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Access to scholarly publishing – publishers' prices, Open Access and copyright

Background

Danish universities have a shared license agreement with the publisher Springer Nature covering read access to approximately 2,500 journals and databases. The existing agreement expires in 2022.

In 2020, the Danish Rectors' Conference and Danish Universities agreed on a set of requirements to upcoming large publisher agreements and announced that it is not prepared to sign a new agreement if a publisher does not meet these requirements.

If a new agreement with Springer Nature is not signed, Danish researchers and students will no longer have access to Springer Nature journals dating from 2023 onwards. There will continue to be access to the archive back for the institutions that have subscribed previously, and university libraries can help with access to the most recent content. Lack of an agreement for read access to the Springer Nature journals has no influence on researchers' publication options with Springer Nature.

This paper gives an overview of some of the factors behind the Rectors' Conference's support to the message that in Denmark we want immediate access to our own research publications, as soon as they are published, and that we will not accept price increases on read access to research publications from other countries.

Publisher monopolies and high prices

Danish research libraries pay in the region of 300 million kroner every year to scholarly publishers for licenses to publications and databases, the equivalent of 5-6 scientific research centres. Publisher prices increase on average 3-4 per cent every year, way above the level of inflation.

This is possible because the publishers have a de facto monopoly on the journals they publish. As an example, articles in *Nature* or *Diabetologia* can only be accessed via these journals, which are sold by Springer Nature. This is because the publisher acquires the copyright to the article through a contract with the researcher. Since the content can only be purchased through that one journal, research libraries are unable to shop around for the lowest price. The publisher sets the price, which is high. In some cases, a single subscription to a prestigious journal for a single university can cost the same as a Ph.D. student's annual salary.

Danish research institutions pay 25 million kroner in subscriptions every year to Springer Nature via the national consortium.[1] This is the equivalent of 39 Ph.D. posts[2]. Denmark is only a minor customer for Springer Nature, which in 2020 had annual turnover of 1.63 billion EUR with a profit margin of 22 per cent.

The unreasonably high prices are closely tied into practices around copyright transfer in connection with publishing, which is again tied into researcher rewards, measured to a considerable degree on journal ranking (Journal Impact Factor, JIF). Just as importantly, one of the most important parameters in university ranking systems is the number of published articles from journals with a high impact factor.

The lack of competition between suppliers, combined with the close connection between the journals' impact factor, researchers' reward systems and university rankings, makes the publishers' position extremely strong and the research libraries' negotiating position weak.

Publishers profit from researchers' free labour

The large publishers, of which the three largest (Elsevier, Springer Nature and Wiley) take up a third of the market, have profit margins close to 40 per cent. That is possible because researchers contribute directly to publishers' finances with free labour.

First, publishers do not pay for the articles they receive. The value of these is difficult to assess. However, behind every article is of course many hours of research.

They also do not pay for the extensive quality control, which every article undergoes (peer review). An investigation from 2018[3] has shown that globally researchers use 68.5 million hours of work on peer review. What does that equate to in kroner? It is of course difficult to calculate, but for the sake of example, if one used the Danish minimum wage (128 kroner an hour), researchers' donations to publishers would total the equivalent of over 8.5 billion kroner. This is more than the annual turnover for Aarhus University.

[1] On top of this are local subscriptions, for example to ebooks, which are not negotiated nationally

[2] Annual average cost of a PhD student at Aarhus University in 2019
https://medarbejdere.au.dk/fileadmin/www.medarbejdere.au.dk/oekonomi_bygninger/health_oekonomi/Hvad_koster_ph.d_studerende.pdf

[3] https://www.nature.com/articles/d41586-018-06602-y / https://publons.com/community/gspr

Finally, many researchers add considerable, invaluable value to publishers in the form of editorial committees. Occasionally this work is paid for, but rarely to an extent, that matches the effort involved.

All of this is delivered freely to publishers by publicly employed (paid by taxes) researchers at Danish universities. The same applies in most other countries.

Publishers of course return a value to research communities in the form of layout and distribution of journals, but their profit margins clearly show that the price for this is much lower than the costs. Furthermore, publishers provide symbolic capital (prestige measured in the form of ranking/impact factor) to the individual research and therefore to the researcher's university. This value is especially difficult to calculate, because it comes into play in university rankings and is therefore central for the university, as described above. Initiatives such as the San Francisco Declaration on Research Assessment[4] and the Leiden Manifesto for Research Metrics[5] attempt to address these problems.

Lack of transparency and restrictive rights are challenging

There are no simple solutions to the challenges presented by the position of publishers in scholarly communities. It is important to drive home that publishers' extensive commercialisation of scholarly publishing is relatively new (since the 1950s). Since 1664, and for several centuries after, journals have been published without commercialisation. At the same time, it is also important to highlight that publishers play an important, positive role in the scholarly community in helping to organise and distribute research results. The problem is that publishers' pricing structures (and annual price increases) for this service are not transparent and it is therefore impossible to evaluate whether they are reasonable.

The high prices mean that Danish research institutions are a long way off having access to all published research. Another, perhaps more important problem is that publishers typically require that researchers transfer their copyright to the publisher. As mentioned above, this locks the researcher's article to a single supplier, and at the same time means that the reuse rights are very restrictive, which is an inconvenience to researchers. For example, an increasing number of researchers need to be able to process large quantities of data with computers (text- and datamining), which is often not possible, because publishers either do not allow it, or only with prior permission and under special conditions. This is time consuming and difficult for researchers.

[4] https://sfdora.org/
[5] http://www.leidenmanifesto.org/

Transfer of copyright gives publishers a unique position of power. It is therefore an important area of interest (and applies to research data).

Closed licenses, however, create problems not only with use of articles within a research context, but also with teaching. Distribution of digital information resources within a teaching context must be agreed with the publishers, and publishers often have different variations of rights provisions. It requires specialist knowledge to negotiate, manage and apply rights of use, and is time-consuming for teachers. Publishing under open licenses (for example, Creative Commons CC-BY) would solve these problems in one strike.

Requirement on openness is necessary but increases price and complexity

When the Open Access (OA) movement began to gather speed in the beginning of the 2000's, the expectation among many was that publishers' days were numbered. It gave rise to worrying analysis of publishers' finances. However, the concerns did not come to anything. Although the research libraries established hundreds of digital repositories for preprints and postprints[6], this did not outmatch publishers' paid-for versions of research articles. A new market instead grew for publishers. In order to meet the OA requirements which researchers were subject to, publishers began to offer a hybrid model of publication, where for a payment a researcher could have his/her article published open access in a paid-for journal for which a publisher had already received income through license payments. This payment, known as an Article Processing Charge (APC) is a very good business for publishers, because it means OA payment and license payment at the same time. The phenomenon is also known as double dipping.

The model has been very popular amongst publishers because it is lucrative, and in recent years, large publishers have converted most of their journals to this hybrid OA model, and have earnt even more money. There are many reasons that self-archiving in repositories has not been able to outmanoeuvre publishers. For example: researchers hesitate to cite pre- or postprints; repositories globally only contain about a third of research publications; for some researchers and research libraries it is difficult and time-consuming to find and archive the right version; publishers solve an important task in a very simple way, and not least, the hybrid version is easy, albeit costly, for researchers.

Coordinated oversight over license and publication costs can be a solution

One of the consequences of publishers' hybrid business model is that it is no longer meaningful to view license and publication charges separately. Research libraries

[6] Preprint: Manuscript of article before peer review. Postprint: Manuscript of article after peer review.

pay for read access and researchers/research institutions pay for OA publishing in the same journals simultaneously.

Analysis across Danish universities has shown that the annual OA publication costs total double digit million kroners. This amount is *in addition* to the quarter of a billion kroner, which institutions pay for read access. This is of course especially interesting given that Denmark, with backing from the universities, has chosen a green (self-archiving) Open Access strategy, which actually means that researchers should not be paying for OA publishing. However, practice shows a more complex picture than the strategy's vision.

It is difficult to map OA publication costs precisely and accurately, in that the payment sources for these charges are diverse (institute budgets, project funds, research funds, etc.) and because in Denmark (unlike Sweden, for example) there is no common account number for OA publication charges. Due to the different funding sources for research, researchers will typically be subject to different OA requirements, which in some cases can force them to pay for OA. This can be because publishers' embargo periods (the time period that publishers require shall pass before a postprint can be made freely available in a repository) are so long, that they do not meet the OA requirements that researchers need to meet.

Gold OA – with or without APC
In addition to publishing in hybrid journals, publishing in gold OA journals, that is, journals that are only published as fully OA, is widespread. This applies especially within the health sciences. A number of these gold OA journals have gradually achieved such a high impact factor, that they are used in the same way as traditional subscription journals. The APC level for gold OA journals is typically lower than for hybrid journals.

Especially within the humanities and social sciences, there are a large number of scholarly journals with solid peer review processes, etc., that are published full OA, but without requirement for APC payment (often known as *diamond* OA).

Predatory journals
The journal market is large and complex. An estimated 30,000 peer reviewed scholarly journals are published annually, and the number increases each year. A number of new journals that see the light of day are *predatory journals*, a type of fake journal that exploit the OA publishing market by offering OA based publication without any real peer review or editorial scrutiny. This type of journal has helped to discredit OA journals generally, to significant inconvenience for researchers. It is important to remember that OA publishing does not have anything to do with a journal's quality or quality assurance processes. OA is about the communication of the journal (open as opposed to closed) and opportunities

for reuse (open licenses), which is conducive to further research with articles, and for the opportunity to bring the published knowledge into play in the rest of society, including, for example, as valuable input to business innovation.

On balance, we have a situation, where universities contribute to publishers' finances with free manuscripts, free peer review, free/cheap editorial work, annually increasing license payments, as well as APC payments. All of this financed by public funds, or taxes. As mentioned above, this is only possible because of the lack of competition between the suppliers of scholarly journals and because the publishers are deeply embedded in current reward practices in scholarly communities.

International experience with new types of negotiation
As described above, the Open Access debate has been active for nearly twenty years. However, only between 25 and 50 per cent of the globally published knowledge is OA. In addition, it is unknown how useful delayed OA is for researchers, especially when the speed of publication for the sciences is taken into account.

There are many approaches to negotiations with publishers. The Danish approach with focus on price and embargo period is well known. In some countries, for example Belgium and France, it is combined with a law, which gives the author the right to self-archiving after 6 to 12 months, regardless of the publisher's policy. In other countries, combinations of green and gold OA are negotiated, for example in Finland, the UK and Holland.

A number of other countries led by Germany have recently begun to respond directly to the whole problem area around high, non-transparent pricing, lack of immediate OA, copyright transfer to publishers, closed licences, etc. in their national licence negotiations with the major publishers.

Just like different countries have different approaches to the transition to OA, so do the publishers. Insight into agremeents which other countries have made with Springer Nature show that they split their portfolio in two; apply different APCs to the two portfolios, and the APCs for publishing in the *Nature* series are some of the absolute highest globally. Additionally, all their agreements cap the number of articles that can be published under the agreement.

If read access shuts down, there's help at hand
It is important to underline that termination of a publisher agreement only affects read access to the most recent journal issues. Access is retained to volumes already purchased. With regard to Springer Nature, there is full access back to the year an institution joined the agreement; which for most is 1997. In addition, it is

important to emphasise that termination does not affect researchers' possibilities for publication. It only concerns access to read new content.

If read access is shut down, there will however be immediate assistance available to affected researchers and students. Research libraries will play an important role as supplier of digital copies of journal articles not available in the archive. In addition, research libraries can give help and advice to alternative possibilities for access[7]. The experience from other countries, which have been or continue to be without an agreement with one of the large publishers, is that problems with read access are only experienced to a very limited extent within research circles. A study from Sweden,[8] which was without an Elsevier deal for over eighteen month, showed that researchers quickly found alternative routes to the articles to which there was no access. Over 40 per cent used internet-based services, approximately 20 per cent contacted a colleague, 20 per cent contacted the article's author and 20 per cent received help from a research library.

[7] https://pro.kb.dk/licensservice/alternative-adgange
[8] https://www.kb.se/samverkan-och-utveckling/nytt-fran-kb/nyheter-samverkan-och-utveckling/2020-02-10-evaluation-of-cancellation-of-journal-agreement-with-elsevier-2018.html