

Open Access Initiative – why, and are we willing to try?¹

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Abstract (Editorial)

In the very early days of the Open Access movement (the concept had, in fact, just been coined at that time) former library director at UiT Helge Salvesen held the introductory speech at a seminar called “Open Online Access to Research”, organised by the Norwegian Council for Higher Education, in Oslo, November 2003. In his speech, Salvesen describes the forms of Open Access now known as Gold OA and Green OA, emphasising the need for institutional repositories and other kinds of infrastructure to facilitate openness and transparency in research.

Introduction

Welcome to this seminar, which we have called *Open Online Access to Research*. I will go straight to the point and ask: Why do we need an Open Archive Initiative? And why does this initiative come from the library sector? And finally, why is this initiative so difficult to implement?

In my introduction to the seminar, I will ask questions, point to dilemmas, and only tentatively hint at answers. I hope that at the end of the day we will have many answers and good strategies for proceeding.

There are three obvious reasons why the open archive initiative is necessary. First, colleges and universities need to cut costs. One way of doing that is to find some way to counter the rising prices of international scientific literature, especially within the natural sciences and medicine, where prices have risen at a phenomenal rate. And providers are preparing new strategies for pushing prices even higher. The open archive initiative is a possible countermeasure. But will it work, is it sufficient, and is the research community willing to try it?

The second reason for this initiative is that universities and colleges are under increasing pressure to legitimize their activities, both to the

¹ Introductory speech at a seminar organised by the Norwegian Council for Higher Education, Oslo, Norway, November 11, 2003.

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general public and to the authorities that provide their funding. One way of achieving such legitimacy is to document and publicize the institutions' research and development activities to the outside world. One means that individual institutions can use to publish their own production is an open archive. But this is unlikely to be sufficient on its own as a legitimization and PR tool. Institutions of higher education and research have obligations to society and a duty to disseminate their production which goes beyond what is possible with an open online access system for research dissemination. Nonetheless, this initiative is a step in the right direction. But are the universities and colleges both ready for such a change and motivated to spend resources on it? Are there any incentives that might promote a commitment of this kind?

The third reason is that institutions of higher education need to develop and make available electronic teaching and learning materials for regular and flexible teaching on the internet. An open archive system for teaching purposes at each institution, in which various textbooks, compendia, and other course material are developed and placed in a pool that can be re-used and is freely accessible may be one possible solution. But even if much of this is technically possible, problems of financing and copyright issues will limit the potential. Is there a way of widening the scope of what is technically possible? Can the fact that institutions of higher education need good teaching materials help ensure easier access?

First I will say something about the dilemmas of the open archive as a countermove against the commercial players' publishing systems.

Patterns of scientific publishing

Seeing the consequences of accelerating price increases as a problem solely for the library, is at best a rather narrow view; at worst, it is a perspective which can never solve the problem of high prices for international literature. The dilemma is as much a question of systems for bestowing status and rewards within the scientific community as a technical problem of price negotiation.

The situation can be briefly summarized as follows: There is a great imbalance between academic fields in terms of access to scientific literature. Roughly speaking, literature on the natural sciences, mathematics and medicine is published in international journals, which have an annual price increase of 10–15 per cent. The humanities and social sciences are more monograph-oriented, and their journals are generally somewhat cheaper than natural science and medical journals. In recent years, this has caused a shift in the allocation of university literature budgets in favor of the hard sciences, to the detriment of the humanities and social sciences. One dilemma is therefore that we have to expect different motivations for solving the problem in different institutional departments.

The fact that libraries have prioritized electronic editions of journals has also led to a decrease in inter-library loans. This is because the

providers of digital journals, i.e., the owners of the information, limit the institutions' right to pass on the information to anybody other than those licensed to use it, i.e., faculty and students at the paying institution.

Since 1 July 2001, literature bought as digital documents is subject to VAT, while paper-based documents are exempt. This automatically gave a 24 per cent price increase for literature available in electronic form. For colleges and universities, an important issue with large economic ramifications is raised when their literature purchasing power is reduced to three-quarters of what it was by the stroke of a pen – or even a key stroke. The decision must be regarded as the result of oversight, but the *Storting* (Norwegian parliament), as the legislative and budgetary authority, has not been willing to remove the injustice.

Why is scientific literature, and journals in particular, so expensive? So far, universities and colleges have been content to regard this as a library problem and note the need for better negotiation strategies at the libraries in order to bring down prices. Something can obviously be done at the purchasing end. Libraries can, for instance, become better at coming together in national, Nordic and international consortia in order to achieve economies of scale. "Pay per view" access is another possible strategy. But such measures would still have only a marginal effect. Furthermore, the large providers keep introducing new strategies so that they can continue to milk the market as much as possible. One way, which has become increasingly common in recent years, is that libraries are given access to a publisher's journals at a package price. And in order to woo libraries and bring down the price per journal, publishers might offer their entire journal portfolio as an extra bonus, even if the libraries do not ask for it. Now we see that publishers are working on plans to charge for all the journals in the package, while still only allowing purchase of access to the entire package. Even if only one of the journals in the package is a must, you have to buy access to the whole lot.

There are two circumstances that make scientific journals a peculiar market: Since the content of the various journals is different, it is not possible to replace an expensive journal with a cheaper one, as is possible with, for instance, a detergent. Furthermore, the production side, i.e. researchers, function in such a way that it is not most interesting to publish in a cheap journal, but rather in the most prestigious ones. Everyone concerned about the future of Norwegian research insists that we must increase our efforts to publish in the leading international journals. Some journals are so prestigious that the authors even have to pay the publisher to have an article printed. Some institutions, also in Norway, have gone so far as to offer extra pay to researchers who manage to get published in the leading international journals. At the same time, being an editor, referee, or member of the editorial board of the same publications gives high status in the academic community. A natural consequence is that

this system increases the market value of the product which is being quality assured in this manner. The publisher's profit can be increased, since the value added comes at little cost to the publisher. The researchers work mostly for the honor.

In spite of the fact that the academic production and quality assurance are very cheap, the product is expensive. The publisher, whether a university or a commercial publishing house, can see that a high-status international scientific journal is a product with considerable commercial value in the knowledge society. The subscription price can be pushed up. The pain barrier is high, because journals that represent the cutting edge of science must be available in the library. Since the producer, i.e., the researcher, has an interest in the product being as good as possible and is willing to do his very best to achieve this, the publisher will be able to exploit this to the full in a market situation: A top-notch product with low production costs, which the producer himself demands as a customer and will pay almost any price for, makes the market ideal for the publisher. In theory, the price can be increased to the point where the costs of buying back the information become so high that there are no longer funds available to produce the knowledge necessary to make the journal attractive.

In such a market, the libraries have only limited ability to push down prices when buying back for the research community the information that the same research community has been willing to do its utmost to add value to, and which it helps define the ranking of – and thus, to a large extent, also the price. Without a change in the triangular relationship between producer, publisher and consumer, the market forces that are part of this price spiral will mean that only the wealthiest institutions will be able to afford to provide their researchers with the most up-to-date information available. With journals available electronically and with copyright law to hand, publishers will only give access to those who pay for it. There will be no free rides. The market can thus be protected against leaks.

Any potential library-internal solutions to these problems will have major negative consequences. If we choose to cancel our subscriptions to the most expensive journals in order to protect a larger number of cheaper ones, this might mean that important academic fields will disappear completely from the library “shelves”. Should we choose to base our priorities on borrowing statistics, this would have equally catastrophic results. What would be the consequences for research if only the richest institutions are willing to pay for access to a rarely used but still scientifically very important journal? We might also be forced to choose between prestigious publications and access to articles intended for students. This is therefore a problem area full of dilemmas of an academic, legal, and financial nature.

Far more actors than just the libraries need to make up their minds about this issue. That is why this seminar is being organized, as a

collaborative project between the library and the research committee of the Norwegian Council for Higher Education. An open archive system based on non-profit making electronic publishing might be a way out of the rut. But until researchers are willing to consider publishing via alternative channels and contributing to a change in publishing patterns, this initiative is doomed to failure. Or is there a possible way out of the vicious circle? Maybe this seminar can provide an answer. A case in point is, for instance, BioMedCentral, a publisher which has created a professional infrastructure for open archive publishing and publishes close to 100 bio-medical journals. Furthermore, since 1991, a number of physicists have been filing their research documents online, both before and after peer-review in the arXiv e-print archive.

Internal publication

Why has internal publication seen a renaissance now, hundreds of years after Gutenberg's invention of printing made it the concern of professional publishing companies? Open access has become relevant, first of all, in relation to *digital* publishing by researchers' home institutions. This kind of publishing has at least three functions: First, scientific institutions welcome internal digital publishing because it saves money now that publishers have turned scientific publishing in particular into a license to print money, – and second, in order to make working papers available to colleagues within the field. Third, institutions use internal publishing to legitimize and publicize their activities to the outside world, but also in order to facilitate access, use and re-use of the material in, for instance, teaching.

There is therefore an international trend in universities and colleges to stimulate internal publication on the web, and there is an increasing emphasis on organizing the information well, storing it safely, and making it easily accessible. Furthermore, institutional libraries are offering students and faculty support for digital publishing, and it is often the libraries that organize this academic production, prepare it, store it, and make it accessible. It is crucially important that this kind of publication should not be open to all; the material must be quality assured academically before being published.

What then is a digital institutional repository? Clifford A. Lynch offers the following description:

“... a university-based institutional repository is a set of services that a university offers to the members of its community for the management and dissemination of digital materials created by the institution and its community members. It is most essentially an organizational commitment to the stewardship of these digital materials, including long-term preservation where

appropriate, as well as organization and access or distribution.”²

The MIT Durable Digital Depository has the following objectives for its internal publication strategy: “A repository that captures, stores, indexes, preserves, and redistributes the intellectual output of a university’s research faculty in digital formats.” In addition to electronic versions of master’s and doctoral theses the following could form part of a university’s or college’s internal publishing services: Articles and reprints, technical reports, working papers, conference papers, posters, various types of data sets such as observation data and data collected for research projects at the institution, visual and scientific images of various kinds, audio files, video files, course materials, and reformatted digital library collections.

Concluding remarks

The question is: Has institutional internal publication been identified as a need in Norway? Are we paying sufficient attention to quality assurance of the content? Are we interested in channeling resources to the libraries for such publication? Are there incentives that can promote such a development? Is it sufficient to point out:

- that the open archive system is one of the very few possibilities we see today of combating the price increases in scientific publication
- that studies show that articles to which there is open access are quoted more often than those only available via subscription
- that the standardization of metadata has made possible the emergence of global providers of search engines that enable searching across a range of digital archives
- that it offers researchers secure long-term storage of their scientific documents
- that the documents will be available on the net and will be searchable in open global catalogues
- that an increasing number of publishers allow parallel publication of researchers’ research in their home institutions’ electronic archives?

If there is strong enough motivation in a united research community for these new forms of publishing, the tools for success are available: If authors collectively demanded the right to parallel publishing in an open archive system, then the publishers of commercial publications would have to give way, since their publications are totally dependent on the production of the researchers. On granting research funding, the Research Council of Norway, the Ministry of Education and

² Clifford A. Lynch, 'Institutional Repositories: Essential Infrastructure for Scholarship in the Digital Age', *ARL*, no. 226 (February 2003): 1-7.

Research, and the universities could set the condition that researchers publishing the results of their research reserve the right to add a copy to the electronic archive of their institution. Today's conference might provide an answer to the question whether the motivation for such a change is sufficiently strong.