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Open Access 2012: achievements, further steps, and obstacles. An interview with Stevan Harnad

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Abstract: On the occasion of Open Access Week (22-28 October) I had a talk with Stevan Harnad, a pioneer and one of the world's best-known Open Access advocates, author of the *Subversive proposal* (1994-1995) which triggered the whole movement. Professor Harnad highlights achievements, further steps, and obstacles ten years after the Open Access manifesto of the Budapest Open Access Initiative.

Ten years ago, at the end of a conference promoted by the Open Society Foundation on February 2002, the *Budapest Open Access Initiative* [1] was released. It was a milestone, a starting line in the path towards Open Access (OA), i.e. immediate, toll-free/restriction-free access to peer reviewed literature. Or, in the words of the *Initiative* itself, «By “open access” to this literature we mean its free availability on the public internet, permitting any users to read, download, copy, distribute, print, search, or link the full texts of these articles [...] [later called “Gratis OA”] or use them for any other lawful purposes [...]. The only constraint on reproduction and distribution, and the only role for copyright in this domain, should be to give authors control over the integrity of their work and the right to be properly acknowledged and cited [later called “Libre OA”]».

There are two complementary strategies to achieve Open Access: open-access self-archiving, or the Green Road, and open access publishing, or the Gold Road [2]. **Green Open Access Self-archiving** means that scholars publish in any journal but, in addition, deposit the final, peer-reviewed draft of their work in open archives (“repositories”), which can either be institutional or institution-external (such as the widely used arXiv for physics: www.arxiv.org); access to the deposit may be immediate or embargoed, depending on the publisher's copyright policy [3]. **Gold Open Access publishing** already includes some prestigious brands such as PLoS, BioMedCentral, Hindawi. OA journals' increasing prestige is reflected in citations and sharing on academic social networks [4].

OA is based on the principle of knowledge as a common and scholarly communication as a “great conversation”: the more open it is to diverging voices too, the more effective it is. The logic of OA is: the results of publicly-funded research should be publicly accessible. On this basis, 335 research institutions and research funders in the world have already adopted a mandatory policy in order to ensure that their research outputs are deposited in an open archive and made free on the web, i.e. Gratis Open Access [5]. These institutions include some of the most prestigious in the world: the USA National Institutes of Health, Harvard University, CERN, MIT...

From a researcher's perspective, OA means increasing the visibility, uptake and impact of one's own work. Many studies have been carried on the advantages of OA in term of downloads and citation counts, which can vary according to the discipline, but always average higher than toll access [6]

A recent study on the percent and growth rate of OA showed that Green Open Access (21.4%) exceeds Gold Open Access (2.4%) in all but the biomedical disciplines; otherwise, overall OA growth rate is still very slow (about 1% per year) [7].

Ten years after the *Budapest Open Access Initiative*, on the occasion of Open Access Week (22-28 October), we can try to take a closer look with Stevan Harnad, professor of cognitive science, one of the world's most active OA advocates and a pioneer. Since his *Subversive proposal* [8], posted in 1994, things have changed:

the old tradition of scholarly communication met the new technology of the Internet, making possible «an unprecedented public good» (Budapest Open Access Initiative). Open Access and its logic can help maximize the sharing and dissemination of scholarly communication, fostering the process of knowledge creation. But is it actually working? Is it growing at the pace it is expected to? Let's ask professor Harnad.

What are the main OA achievements of the last ten years? And, on the other side, what went wrong?

Before I reply, let me give a context. In my view there is only one sure way to reach 100% Open Access (OA) globally, and that is for all the world's research institutions and funders to mandate Green OA self-archiving. It's important to understand why Green OA mandates are the only sure way to reach universal OA:

Green OA self-archiving is entirely in the hands of the research community, not the publishing community, it calls for no extra money, it can be mandated immediately, and mandates work, even when the publisher embargoes Green OA.

The alternatives – to wait for publishers to convert to Gold OA, to pay extra for Gold OA while publication is still being funded by subscriptions, or to try to renegotiate rights with publishers – are not only slow, costly and uncertain, but most important, they distract and sometimes even deter institutions and funders from the sure solution that is immediately within reach: to mandate Green OA.

The main achievement in the last ten years was accordingly the growth of Green OA mandates (obligatory self-archiving) by institutions and funders. And what went wrong was that the Green OA momentum slowed, largely because of distraction by what I have come to call “Gold Fever” (for Gold OA) and “Rights Rapture” (for Libre OA). The most recent and notable case of this is the Finch Report in the UK and the proposed revision of the UK Research Councils (RCUK) OA policy [9]. The Finch Report recommended downgrading Green OA self-archiving to preservation archiving and instead funding Gold OA for all UK research output (out of already scarce research funds) so that all UK research output (6% of world research output) is Gold OA within two years. The RCUK proposed revising its Green OA mandate, which had formerly required OA to be provided either via Green OA self-archiving or (where a suitable Gold OA journal and sufficient funds are available) via Gold OA: the new mandate *requires* choosing the Libre Gold OA option whenever it is available (even from a subscription publisher that offers “hybrid Gold” OA as an extra option for individual papers, if the author pays). If this new RCUK policy is implemented (rather than revised, as I hope it will be), UK authors will resist, scarce research funds will be wasted, little UK OA will result, the UK will lose its worldwide leadership in OA, and (if the rest of the world does not immediately realize that it should no longer follow the UK's example) worldwide OA will be set back yet another decade.

The solution is to drop the requirement to pay for Gold OA and instead to strengthen the compliance verification mechanisms of institutional and funder mandates to make them mutually reinforcing, by both requiring immediate, un-embargoed institutional deposit (even where OA to the deposit is embargoed) and designating institutional deposit as the sole mechanism for submitting publications for research performance assessment by both institutions and funders.

What role can funders and institutions play?

Adopt the effective, integrated Green OA mandates described above. These will recruit institutions as the natural partner in monitoring and ensuring compliance with both funder and institutional Green OA mandates. Mandating universal Green OA – and not paying pre-emptively for Gold OA -- is also the fastest and surest way to induce an [eventual transition](#) to universal Gold OA publishing at a [fair price](#), while also freeing the institutional subscription funds to pay for it [10]. That in turn is the fastest and surest way to put an end to the needless and unwanted transfer of author rights to publishers (hence to Libre OA).

And the publishers?

Responsible publishers are already cooperating, rather than trying to block the outcome that is optimal and

inevitable for research, researchers, their institutions and funders, the vast R&D industry and the public that pays for scholarly/scientific research, and for whose benefits it is conducted. The responsible publishers are the ones that publish the [60%](#) of journals that already endorse immediate, un-embargoed Green OA, and do not lobby against Green OA mandates [11]. The venal publishers will continue to lobby and embargo and try to prevent or slow the natural evolution of OA, but the Immediate-Deposit/Optional-Access Mandate ([ID/OA](#)) plus the [Button](#) moots all their efforts [12]. OA is inevitable and publishers can and will adapt.

What should a mandatory policy state?

All institutions and funders should require that the final, refereed, revised draft of *every* article (no exceptions) must be deposited in the author's institutional repository immediately upon acceptance for publication. Access to the deposit should also be made OA immediately wherever feasible (i.e., those published in the 60% of journals that are already green on immediate, un-embargoed OA) and otherwise (i.e., for the remaining of journals 40% that embargo Green OA): implement the institutional repository's automated "email-eprint-request" button, which allows individual users to request and authors to provide an eprint with one click each. This is not OA but it is "Almost-OA." Once 60% immediate-OA and 40% Almost-OA are being provided globally, the fall of the rest of the dominoes (the end of embargoes, transition to Gold OA, rights reform and Libre OA) will soon follow.

If you had to mention just one milestone, it would be...

The 2004 [UK Select Committee's](#) recommendation that UK funders and institutions should mandate Green OA (following the cue from the world's first Green OA mandate at the University of Southampton in 2003) [13].

A close second is the adoption of the ID/OA mandate, compliance verification mechanism, and [integrated institution/funder mandate](#) in Belgium thanks to the initiative of the rector of University of Liege, Professor Bernard Rentier [14].

What about the holdbacks?

Pre-emptive Gold Fever (Finch Report), premature rights rapture, institution/funder sluggishness and indirection, and researchers' digital paresis ("[Zeno's Paralysis](#)") [15].

The Finch Report and the proposed new RCUK policy would set global OA back by a decade, by requiring that UK authors pick and pay for Gold OA whenever it is offered. The only thing subscription publishers need to do in order to increase their total revenues by 6% (the UK proportion of all articles published yearly) is to continue charging subscriptions to everyone, but add a "hybrid Gold" option: If an author pays extra (anywhere from \$1000 to \$5000 or more, per article – usually 1/Nth of the journal's total yearly revenue, if the journal publishes N articles per year), they can have Gold OA (for their article only). This just means a different copyright license. It is unaffordable for most of the world, and a needless waste of research money even in the countries that foolishly decide to divert scarce research funds to paying publishers even more, while continuing to pay the subscription fees that cover the costs of publishing several times over.

The premature obsession of some OA advocates with the much harder-to-reach Libre OA (re-use rights) even before we have grasped the already-reachable Gratis OA (free online access) has also slowed OA progress. It is undeniable that there are some fields (such as crystallography in chemistry) in which research is impeded because publisher copyright contracts forbid the machine data-mining of the digital data in the articles. But there is no immediate way to get publishers to allow that, so mandating Gratis Green OA (with the ID/OA compromise) is still the fastest, surest and cheapest way to reach the outcome these fields require. Hence it is a handicap (with disastrous results, such as Finch/RCUK in the UK) when Libre advocates keep agitating for unreachable Libre Gold OA instead of first grasping Gratis Green OA. It is not just venal publishers but well-

meaning yet short-sighted researchers and OA advocates that are retarding the optimal and inevitable outcome for research.

Institutional and funder sluggishness and timidity (the latter under pressure from the publisher lobby) to lobby Green OA is also a big retardant. EnablingOpenScholarship - EOS (<http://www.openscholarship.org/>) was created by Alma Swan and Bernard Rentier to encourage and guide institutions and funders in designing, adopting and implementing effective OA policy.

But perhaps the biggest retardant is and always has been researchers' own fingers (Zeno's Paralysis) [10], for they could already have been providing OA globally, un-mandated, for the past two decades, by simply self-archiving. Historians and sociologists will have to explain this, once the optimal and inevitable is behind us.

And the advantages for scientists and science itself?

Maximized research uptake, usage, applications, impact, productivity, and progress, and eventually the efficiency and economy of Libre Gold OA (with publishing downsized to just a [no-fault peer-review service](#)) plus all the re-use rights researchers want and need [16]. (Not all fields need and want Libre OA, and in some fields subsidies can cover Gold OA publishing costs without the need of author publication fees.)

Is OA (or perhaps Gold OA) not most urgent in biomedicine?

Perhaps, since health research is a life/death matter for all of us. But that is only a fraction of all scholarly and scientific research (and scholarly and scientific research funding). So if the rest of research is worth funding and conducting, it's worth making OA, to maximize its usage, impact and progress.

Let me close by adding that in the exigencies of having to promote OA to so many different "stakeholders" (researchers, institutions, librarians, publishers, journalists, charities, governments, politicians, voters, tax-payers, teachers, students, industry), and to do so in the face of a well-funded publisher lobby defending their own interests, the most fundamental purpose of OA has sometimes been obscured: Yes, the benefits of OA in the form of public access to biomedical research information are real and important. So are the benefits of OA to the developing world; and to the fields that require digital text-mining; and to students and teachers; and to worldwide discourse and dissent; and the potential relief of shrinking library budgets; and the eventual reform of copyright law. And the slogan "public access to publicly funded research" is catchy, and plays well with politicians and voters.

But none of those corresponds to the fundamental purpose of OA, which is very simple: Research is funded, conducted, refereed and reported so that it can be accessed, used, applied and built upon by all users, but its primary intended users are researchers themselves. It is their usage that toll-access barriers are needlessly blocking in the online era. And it is for that reason, more than any other, that OA is optimal, inevitable, and already long overdue.

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