

OPEN ACCESS – LOOKING TEN YEARS BACK AND A FEW YEARS AHEAD

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I have been invited by the editor to reflect on the development of open access over the latest ten years. When writing this I am about to retire from active service at the National Library of Sweden and from my position as coordinator of the OpenAccess.se programme. The occasion makes it tempting to look back and try to draw some conclusions.

Ten years back

My own interest in the open access issue started already in the middle of the 90-ies but became stronger around 2002. There were a number of breakthroughs during just a few years. We saw the three B-declarations - Bethesda, Budapest and Berlin - and the Open Letter from Public Library of Science. Interoperability was taken to a new level with the Open Access Initiative Protocol for Metadata Harvesting. The number of open access journals grew fast and commercial players entered the field. A Swedish contribution was the Directory of Open Access Journals at Lund University which was being developed from 2002, mainly with the support of the Open Society Institute but also from the National Library of Sweden.

I was invited to write a chronicle for a Swedish research journal (Dagens forskning) in 2002. I wrote that “it is strange that universities still accept the rules of the game for the publication of scientific journals. First universities pay the salaries of their researchers as authors, reviewers and editors of these journals. No compensation is given from the publishers. Then universities via their libraries pay soaring subscription prices to get access to the same journals.” In dialogue with the editors the chronicle was given a flashy title, “The system should have perished by itself “. My analysis at the time was that the publishing system was so absurd and irrational that it had to break down soon, now that a viable alternative was being built. The PloS Open Letter had brought the discussion to a much wider audience, in mass media and in journals like Science and Nature. Somewhat later the Berlin declaration on Open Access Knowledge in the Sciences and Humanities testified to the intention of major

organizations within research in Europe to work for open access.

Too optimistic?

But the system did not break down in the years thereafter. We did not see a quick transition to an open access model. So had I got it wrong? When you are deeply involved in a process and you have realized how irrational the present system is, it is easy to underestimate the inertia of social practices and structures established during a long period of time. Science has among its basic values not to accept something new until it is solidly proven. The tight connection between the present scientific journals and the model for career advancement is a very strong conservative force. Authors don't lose any income in an open access model but they might feel they risk their careers. It is interesting to compare with the music industry. Here the free flows on the web is directly threatening the very livelihood of the creators, but still we now see a rapid transition to a new model (Spotify etc) where costs are covered in a new way and access is, if not completely free, yet immensely widened for users.

Look at the bright side

But let's look at the bright side; the glass is rather half full than half empty. Changes were not as rapid as I had expected but they have still been very substantial, especially when seen in a ten year's perspective.

Open access has moved from a fringe discussion in smaller circles of researchers, librarians and publishers to a level where the model in principle has the support from practically all major stakeholders within research; universities, research funders and to a degree also governments. In Europe the EU early took a positive interest and gradually has strengthened its support. Publishers have moved from an attitude mixing aggressive opposition and downgrading of the importance of open access to a stance where they generally take the issue seriously and in many cases actively take part in open access developments. It is hard to avoid the conclusion that the political battle is

won! It seems very unlikely that we would see a general retreat from these positions.

The developments on the ground are lagging somewhat behind but all growth figures are impressive.^{1 2 3} It is not a question whether we will get a transition to a state where the open access model dominates, but only (no small questions!) how **fast** it will come, what **means** are most effective and what **shape** it will take.

In the new strategy⁴ of the OpenAccess.se we write: "The conditions constantly improve for reaching a breakpoint in the next couple of years, when more than half of the yearly production of Swedish, publicly funded research publications will be freely available. After that everything points to an even faster development towards open access." This is not just wishful thinking. There are numerous examples of technological and social developments where you get this acceleration when passing a breakpoint.

What means?

What means are most effective? I think most people would agree that we need things like the following:

- Clear and coordinated open access policies from Higher Education Institutions (HEIs), research funders and governments,
- Reliable and well presented information to researchers and other stakeholders about open access
- An infrastructure with user-friendly and efficient services to researchers, including repositories at HEIs, national OA journals,

national search service, and data centres etc

- Economic agreements and solutions that facilitates publishing in OA journals, or at least create a "level playing field"

Should we choose between Green and Gold?

However, there is some disagreement on whether we should stress the "Gold road" or the "Green road". The strategy of the OpenAccess.se is even-handed on the issue. "The Programme shall support both publishing in open access journals and parallel publishing in open archives. For a foreseeable future these two roads will run parallel." I find this the only sensible position at the present stage. A strategy has to be based on a realistic appraisal of the facts. Open access journals are growing rapidly in numbers and in volume of articles as shown by Laakso et al.⁵ But still, according to their estimates the share of OA articles of all articles published in peer review journals in 2009 was only 7.7 %. In another article by the same group of researchers the total OA availability of articles in 2009 was studied.⁶ The total OA availability was 20.4 % of which 8.5 % was Gold and 11.9 % was Green. What more, they show very clearly how the authors preferences for Gold or Green differs widely between major subject areas. Researchers in Medicine and Biology lean heavy towards Gold whereas researchers in all other field prefer Green. These are studies with a carefully developed and well presented methodology. It is likely that the general OA share should have risen at an even quicker pace since 2009, but not that the shares of Green and Gold should have changed dramatically. This holds even though the OA journals probably have got some extra boost from the success of mega journals like PloS ONE with followers.

The only possible conclusion is that a successful open access strategy must base itself on a combination of Green and Gold. If the focus earlier was on Green the balance today should be more even, but not lean over to fast to Gold. Of course the Green road is a transitional model in the sense that it is dependent on articles first being published in traditional Toll Access journals. But it contributes to create a pressure on traditional publishers to change. Why otherwise would a publisher like Elsevier put so much energy into

¹Björk B-C, Welling P, Laakso M, Majlender P, Hedlund T, et al. (2010), Open Access to the Scientific Journal Literature: Situation 2009. PLoS ONE 5(6), www.plosone.org/article/info:doi/10.1371/journal.pone.0011273

² Laakso M, Welling P, Bukvova H, Nyman L, Björk B-C, et al. (2011), The Development of Open Access Journal Publishing from 1993 to 2009. PLoS ONE 6(6): <http://www.plosone.org/article/info:doi/10.1371/journal.pone.0020961>

³Morrison, H. Dramatic Growth of Open Access Series. The Imaginary Journal of Poetic Economics. <http://poeticeconomics.blogspot.com/2006/08/dramatic-growth-of-open-access-series.html>

⁴ Strategy for the OpenAccess.se programme 2011- 2013 http://www.kb.se/dokument/Om/projekt/open_access/2011/OA-strategi_eng_final.pdf

⁵ Laakso et al (2011), *ibid.*

⁶Björk et al (2010), *ibid.*

blocking institutional open access mandates?⁷ Let us be clear that there can be no institutional or funder OA mandates without the Green road. Finally, repositories at Higher Education Institutions already have many different functions and could certainly evolve further.

The shape of things to come

So much for the pace of changes, what about the shape? The challenge is to manage a transition to an Open Access model, with full regard to other important demands that can and should be addressed to the scholarly publication system:

- It must guarantee and stimulate a continuous increase of scientific quality
- It must be economically sustainable for authors, universities and funders
- It must be efficient and flexible for both authors and users
- It should guarantee long term access to publications (and data)

The open access movement has a strong focus on the access issue and rightly so. But now when we no longer dream about a distant goal, but rather explore the practicalities of a transition to a model for scientific communication where open access is taken for granted, we have to discuss all the other aspects of the system we would like to see.

Open access in Sweden

I will make a few comments on the way work for open access has evolved in Sweden. For a more detailed story I refer to a few earlier articles on Swedish open access developments.^{8 9}

⁷Hagerlid, J. (2012), Elsevier tries to block institutional OA mandates. Open access i Sverige. <http://openaccess.kb.se/?p=637>

⁸ Hagerlid, J. (2006), Open Access in Sweden 2002-2005, ELPUB2006. Digital Spectrum: Integrating Technology and Culture - Proceedings of the 10th International Conference on Electronic Publishing held in Bansko, Bulgaria 14-16 June 2006 / Edited by: Bob Martens, Milena Dobrova. ISBN 978-954-16-0040-5, 2006, pp. 135-144. <http://www.informatik.uni-trier.de/~ley/db/conf/elpub/elpub2006.html>

⁹ Hagerlid, J. (2011), The role of the national library as a catalyst for an open access agenda: the experience in Sweden", *Interlending & Document Supply*, Vol. 39 Iss: 2, pp.115 - 118 <http://www.emeraldinsight.com/journals.htm?issn=0264-1615&volume=39&issue=2>

The Swedish universities individually and collectively through the Association of Swedish Higher Education (SUHF) have expressed a principal support for open access, starting already in 2004 when SUHF signed the Berlin Declaration. The Swedish Research Council signed the Berlin Declaration in 2005 and adopted an OA mandate in 2009. So far five other research funders - governmental and foundations - have adopted OA mandates. Of the four governmental research funders only one, VINNOVA, has not as yet decided on an OA mandate. The situation would seem ripe for the government to adopt a national open access policy and hopefully this will come as a part of the Research bill that will be presented to the parliament in autumn 2012.

Top-down or bottom-up

This is all very good, but there is a danger that the process is too much top-down. Some researchers might feel that open access is just another bureaucratic imposition that only serves to hinder their research and make life more complicated. This kind of reaction came clearly across in a petition from 83 Swedish chemists in autumn 2010 who strongly criticized the SRC open access mandate.¹⁰

On the other hand we get reports from universities that many researchers appreciate their repositories, especially when they can see the increased impact of their own work. There are also impressive growth figures for Swedish open access journals. The number seems to have grown every time I check in DOAJ, today (8 of March 2012) it is 54.¹¹ These researchers, who are positive to open access, are not publicly visible in the same way as some of the opponents, like the chemists in the petition.

The OpenAccess.se has put a lot of energy in promoting strong open access policies at universities and research funders. Could we also find new ways to support bottom-up open access initiatives? One way would be to organize workshops for researchers active in new or potential open access journals. Another might be to find ways to connect to the growing number of science bloggers. When you blog about

¹⁰ Hagerlid, J. (2011), Vetenskapsrådet förtydligar sina open access-krav. Open access i Sverige. <http://openaccess.kb.se/?p=200>

¹¹ Directory of Open Access Journals. <http://www.doaj.org/doaj?func=findJournals&uiLanguage=en&hybrid=&query=Sweden>

your research it would be an advantage to be able to link to works that are open access.

Perhaps this is essentially a question about the way the Swedish open access movement defines itself. When we organize meetings most of the people attending are involved in repositories at universities. We see few, if any, editors of Swedish open access journals or, for that matter, Swedish researchers involved in international open access journals.

The achievements and challenges of repositories

A major achievement during these ten years is that e-publishing at universities have grown from scattered initiatives to a stable network of repositories covering practically all Higher Education Institutions and having their content harvested to the national SwePub service. Repositories from the start only held open access material but are now integrated with publication databases containing metadata for the total (in principle) research output of a given institution. Increasingly these repositories/publication databases bring several different kinds of benefits to their host institutions: visibility, profiling, impact, evaluation and reporting. I suspect that evaluation and reporting always will be highest on the agenda of university leaders and thus define institutional priorities. This makes it even more important that repository managers, libraries and researchers instead stress access, impact and visibility. If these sometimes contradictory ambitions are handled wisely, the wide role of repositories might give them a very strong position within their host institutions.

Repositories could develop in a number of directions. Should they create functions that usually characterize university presses, like quality selection and marketing, when engaging in publishing of monographs and journals? Access to research data has attracted a rising interest during the last few years. Should repositories link to research data in a systematic way and should they also host (some) research data? Can Open Educational Resources, that are constantly evolving, be handled in a meaningful way by repositories? Will we see for real a development where authors first publish in repositories but the quality selection then takes place in international research portals, overlay journals or whatever you like to call them. There seems to be no lack of exciting challenges and opportunities for repositories.



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