

The Open Access Interviews: Jan Velterop

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In the world of scholarly publishing, [Jan Velterop](#) is a well-regarded “old hand”. But an old hand who has shown himself to be very receptive to new ways of doing things.

He began his publishing career at [Elsevier](#) in the mid-1970s, and subsequently worked for a number of other leading publishers, including [Academic Press](#), [Nature](#), and [Springer](#). Unlike many of his colleagues, however, Velterop has always been willing to embrace new ideas, and new models, particularly those made possible by the Internet.

While at Academic Press in the mid-1990s, Velterop was one of the architects of what was to become known as the [Big Deal](#) – an arrangement by which large bundles of electronic journals are sold on multi-year “all you can eat” contracts. While the Big Deal has now fallen into disfavour, it was a revolutionary development in the world of scholarly publishing, and remains a very significant part of the landscape.

In 2000, Velterop joined [BioMed Central](#), the first commercial open-access science publisher, and in 2001 he was one of a small group of people who gathered together in Budapest to [discuss](#), “the international effort to make research articles in all academic fields freely available on the internet.”

It was at that meeting that the Open Access movement was born, along with the Budapest Open Access Initiative ([BOAI](#)), and the BOAI statement – “the clearest and most generic of what Open Access means and should mean”, suggests Velterop.

Like the Big Deal before it, open-access publishing was initially scorned by other publishers. By 2008, however, it was clear that it was the wave of the future, a truth underlined by the [acquisition](#) of BioMed Central by Springer in October of that year.

Ever restless for new challenges, Velterop quickly moved on, and began to put his formidable talents to addressing the problems of information overload and the interoperability of data. To this end, in 2009 he was one of the initiators of the [Concept Web Alliance](#), “an open collaborative community that is actively addressing the challenges associated with the production of unprecedented volumes of academic and professional data.”

Today, Velterop is CEO of Academic Concept Knowledge Limited ([AQnowledge](#)), a new company developing tools for “semantic knowledge navigation”. In particular, says Velterop, it is trying to “make the interfaces from the literature to open data resources financially sustainable.”

Velterop’s journey from traditional print publishing to the semantic web has inevitably impacted on his vision of what scholarly publishing is and ought to be – a vision now somewhat distanced from his erstwhile publisher colleagues.

At the beginning of January, for instance, [Velterop wrote](#) on his blog, “Looking at it as dispassionately as possible, one could conclude that peer review is the only remaining significant *raison d’être* of formal scientific publishing in journals.”

He then went on to make the heretical suggestion that traditional pre-publication peer review should be abandoned in favour of the “[endorsement](#)” model pioneered by the physics pre-print server [arXiv](#). By doing so, he says, the research community could save the taxpayer \$3 billion a year of unnecessary expense.

The heresy does not end there. Speaking of the future of scholarly publishing, and the role of publishers, Velterop says, “The evolution of scientific communication will go on, without any doubt, and although that may not mean the total demise of the traditional models, these models will necessarily change. After all, some dinosaur lineages survived as well. We call them birds. And there are some very attractive ones. They are smaller than the dinosaurs they evolved from, though. Much smaller.”

In short, if Velterop’s vision of the future of scholarly communication proves accurate, publishers can expect their role to be dramatically reduced, with obvious implications for their revenues, and thus for their profits. “I have for a long time felt that ‘publisher’ is a misnomer for the outfits that are called that, anyway,” says Velterop, “Publishing is what the author can do, and increasingly does, autonomously; it is the tagging of an article with a peer reviewed journal title that the ‘publishers’ do.”

It is, therefore, unsurprising that Velterop takes the view that publishers have made a serious error of judgment in pushing for the controversial Research Works Act ([RWA](#)) – a new bill introduced into the US House of Representatives at the end of last year that would roll back the [Public Access Policy](#) introduced by the US [National Institutes of Health](#). “I truly don’t understand how a sophisticated industry could get itself into a PR disaster like the RWA,” he says.

More of Velterop’s views on these and other aspects of scholarly publishing can be read in the interview below.



Jan Velterop

The interview begins ...

RP: *As I understand it, you began your professional life as a traditional publisher, working first for Elsevier.*

JV: I actually started out as a scientist, a marine geologist, working on mapping the geology of the ocean floor, particularly fracture zones in the Atlantic, in the framework of plate tectonics.

Because I did some editing work whilst at sea, I got into publishing, and once I accepted a job at Elsevier, I never looked back. At Elsevier, where I worked from the late 70s until the late 80s, I learned the basics of science publishing (as it was then – still fully print-oriented).

RP: *You subsequently worked at Academic Press (which was later acquired by Elsevier), and then at Nature, before joining the first Open Access publisher BioMed Central.*

JV: Right, upon leaving Elsevier I had a brief sojourn of a few years in newspaper publishing, after which I returned to science publishing at Academic Press, stationed in London.

The time at Academic Press was an exciting one, not least due to the willingness of the company management to engage in genuine thinking about the role of publishing in science and to experiment, eventually culminating in [IDEAL/APPEAL](#).

RP: *The first [Big Deal](#).*

JV: Correct. IDEAL stood for International Desktop Electronic Access Library, and APPEAL for Academic Press Print and Electronic Access Licence – the two were later conflated and became known as the Big Deal.

RP: *As our understand it from our last [conversation](#), the objective of the Big Deal was to stop the cancellation spiral that was seeing more and more journals cancelled every time subscriptions were raised, requiring publishers to further increase their prices in order to protect their income, sparking yet another round of cancellations. The Big Deal offered universities large bundles of journals for a set fee and on multi-year contracts. Today the Big Deal is not what you envisaged is it?*

JV: True. The reasoning for the development was straightforward: if we, at AP, could safeguard our revenues, why should we not maximise access to the journal content, which would also be attractive to our authors, exposing their work to a potentially (much) larger audience.

The idea was to have country-wide, or in the US state-wide, arrangements, where one contract would ensure access for all of higher education in that country or state.

Initially, most publishers were against that approach, though they did come around to it after a short period. But you are right, it didn't quite develop in the way it was intended. At least not in the way I foresaw.

RP: *Can you say why?*

JV: Country-wide deals were fine for a while, but they came with a degree of top-slicing of funds, which wasn't acceptable to many librarians and their university.

RP: *In other words, the subscription costs were paid for by funding agencies rather than universities, which left universities complaining that their autonomy had been removed?*

JV: Quite. That's a way of seeing it, although the difference was more that they were paid directly by funding agencies, rather than indirectly, via the overhead portion of grants that go to the universities where the research is carried out. And as a result, the Big Deal developed into a kind of journal subscription bundle instead of the comprehensive scientific literature database it could have become.

A subscription bundle feels like an à la carte menu, with quantum discounts, whereas a database approach is more like an 'all you can eat' buffet, at a set price per diner, whether you eat much or a little. I see these as fundamentally different.

Open Access

RP: *So what had been the vision behind IDEAL/APPEAL?*

JV: I regard the provision of access to scientific information, be it in the form of subscriptions or in the form of database access, as an infrastructural provision – the pipes, if you wish, rather than what flows through the pipes.

That may seem a strange analogy, because scientific content is seen more like what flows through the pipes than the pipes itself. Except, that it is access that's important in science. As and when

you need it, not restricted by any access limitations, marginal costs, or other hurdles of getting access.

RP: Which inevitably led you to the concept of Open Access perhaps?

JV: In my view, that model favours the comprehensive database approach and militates against the selective approach that is inherent to the à la carte subscription model. So yes, the step from a comprehensive database approach to open access is easily made, and I made it. And I joined [BioMed Central](#), the first OA publisher.

RP: The first challenge for OA was to demonstrate that it was a viable publishing model of course.

JV: Well, the only fundamental thing to be done was to think of a sustainable financial model that would allow Open Access. Otherwise, Open Access publishing is just like traditional publishing. And given that the adage in the academic ego-system is ‘publish-or-perish’ and not ‘read-or-rot’, it was a logical step to go for an author-side payment model. Not author-paid, mind you, as readers never paid, either. The costs should be absorbed by the academic funding streams, just as the cost of subscriptions have been, and still are.

RP: The author-side payment model introduces its own problems perhaps. Do you see it as an end point, or merely a transitional model?

JV: The author-side payment model still has flaws, as all the charges are loaded on the published papers, whereas a large portion of the publication costs is to do with the peer-review process, even if an article is rejected and not published.

I favour a submission fee, analogous to an exam fee, which you pay, whether or not you pass the exam. But I accept that, although logically the right thing, it may not be quite psychologically right in the current circumstances.

It would also introduce more demand for accountability of the actual peer review, especially of its quality, which may be opening an unmanageable can of worms.

RP: In 2001, you took part in the Budapest meeting where the OA movement was born, and out of which the [Open Access Initiative](#) emerged. It was a historic moment. What were your impressions of the meeting, and the significance of the outcome?

JV: The Budapest Open Access Initiative (BOAI) meeting, 10 years ago last December, was indeed a seminal moment. The people who attended were pretty much of one mind, and it quickly became clear – though that never prevented a very lively discussion – what the definition and principle of open access should be. Still today, the BOAI statement is the clearest and most generic of what Open Access means and should mean.

RP: What were the key issues raised at the meeting, and what were the main points of difference?

JV: The question whether self-archiving (later called ‘[green](#)’) or open access journals (later called ‘[gold](#)’) should be the preferred strategy led to much discussion. It was not resolved, and therefore both strategies were supported, as complementary strategies.

The BOAI was a significant step in that it provided clarity for what was a hitherto fairly fuzzy movement, or at least seen as such. Having a definition and clear motives for open access helped focus the attention of those who thought along similar lines and the advocacy they were willing to engage in.

RP: The issue of whether green or gold should be prioritised has been a source of constant tension in the OA movement. Do you think it might have been better if those attending had agreed on one route only?

JV: There were differences of opinion, to be sure. Not every difference of opinion should be called a ‘tension’, though. As everywhere else in life, you have to play with the cards you have been dealt. It was not possible to agree on one route only.

My view is that unless there is a method that makes for reasonably robust financial sustainability, a system won’t survive very long. This militates against ‘green’ and speaks in favour of ‘gold’.

RP: *Another source of tension within the OA movement today is that between so-called [gratis and libre OA](#). I guess the BOAI definition of OA assumed libre OA. What are your views on the gratis vs. libre debate?*

JV: On this issue my opinion is quite categorical. Open Access without the freedom to re-use data or publications (albeit with the obligation to acknowledge its provenance, where possible and practicable), is missing the point of Open Access altogether. I am aware of semantic discussions about what the term Open Access means, but I am inclined to dismiss those as a minor irritant.

AQnowledge

RP: *Your current job is CEO of a start-up called Academic Concept Knowledge Limited ([AQnowledge](#)). What is the purpose and proposition of AQnowledge?*

JV: What we are currently doing at AQnowledge, in close collaboration with the people who developed [Utopia Documents](#) (at the University of Manchester), is in essence helping to incorporate various linked open data sources as a form of enrichment of the regular scientific literature, in a publisher-independent way, using semantic and what I may call ‘quasi-semantic’ techniques.

What AQnowledge does, more specifically, is to try and make the interfaces from the literature to open data resources financially sustainable. The first of such interfaces being made sustainable is the scientifically optimised PDF reader, Utopia Documents, that connects the user, straight from the PDF (as long as the user is online) to resources on the web.

This is important, as a very high percentage of literature intake is via PDFs, and the links to open data are almost exclusively available only in HTML versions of the literature.

RP: *You don’t envisage HTML becoming the norm for papers as well.*

JV: I think what will happen is that everything becomes available in both formats. They both have their advantages and their drawbacks. What researchers need is the convenience that having both formats entails.

The ‘norm’ should be the availability of whatever format is the most convenient in a given circumstance. And there is a real need for tools to bridge the divide between HTML and PDF; a need we are trying to address.

RP: *What is AQnowledge’s business model?*

JV: We consider it of paramount importance that the [Utopia Documents PDF-reader](#) is, and remains, free to users. But that means, of course, that we must find another way of financially sustaining it.

The problem is not a million miles away from the one we faced with regard to making OA sustainable. The long-term free provision of these interfaces is not secured unless robust financial sustainability methods are developed.

To that end, we have developed a method to enable vendors of relevant (laboratory) equipment and supplies to link to detailed information about specific and appropriate products (appropriate to the article in question, that is), at a very fine-grained level (e.g. specific antibody or enzyme), via the PDF-reader interface, to be called up by the user as and when desired.

RP: An advertising-based model?

JV: It is not what is normally regarded as advertising in the way that vendors usually understand it, so we also developed a narrative that convinces such vendors that it is worth paying for being included.

Due to the level of granularity involved it is best to think of such payments as micro-sponsorships. We have a high level of support from the supplier community that makes us confident that long-term sustainability of the free to use Utopia Documents PDF-reader is a realistic expectation.

Peer review

RP: You recently [wrote something](#) about peer review in which (if I understand correctly) you estimated that it currently costs the taxpayer \$10,000 fee each peer-reviewed paper published. You also said, “Looking at it as dispassionately as possible, one could conclude that peer review is the only remaining significant *raison d’être* of formal scientific publishing in journals,” and you asked, “is peer review worth that much?” I think you concluded that it is not worth it. Can you expand on your thinking?

JV: I did, and I was being provocative, of course. I also made some errors in the calculation (and the assumptions). My intuition (a ‘sniff test’), however, tells me that the average cost of a peer-reviewed journal article to Academia is more likely to be in the order of \$2000 than \$10,000. And that’s what I came out at in my first post on my blog, when someone rightly pointed out that I made a calculation error and it should be more like \$10,000.

My conclusion is that either the figures of the STM total revenues I used are wrong (they came from the Bookseller), or my assumption of the number of articles published annually (I’m not aware of anybody actually counting them).

Nonetheless, the difference in cost to Academia between a ‘preprint’ published in [ArXiv](#) and a formally peer-reviewed article is such that some soul searching would be in order. Is peer review indeed worth such an amount per article in all cases?

It may be that the reward system in science needs peer review, in spite of the costs seemingly unavoidable in the system, but I think it helps focussing the mind if one has an idea of the amounts involved.

RP: You proposed instead the arXiv “[endorsement model](#)”. Can you say what that is, and why you recommend it?

JV: Instead of peer review, I think that in many cases an endorsement system like the one employed at ArXiv is sufficient to keep out sloppy methods and crackpots.

The other elements of peer-review, such as a value judgement or placing an article in a ‘relevancy’ or ‘quality’ category (whatever that means anyway), can easily be done post-publication as and when the community thinks it serves a purpose. Essentially replacing the ‘filter first, then publish’ by ‘publish first, then filter’.

The entire web works that way, and the exceptionalism of scientific publishing is no longer plausible, in my view. Of course there is a lot of rubbish on the web, but people are on the whole very discerning and only the most gullible run the risk of being taken in by that rubbish.

Scientists are supposed to be sceptical and their critical thinking skills will ensure that, as a given community in a given discipline or sub-discipline, they are not easily fooled.

Members of the public accessing scientific literature will get the same level of reliability from ArXiv-like repositories as from peer-reviewed journals.

RP: What is your estimate of the potential savings to the research community of moving from today's system to an endorsement model?

JV: Well, that seems a rather simple sum. If there are 1.5 million articles a year published, and the average savings are in the order of \$2000 (assuming the ArXiv per-article cost of some \$7 is valid elsewhere for ArXiv-like outfits as well, and no journals are published in print), the savings amount to in the order of \$3 billion a year.

Heretical

RP: As you will know, former [British Medical Journal](#) editor [Richard Smith](#) has some pretty radical views on peer review too. As he [put it](#) in a BMC journal in 2010, "The problem with filtering before publishing, peer review, is that it is an ineffective, slow, expensive, biased, inefficient, anti-innovatory. The sooner we can let the 'real' peer review of post-publication peer review get to work the better." I suspect his views may be a little more radical than yours. Would you agree? If so, why would you not go so far as he does?

JV: I think my views on peer review are pretty close to those of Richard Smith. The only difference between us seems to be that I think that some measure to keep out crackpottery might be beneficial – I think that an endorsement system like the one used by ArXiv would achieve that – and Richard hasn't mentioned such a crackpot sluice, at least not in the article you mention.

RP: One problem with post-publication peer review (as [PLoS ONE](#) discovered) is that researchers appear not to be particularly interested in commenting on published papers. Where they do, they generally do it in order to attack a paper, not praise it; and they prefer to do it on their own blog, or another social networking site, rather than on the publisher's site. Is this problematic?

JV: I don't think so. In other areas the web seems to work well in terms of floating things to the surface that are worth paying attention to. And it is not as if peer review ensures that such attention is given.

The best you can say is that peer-reviewed articles (whether pre- or post-publication) have been read by more people than just the author. That is in no way a guarantee that their true significance is, or will be, recognised. Or the absence of peer review that they will be ignored.

The web itself is a review engine. What turns out to be the wisdom of the crowds and what the madness of the mob is a judgement scientists should be able to make.

RP: OA advocates have been very keen to stress that OA does not imply any change to the traditional peer review system, and yet [PLoS ONE](#) has undoubtedly changed the rules. What you are suggesting implies an even more radical change. Does your proposal that pre-publication peer review needs to change (or even be abandoned) flow from a belief that online publishing inevitably changes the rules, or is it more because you believe that peer review is (and always was) inherently flawed? Or perhaps it is a combination of those two things?

JV: It is a combination of those things, but by far the more important one is that the possibilities the Web offers have so radically changed the publishing environment that we have truly entered into a new era.

As a geologist I go so far as to say that I see analogies with the Permian-Triassic boundary and the Cretaceous-Tertiary boundary, when life on Earth changed dramatically due to fundamental and sudden changes in the environment.

Those boundary events, as they are known, resulted in mass extinctions, and that's an unavoidable evolutionary consequence of sudden dramatic environmental changes.

But they also open up ecological niches for new, or hitherto less successful, forms of life. In this regard, it is interesting to see the recent announcement of [F1000 Research](#), which intends to address the major issues afflicting scientific publishing.

RP: *In saying that peer review is the only remaining significant raison d'être of formal scientific publishing in journals the given in your statement therefore is "in an electronic environment". I cannot help but point out that if you were still at Elsevier, or even BioMed Central, such ideas would be considered heretical. After all, if peer review were discontinued there would be no role for publishers would there? Or at least, they would have a significantly reduced role, and thus a much lower revenue stream. Would you agree?*

JV: Indeed, my views are shaped by the possibilities an online environment offers. They may well be seen as heretical. So be it. They may also be impractical in the short run. And yes, the role of publishers would be dramatically reduced, becoming ArXiv-oid service platforms, if you wish.

I have for a long time felt that 'publisher' is a misnomer for the outfits that are called that, anyway. Publishing is what the author can do, and increasingly does, autonomously; it is the tagging of an article with a peer reviewed journal title that the 'publishers' do.

Futures

RP: *What you say implies that simply moving to OA publishing is not sufficient. Scholarly communication will need to undergo a much more radical transformation?*

JV: OA publishing is a tremendous step forward, and as the success of *PLoS ONE* indicates, reducing peer-review to a level where scientific robustness and integrity is assessed, and not significance, is already happening. To my mind, the step to an endorsement system, with post-publication peer-review as and when the community decides to put effort into it, is but a small-ish one.

RP: *As you will know, the Research Works Act ([RWA](#)) is highly topical at the moment. OA advocates tend to characterise the RWA as an attempt by a group of industrial age companies to foist an outdated model of publishing onto the digital world in order to protect their profits. Would you agree with that characterisation?*

JV: I think it is born out of some panic reaction. There seems to be a lot of pain potential and little or no gain potential. I truly don't understand how a sophisticated industry could get itself into a PR disaster like the RWA. That said, I am not a great believer in the 'green' model.

RP: *Do you have a vision of how in the future researchers will a) distribute their research and b) navigate the huge and exponentially growing corpus of other scientists' work?*

JV: I have a vision, but I'm careful not to call it a prediction. In this vision, researchers will disseminate their results far more freely and we will develop ways to navigate the oceans of information rather than stick to taking it in 'by the drink' or at best, float on a few narrow channels and rivulets.

Ways of representing the essence of scientific knowledge will be found that make it possible to gain an overview, upon which we can base decisions as to where to dig further, without, as we do now, needing to read all there is to be read and creating the overview in our heads, to the extent possible, which isn't a great extent.

RP: *I sometimes think we face two possible futures – one in which vested interests (be they publishers, researchers, librarians, funders, research institutions etc.) force traditional models on to the digital world, and one in which the possibilities opened up by the digital world force these different interest groups to adapt and change. No doubt this is far too simplistic a view and the likelihood is that both things will happen in different ways, but would you agree that that there are two competing forces at play in scholarly publishing today, and that the outcome is far from certain? Or do you have greater certainty about this than me than me?*

JV: The evolution of scientific communication will go on, without any doubt, and although that may not mean the total demise of the traditional models, these models will necessarily change. After all, some dinosaur lineages survived as well. We call them birds. And there are some very attractive ones. They are smaller than the dinosaurs they evolved from, though. Much smaller.

RP: *The world of scholarly journal publishing is quite a small one, and I think you all tend to know each other. Looking around at your colleagues, who would you say where the three most talented and/or influential scholarly publishers, and why?*

JV: I will refrain from answering this question. Those whom I regard as the most talented will probably recognise themselves in much of what I have said in this interview.



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