright protects against plagiarism, it protects OA and non-OA work equally. Even CC-BY requires acknowledgement of authorship (that's what the "BY" refers to) (although in a "mash-up," the re-mix of words, even listing all authors, can be rather like crediting body-parts in a common grave); but for now, allowing CC-BY should be left entirely a matter of author choice.

Institutional vs. central repositories: All [OAI-compliant](#) repositories are interoperable, hence harvestable and hence searchable as if they were all one global archive. So it does not matter technically or functionally where articles are deposited, as long as they are deposited immediately (and made OA). But it matters a great deal strategically -- for the effectiveness of mandates, for compliance verification, and to minimize author keystrokes, effort and hence resistance and resentment -- that *mandates should require institutional deposit (and just once).* Once, deposited, the metadata can be automatically exported to or harvested by other repositories, so they can be searched at a central-repository level for a discipline, nation, or globally.

"Evidence of harm": Publishers often speak of repositories and Green OA self-archiving in terms of the presence or absence of "harm." But one must ask what "harm" means in this context: Increased access, downloads and citations overall are certainly not evidence of harm -- to research, researchers, their institutions, their funders, R&D businesses and the tax-paying public -- quite the contrary, irrespective of whether the increase usage occurs at the publisher's website or institutional repositories. Nor is it clear that if and when mandatory Green OA should eventually make subscriptions unsustainable -- inducing cost-cutting and a transition to Gold OA at a fair price and without double-payment -- that this should be counted as "harm" rather than as yet another benefit of OA -- to research, researchers, their institutions, their funders, R&D businesses and the tax-paying public -- in the natural evolution of scientific and scholarly communication with technology (bringing not just universal research access, but lower publication cost), to which the publishing industry can and must and will adapt, rather than the reverse.

Embargoes and compromise: It has to be clearly understood that embargoes on providing Open Access to the author's final draft are imposed by the publisher in order to

protect and sustain subscription revenues and the subscription model. If the objective is a transition to sustainable Gold OA at a fair price, publisher OA embargoes are not in the interests of the research community. However, as a compromise, they can be tolerated, for the time being, *as long as the HEFCE/REF immediate-deposit mandate proposal is adopted.*

Redirecting funds: It is premature to speak of “redirecting funds” from subscription payment to Gold OA payment. Journal subscriptions cannot be cancelled until the journal articles are accessible in another way. That other way is Green OA. Hence Green OA must be universally mandated first. The alternative is double-payment and double-dipping (see above).

Added value: The values added by publishers to the author’s un-refereed draft are: (1) peer-review, (2) copy-editing, (3) formatting & tagging, (4) print edition, (5) online PDF edition, (6) access-provision, (7) archiving. Once Green OA is universally mandated, (3) – (7) become obsolete. It is not clear how much copy-editing (2) is still being done or needed. So the only remaining essential post-Green function of peer-reviewed journal publishing is the service of peer review (1). This is what can be paid for as Gold OA, at a fair, sustainable post-Green price.

Hybrid gold and embargo: One of the perverse effects of the Finch report’s recommendation to require authors to pick and pay for Gold OA if a journal offers it is to encourage subscription publishers to offer hybrid Gold as an option and to adopt and lengthen Green OA embargo periods beyond the allowable limit, so as to make sure that authors must pick and pay for Gold. This is why the Green option must always be allowed and mandates must not be draconian.

Open data vs article access: It is a misunderstanding as well as a strategic mistake to conflate open data and OA. The purpose of data is to be used. In general, the one who gathered the data must be allowed fair first data-mining rights. After that, it is reasonable for the funder to require that the data be made open for re-use. But articles are not data, and authors must be allowed to decide whether or not to allow their text to be re-used. (The findings and ideas can of course always be re-used, with acknowledgement; but that is not the same thing as re-using, re-mixing or re-publishing the verbatim text itself.)

Discipline differences: There may be discipline differences in the length of OA embargo needed to sustain subscriptions, but there are no discipline differences in the need for free online access to research for all would-be users, not just those that have subscription access.

“Reasonable access”: At the hearings it was asked “what is ‘reasonable’ access”: it’s free online access to peer-reviewed research, immediately upon publication.