

**Open Access to scientific publications (in The Netherlands);
Gerard Meijer, March 22, 2017.**

Open Access to scientific publications means the free, unrestricted access to the outcome of scientific research for the general public, at no cost for the reader, made possible by the world-wide distribution via the internet. Such access enhances creativity in our society and enriches its development. It sounds so logical, but Open Access to scientific publications is strangely enough not yet standard. Instead, most research publications are still locked-up behind pay-walls, not accessible for the interested laymen and also not for the scientists working at Universities or research institutions that can no longer afford the subscription prices charged by the publishers, steadily increasing way above inflation. Making scientific publications available under Open Access also costs money, Jeffrey MacKie-Mason elaborated on that yesterday, but whereas in the current subscription model the reader has to pay to get access to a certain article, in the Open Access model the author pays to get the article published, free to read and use for everybody.

Open Access to scientific publications is a topic that has been high on my agenda during the four-and-a-half years that I have served as president of the Radboud University in Nijmegen, The Netherlands, and it will remain an important topic for me now that I have returned from University administration to active research at the Fritz Haber Institute of the Max Planck Society, just next to this building, at the beginning of this year. In this presentation I would like to share with you my experiences with Open Access, both as researcher and as University president, and although much of this will not be new to you, some things cannot be said often enough, and I will give you a status report on the developments around Open Access in The Netherlands.

It is actually at the Fritz Haber Institute that I realized – and became convinced of – the importance of Open Access, shortly after I had first joined the Max Planck Society in the summer of 2002. Robert Schlögl, my colleague director here in Berlin, was at that time actively involved in the preparations for the meeting that resulted in the “*Berlin Declaration on Open Access*” in October of 2003. From the simple reflection stated then that “*our mission of disseminating knowledge is only half complete if the information is not made widely and readily available to society*” we have to conclude, unfortunately,

that our mission of disseminating knowledge is now, more than thirteen years later, still far from complete. Important steps still need to be taken to make full Open Access to scientific publications a reality although it appears that due to concerted actions in several countries things are now moving in the right direction.

One could be disappointed with the limited progress that Open Access to scientific peer reviewed publications has made since the first Berlin declaration; the fraction of scientific articles that is published Open Access has grown approximately linearly since then, each year increasing by about another 1%, up to only about 15% by now. This slow growth is in spite of the widely accepted and acknowledged advantages of Open Access publication, and even apart from the equally widely acknowledged moral obligation of researchers and research organizations to inform society about the outcome of publicly funded research. Researchers write scientific articles *for impact and not for money*, and every scientist would like her or his work to get as widely disseminated as possible; various studies have unambiguously shown that this is best guaranteed when articles are published under Open Access, as these are downloaded and cited significantly more frequently.

In discussing Open Access of scientific publications with researchers as well as with science politicians, I have encountered many myths and misconceptions surrounding this topic, and I agree with Peter Suber when he expresses in the preface of his book on Open Access, and I quote: *“that the largest obstacle to Open Access is misunderstanding. The largest cause of misunderstanding is lack of familiarity, and the largest cause of unfamiliarity is preoccupation. [In addition,..] there has been organized opposition from some publishers.”* End of quote. An argument that is often heard is that the quality of Open Access articles would be inferior. Well, it is evident that the quality of an article is solely determined by the content of the article, which is under the responsibility of the authors, independent in which journal this article appears. If a journal has a higher standing, i.e. a larger impact factor, in the field than another journal, this is because *on average* articles of higher quality or importance get published in this journal, but this tells *a priori* nothing about the quality of a specific article that gets published in that journal. By the same argument, it is thus indeed not correct to value articles (authors) simply by the journal in which these (their) articles are published, even though this appears to be common practice in many

evaluation and nomination panels. The quality assurance of a journal is determined by the expert refereeing system that is set up, which in turn is under the responsibility of the Advisory and Editorial Boards of the journal, whose members are the internationally recognized experts in the field. This quality assurance is, and should be, independent of whether the articles in the journal are published Open Access or under the subscription model. It is understandable, though, that this quality argument comes up as there are quite a number of new Open Access journals coming on the market, who are willing to take the money from the author to publish their paper, without having a good (or any!) quality assurance system in place. These “predator Open Access journals” are very damaging to the whole idea behind Open Access of scientific publications. The existence of these journals is likely to only be a transient phenomenon, made possible now that new business models need to be developed in transitioning from the classic subscription model to a service-oriented Open Access model.

It is also often argued that the number of scientific articles would uncontrollably increase when Open Access publication becomes the standard. This misconception is closely linked to the previous one about the quality and, provided that an expert refereeing system is in place for the Open Access publications, this increase in the number of published papers will not occur; there will be the same number of scientists publishing about the same number of peer reviewed papers, independent of whether their articles remain locked up behind a pay-wall or are accessible to everybody.

It is often thought that Open Access publication of scientific articles is more expensive, and that it costs extra money to make articles available under Open Access. From the viewpoint of the individual researcher, this standpoint is understandable; under the conventional subscription model, it costs the researcher nothing to get the paper published in a certain journal whereas the same (hybrid) journal will charge an Article Processing Charge (APC) of around 2000 € to publish the article Open Access. Even though APCs are mostly somewhat lower for full Open Access journals, these APCs are known and often paid directly by the researcher, for whom Open Access publication thus carries additional costs. That the researcher can get access for free to his or her own paper that is now published Open Access does not seem to be so different from the access there is for him or her to articles published in subscription journals, as this

appears to be for free for the researcher as well – at least at well-funded institutions. The researchers are indeed often not aware of the costs that are incurred to (the library of) their home institution to provide its researchers with access to all the available subscription journals, and it is therefore not easy to conclude for them whether the APC is high or low – they just experience it as having to pay extra.

The argument on the cost of Open Access publication is a crucial one, and here the White Paper published by the Max Planck Digital Library (MPDL) in April of 2015, a paper that has been mentioned yesterday in almost every presentation that has been given and that is with over 30.000 downloads the most accessed paper in the repository of the Max Planck Digital Library, has provided important insight. Their fact-based analysis shows that there currently is more than enough money in the publication system worldwide to make a complete transition from the subscription system to a full Open Access system, at no extra costs. In fact, there should be a considerable amount of research money left over in the system that can then be used for what it was originally intended for, i.e. for supporting research. It is estimated that the total amount of money involved in scientific publications currently amounts to about 7.6 billion € per year globally. The Web of Science lists about 1.5 million articles annually, but this slightly underestimates the total amount of published articles. Even when a total of 2 million papers per year is assumed, this implies an average cost of 3.800 € per article in the present system. We all know these numbers by now but they cannot be mentioned often enough, and in yesterday's presentation Jun Adachi confirmed these numbers for the situation in Japan. This cost per article is about a factor three larger than the APCs that are typically being charged for Open Access publications. This is remarkable and might come as a surprise, but it is in line with the observation that the before-mentioned 15% of Open Access publications currently amount to about 5% of the total cost of the publication system.

In my discussions with colleague scientists and science politicians, I have not encountered any valid argument against Open Access. While at the Radboud University, I have always taken ample time when researchers (in different stages of their career) contacted me with their questions and concerns about Open Access and I have come to realize that outreach and further clarification about this is still very much needed. I have gone out “on stage” myself to inform

researchers repeatedly that the present subscription model is no longer sustainable and that we are obliged to make the transition to a full Open Access publication system with a better cost-transparency than we have nowadays. That this does not imply any change for the role of the researchers and the referees, nor for the members of the editorial and the advisory boards, but that only the role of the publishers – those who provide the least added value to the publication process but that now have the largest profit – will change. That Open Access publication can still be profitable, but that the profit margins will be more in line with the added value. It also includes explaining to the researchers that it is absolutely correct that the author pays for getting the article published such that it is then free to read and use for everybody, as dissemination of the output of scientific research is an integral part of the research project. It appears to me that researchers still accept more readily that the costs for attending a conference, where the research results can be presented, are charged to the research budget than that they realize that the costs for disseminating and, indeed, advertising the results via a publication should naturally also be charged to the research budget.

During the 91st *anniversary celebrations* of the Radboud University in May of 2014, I have given a lecture in which I mesmerized to a wide audience how strange the present system of subscription journals actually is. I compared the publisher with a supermarket, using a metaphor that the former president of the Royal Netherlands Academy of Arts and Sciences, Robbert Dijkgraaf, had used in a column shortly before. In this supermarket one can buy groceries, groceries that one has actually sown, fertilized, grown and harvested oneself on its own soil and that one has brought to the supermarket for free. The supermarket organizes that the freshness and quality of the groceries that are being delivered are being controlled by other suppliers of the supermarket, also for free, and then merely puts a price-tag on it and sells it. For unclear reasons, the prices for these groceries go up every year, and as there is no other supermarket with the same assortment that one can go to, one has to keep on buying there. Needless to say that the supermarket is doing extremely well and that its owners would very much like to keep their unique and highly profitable business model in place. Robbert Dijkgraaf ended his column with the remark that “*It is actually really strange that the scientists – who, after all, are not the dumbest of them all – have ever let this come this far*” and I couldn’t agree with him more.

So there is enough money in the system to make the transition to Open Access possible, but the business model of the publishers needs to change and within research organizations the money streams need to be redirected. Prior to redirection, however, these money streams need to be known. Right now, research institutions often secure access to the subscription journals in so-called “Big Deal” arrangements, i.e. arrangements via which electronic access to the bundle containing all scientific journals from a given publisher is obtained for a certain number of years. There is much to be said about these Big Deal arrangements as such; as these are more common in the sciences and for the larger publishers and as it is harder for libraries to get out of them, they have led in general to a diminishing remaining budget for journals from smaller publishers and to a diminishing remaining budget for books, hitting in particular the social sciences and the humanities. These Big Deals are typically paid for via the central library budget and the research organizations are generally well aware of the amount of subscription fees that they pay annually. The research organizations are currently much less aware of the total amount of APCs that is transferred to the publishers by their individual scientists. A few organizations have made a central budget available for their scientists where the cost of Open Access publication can be charged to, and these organizations consequently have a good overview of the total amount of money involved in APCs, as well as of its increase over the recent years. However, most Universities and research organizations do not have this structure in place yet. For the research-intense Universities in The Netherlands, the amount currently spent on APCs is estimated to be around 10% of the amount that is spent on subscription fees, and this situation is expected to be quite similar for Germany. From yesterday’s presentation of Ingrid Kissling-Näf we learned that in Switzerland it is currently between 8 and 9 %.

In a full Open Access model, it is highly impractical if every researcher would get charged and would have to pay individually for each publication. It would be much better if a University or a consortium of research organizations could reach an agreement with the publisher such that all articles coming from that University or consortium are published Open Access, and that the publisher would annually receive a certain lump-sum payment for that. The number of research publications that are submitted from a given research organization to the journals of a certain publisher is fairly constant over the years, and the known publication records of the past years

can therefore serve as a good basis to reach agreement on the amount of this payment. The total amount would simply be given by the number of publications (of the previous year) times the appropriate value for the APC; if needed, this can be corrected afterwards for the change in the number of publications from year to year. In a full Open Access world, this lump-sum payment would be the only money the Universities or consortia of research organizations would have to transfer to the publisher. Such an agreement could be termed an “APC Big Deal” and as all publications would be available under Open Access, there would be no additional costs to get access to any other articles published worldwide. From the numbers quoted earlier, it is expected that the total cost for scientific publications in this ideal world could be about three times lower than it is now.

When the authors pay for the publications instead of the readers, there will be a reallocation of the costs, and research-intense organizations that publish the most will also have to pay the most, and that is also absolutely correct. Here one should be careful to count the publications correctly, as the APC only needs to be paid once for a given article. Many publications have co-authors from different institutions, and these papers will appear in the listed output of each of the collaborating institutions. When the total price for the “APC Big Deal” is calculated, however, only “corresponding-author papers”, i.e. papers whose corresponding author belongs to the consortium of research organizations that makes the agreement with the publisher, should be counted. The study of the MPDL mentioned earlier has concluded that only about two-thirds of all the publications that are listed as output from a certain (consortium of) research organization(s) are corresponding-author papers and should thus be counted, a fraction that does not vary much between those countries in western Europe for which this has been analyzed in detail (Germany, France, UK).

I have used the above arguments from the ideal full Open Access world and the associated reduction in costs over and over again in discussions that I have had with the publishers. The reactions that I normally get are that “*the world is not as ideal as I had hoped*” – which is certainly true – and that “*this would only work if all countries would be willing to change to a full Open Access publication system*” – which I also agree with. The argument normally continues then by saying “*but most countries do not want Open Access*”, which I have always

questioned because I see no rationale for this and which, in any case, has never been substantiated to me by the publishers either. The only argument that I do understand is that in the full Open Access world the publishers would miss out on their current income from, for instance, commercial organizations and companies that do not publish themselves but that now pay the subscription fees because they do want to stay informed on what is being published. This commercial income is for most publishers, however, only a small fraction of the total income, considerably less than the up to 40% profit margin that they currently enjoy. So this is not a serious argument against a switch to a full service-oriented Open Access system either, and there are actually simply no arguments against it. It is clear, however, that all the arguments in favor of Open Access will never suffice to convince the publishers to give up their highly profitable subscription based business model, and that external pressure from consortia of researchers worldwide, from funding organizations and from politics is needed to bring the real transition about. That is why it is so important to gather here at this meeting, for instance. In the support Letter of the EU that has just been read out aloud, it was correctly stressed that the funding agencies – who, after all, hold the purse – can play a key role in the transition process, by making Open Access publication mandatory.

In The Netherlands, strong political backing came in November of 2013 when Sander Dekker, the State Secretary of the Ministry of Education, Culture and Science, wrote a Letter to parliament in which he formulated the Dutch ambition concerning the Open Access of scientific publications. He demanded that within a time period of ten years, i.e. in 2024, all Dutch corresponding-author articles should be published Open Access, with 60% Open Access to be reached in 2020. He also clearly stated that this should be achieved by reaching agreements with conventional publishers, i.e. by Open Access publication in the journals and on the platforms of the publishers instead of in repositories of the research organizations themselves, thereby choosing for the so-called *golden route* instead of the *green route*. And last but not least, he made it very clear that the government would not provide any additional funding for this – a typical Dutch strategy – and that this transition therefore would have to be accomplished within the existing budget of the research organizations.

This Letter of the State Secretary put Open Access of scientific publications very high on the agenda of all fourteen Dutch Universities, organized in the VSNU (“Vereniging van Samenwerkende Nederlandse Universiteiten”), the Association of Universities in The Netherlands. In one of the monthly meetings of the Board of Presidents of the Dutch Universities in the VSNU-office in The Hague in early 2014, we agreed that the assignment that the Universities had received from the State Secretary to reach an agreement on Open Access with the publishers had to be taken up at the highest level. On behalf of all Dutch Universities, Koen Becking, the president of Tilburg University, and myself were asked to lead the negotiations with the main publishers, later supported by Jaap Winter, the president of the Free University, Amsterdam. As lead-negotiators we were supported by the directors of the University libraries, by SURFnet (SURFnet is a non-profit foundation responsible for the backbone computer network for higher education and research in The Netherlands) and by the VSNU office. The Netherlands has had for many years already national Big Deal arrangements with the main publishers on the access to the subscription journals. We realized that agreements with the publishers on Open Access could only be reached during the negotiations on the renewals of the Big Deals, and that the University presidents could speak and act most firmly on behalf of all the Dutch researchers in these negotiations. Moreover, the total budget that the Universities in The Netherlands spend on subscription fees has meanwhile increased to about 1.5% – 2.0% of their annual base-funding and this alone makes it mandatory that these negotiations are taken up by the University administration at the highest level. And I would guess that the latter argument holds for all research-intensive universities worldwide!

We agreed in the Board of Presidents that we would only sign new Big Deal contracts if these would include clear arrangements for the Open Access publication of scientific articles of which the corresponding author is affiliated with a research institution in The Netherlands, hereafter referred to as “Dutch articles”. Preferably, we would reach a national “APC Big Deal”, with Open Access publication of all Dutch articles and with access to all subscription journals, for the same price as the previous Big Deal. We realized that this still might be a bridge too far for some publishers, who tend to argue that “Big Deals” and “Open Access” are two completely different topics that have nothing to do with one another – they typically argue that

“one cannot alter a world-wide business model for an eccentric, local model” – and we at least wanted contracts in which the APCs for Open Access publication of Dutch articles would be offset against the cost for the access to the subscription journals. We were willing to tolerate a price increase for this total package to compensate for inflation, but not more than that. The Netherlands produces slightly less than 2% of the world’s output of scientific publications. This output is acknowledged to be of high quality and we knew that if we would stand united we would be taken seriously, also by the biggest publisher in the field, based in The Netherlands. We confirmed that it was really important to us to reach agreement under our conditions with the well-established publishing houses that have good quality-assurance systems in place, but we also agreed that we would no longer tolerate “to be kept hostage” by the publishers and that a complete opting out of the contracts had to be a realistic option, and we prepared for that. I should remark here, that this approach of giving the publishers basically two options, namely either to go along in the transformation or to face cancellation of the contract, is in line with the approach presented by Ralf Schimmer yesterday. On the one hand, the publishers have a monopoly position, but on the other hand, they can do nothing without our scientists and we mobilized them to support us in the negotiations. We were convinced that we could explain even a drastic opting out step to our researchers if this would be needed, but we also were convinced – and I said that yesterday already – that even in that case nothing dramatic would happen. We made an inventory of the editorial and advisory board members among our top scientists and our question to them “whether they would be willing to give up their position in the board of the journal when we would not reach agreement with the publisher” received an overwhelming, positive response. It made the publishers nervous, in particular because quite a few scientists had misunderstood our question and had stepped down from the board immediately. We also asked our researchers more generally to consider refereeing articles exclusively for, and submitting articles exclusively to, Open Access journals. We asked all our University administrators, librarians and researchers to avoid contact to the publishers and to not accept their invitations for meetings, etc., during the course of the negotiations. Every month we reported on the progress in the negotiations with the various publishers in the meeting of the Board of Presidents, we discussed the next steps, including the next steps in our public outreach strategy, and we managed to remain united and firm in the above standpoints. Once

an agreement was reached with a publisher, it was up to the Board of Presidents to either approve this or to send it back to the negotiation table.

The VSNU office played an important role in coordinating all the negotiations and by informing the University personnel as well as the politicians, their lobbyists and the general public via newsletters and press releases about the importance of Open Access, about the “serials crisis”, i.e. the chronic cost increases of the subscription journals, and about the progress in the negotiations and the agreements reached. A web-site was launched where up-to-date information can be found, in Dutch as well as in English (http://www.vsnu.nl/en_GB/openaccess-eng.html), and an e-zine was produced, to be found on the same web-site. Meanwhile, ten contracts including ever better and more far-reaching agreements on Open Access of peer reviewed scientific publications have been signed with publishers, where the five-year contract with the American Chemical Society should be mentioned explicitly as this really is the envisioned “APC Big Deal”. I will not go into the detail of these contracts here and that is also not needed as eight of these ten contracts are since yesterday online and can be found via the Open Access page of the VSNU; we meet SpringerNature and Elsevier in court in The Netherlands today, and we will see whether they will also have to give in to the “freedom of information” request according to which we made these contracts public.

Together with the Dutch funding agency NWO, the Dutch Universities have also given a financial guarantee for the first five years for the new Open Access initiative LingOA, via which several international linguistics journals move from their traditional publisher to a new Open Access publisher, along with their entire editorial staff, authors and peer reviewers; you will hear more about this from Johan Rooryck later today. The Netherlands is now more than on track with the Open Access ambition as formulated by the State Secretary and, based on currently known contracts with the largest publishers, more than 50% of the Dutch publications is expected to appear free to read and use for everybody in this year already.

As Universities in The Netherlands we stood and stand united in the negotiations with the publishers. As research organizations and countries worldwide we have to stand united as well to change from the archaic subscription based publication model to a service-

oriented Open Access business model – correcting a mistake, a correction that is long overdue. We have to openly exchange information on the strategies that are being used in the negotiations, as well as on the details of the agreements that have been reached. We are more than willing to share our experiences, and that is why we gather here today! Thank you for your attention.

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