The OA Interviews: Bernard Rentier, Rector of the University of Liège

What is striking about Open Access (OA) is that it so obviously the right and rational way for the research community to respond to the networked world. Indeed, one could aptly describe it as a no-brainer — or, as OA advocate Stevan Harnad likes to put it, OA is "raincoat science" ("*It's raining, kids, and you're getting wet: Time to put on your raincoats!*").

What is odd about OA is that so few in the research community yet appear to have understood (or at least accepted) its inevitability. Such myopia is doubtless no accident — many have a vested interest in the status quo, while others instinctively fear change, and have an irrational abhorrence of the new.

As a consequence, what is surely "inevitable and optimal" has been delayed now for over a decade and a half: While universal OA could in theory be realised practically overnight, it is estimated that still only around 30% of the world's academic and scientific literature is freely available on the Web.

Fortunately some do "get it" the moment the concept is explained to them — as did Bernard Rentier, a professor of virology and immunology at the University of Liège (ULg), in 1998.

Rentier had been appointed vice-rector in charge of research policy and libraries at ULg the year before — a position that inevitably focused his professorial mind on a number of problems for which OA turns out to be the solution. This became apparent to him during a conversation he had with a science librarian, who introduced him to the concept behind the then incipient OA movement.

"[I]t was immediately obvious to me that this was the logical approach to take," says Rentier, "especially as the new technology that was then emerging made it entirely possible."

For a start, says Rentier, he saw that OA could help alleviate the serials crisis — an unwelcome burden on universities that each year sees larger and larger chunks of their library budgets swallowed up by increases in journal subscription prices.

He also realised that by making their papers freely available on the Web, ULg researchers could increase both their impact and their visibility within the global research community — something that all researchers and their institutions desire.

Finally, Rentier could see that OA would allow ULg to demonstrate to the world the quality of the research its scientists were doing, and thus enhance its institutional reputation.

What was especially fortuitous about Rentier's conversion to OA was that he is a man with unbounded energy and enthusiasm, and one in a position to create change more effectively than many OA advocates — particularly after he was elected Rector of ULg in 2005.

By now Rentier had concluded that although Gold OA (OA publishing) might prove to be a good long-term solution, the best short-term strategy was to embrace Green OA (self-archiving). In other words, instead of advising researchers to seek out an OA publisher for

their papers, it was better to encourage them to carry on publishing as normal, but to make all their papers freely available on the Web — by self-archiving them.

To this end Rentier oversaw the creation of ULg's own institutional repository ([IR](#)) — dubbed the Open Repository and Bibliography, or [ORBi](#). This went live in November 2008, and the University's researchers were invited to deposit all their papers in it. To help persuade them to do so Rentier began his own [blog](#), and began a campaign of encouragement and exhortation.

Moreover, determined that ORBi should capture all the research being produced at the University, Rentier also introduced a self-archiving mandate — which *requires* all ULg researchers to deposit their papers in ORBi.

To further motivate compliance, Rentier announced that depositing papers in the repository was henceforth the sole mechanism for submitting them to be considered when researchers underwent performance review.

Fourteen months after it was launched ORBi had accumulated 30,000 bibliographic references, and more than 20,000 full text documents.

Today ORBi is the [most active](#) institutional repository of its type in the world (Ranking first of 1,418 IRs), and ULg researchers are beginning to see the benefits of embracing OA, both in terms of increased citations and prestige, and enjoying the excitement of seeing some of their older papers begin, as Rentier puts it, "to live a new life".

But Rentier is not a man who would ever be content to see OA implemented in his own university alone: He wants the research community at large to seize the opportunities that OA provides. To that end he has also taken on [the chairmanship](#) of EnablingOpenScholarship ([EOS](#)).

Founded in 2009, EOS aims to persuade the world's rectors, vice-chancellors and university presidents of the benefits of OA, and to tutor them in how best to achieve it.

He is also currently trying to persuade the National Research Fund of Belgium to adopt a green mandate, one that would require all papers resulting from research that it funds to be made OA.

Rentier was not the first senior manager in academia to introduce a green OA mandate (that plaudit must go to [Tom Cochrane](#), deputy vice-chancellor at Australia's [Queensland University of Technology](#), who introduced the world's first university-wide mandate in 2004). Nevertheless, says Harnad, "Bernard is the first rector/VC to fully grasp and fully act upon OA".

He adds: "Bernard understood, implemented exactly the right mandate at Liège ([Immediate Deposit/Optional Access](#), linked to performance evaluation) and, in addition, immediately assumed the leadership in university OA policy, not just in Europe but worldwide."

In short, Bernard Rentier is no armchair enthusiast of OA; he is an energetic advocate who has proved himself both able and willing to institute change at home and abroad. Indeed, says Rentier, it is not just change he seeks, but "a global revolution" in scholarly communication.

Bernard Rentier

RP: What is your role at the University of Liège?

BR: I am [the Rector](), i.e. something like a vice-chancellor and a chairman of the board at the same time.

RP: Can you say something about the University of Liège (ULg): student and faculty numbers, research interests etc.?

BR: The University has 20,000 students, and is a comprehensive university. There are 11 faculties and 4,500 staff members, of which 600 are professors.

We also have a [university hospital]() (with another 4,500 staff). And we have the only [Faculty of Veterinary Medicine]() in French-speaking Belgium.

In total there are 2,800 faculty at ULg, with a further 1,000 or so in the university hospital. Our research is outstanding, and we specialise in space technology, medical biotechnology, environmental science, agronomy, and veterinary medicine.

RP: You are an advocate for Open Access. When did you become an advocate, and why?

BR: I became interested in 1997, when I became vice-rector and was in charge of research policy and libraries. I have become an "advocate" progressively.

RP: So there was no Eureka moment. But perhaps there was a tipping point, a moment when you suddenly saw the logic of and need for OA?

BR: There was definitely a tipping point. It occurred to me very early on, when the lady in charge of the library of sciences told me about (what is now called) the OA movement, which was quite young then (and did not yet have a name).

RP: What year would this have been?

BR: I can't remember exactly, but it would have been in around 1998 or 1999.

But it was immediately obvious to me that this was the logical approach to take, especially as the new technology that was then emerging made it entirely possible, although that technology was obviously not as developed then as it is now.

RP: Librarians have been in the vanguard of the OA movement. Do you think that this is because it is they who have had to pay the ever-rising subscriptions for scholarly journals, or is it simply that librarians are naturally progressive?

BR: I wouldn't want to be too assertive on this, or to make undue generalisations! *Some* librarians are naturally progressive. Certainly we selected our head librarian Paul Thirion — who was instrumental in the development of our documentation policy, and mastermind of the ORBi initiative — because of his progressive mind. More generally I would say that librarians cannot be just progressive: at times they also have to take a very conservative approach. Good preservation requires a conservative approach. However as I understand it, running an IR requires both respect for the past plus innovation and audacity.

Repository and mandate

RP: In May 2007 the University of Liège decided to create an institutional repository called ORBi, which went live in November 2008. What was the aim?

BR: ORBi was set up for several purposes:

1. To contribute to OA by making all the literature produced at the University of Liège freely available online.

2. To provide the University — for the first time — with a complete catalogue of all the publications that its researchers had authored.

3. To provide the University with a permanent and updated showcase of its scientific production.

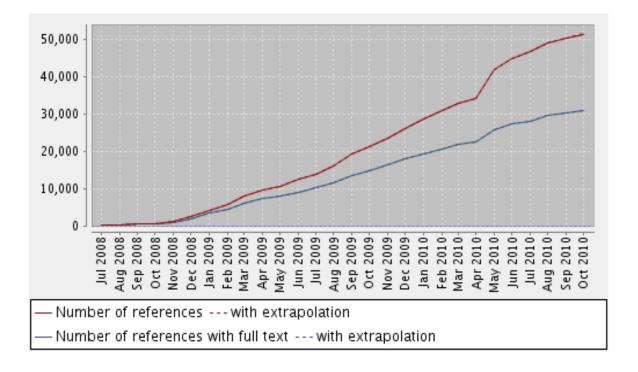4. To provide our scientists with a better chance of being read and cited.

RP: I understand that ORBi has proved very successful, accumulating more than 30,000 bibliographic references and more than 20,000 full texts within fourteen months of launch. What are the current figures?

BR: Today there are 62,207 references and 37,497 full-text publications. The figures are constantly updated on the front page of ORBi.

RP: ORBi's success owes something perhaps to the fact that the University also introduced a self-archiving mandate. This requires that all the university's researchers deposit copies of their research papers into ORBi. Can you say something about the specifics of the mandate, and why it was introduced?

BR: It was introduced because I knew that without it the repository would, even in the best possible circumstances, eventually only attract 5-10% of the target publications.

This is a well-demonstrated fact. For instance, my colleagues at ULB in Brussels have no mandate, and their IR has 56,669 references of which just 7,517 are full-text documents.

RP: As I understand it, the University of Liège mandate is what OA advocate Stevan Harnad calls an Immediate Deposit/Optional Access (ID/OA) mandate? That is, the University expects all the papers its researchers produce to be deposited on publication, but if the publisher insists on an embargo the paper can be set to "closed access" until the embargo expires. This ensures that even where a paper is embargoed the University has its own copy, which it can use internally. And since the bibliographic details are freely available on the Web other researchers can contact the author and ask to be sent a reprint?

BR: Exactly, it is an ID/OA mandate. And yes, the embargo policy is as you describe.

RP: What percentage of the total output of the University's research would you say is now being deposited in ORBi?

BR: It is very difficult to say. First, we don't know (and have never known!) how much research we actually produce. So ORBi provides us with an opportunity to discover that for the first time.

Second, some authors have filled ORBi with their entire published output, which may consist of decades-worth of work. Others still have a very incomplete record. But our mandate will ensure that the repository is eventually filled.
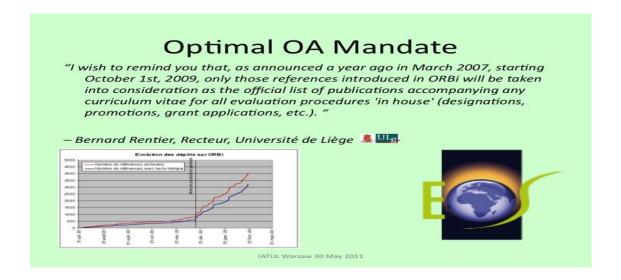
Incentives

RP: So the mandate has made it compulsory for all the University's researchers to deposit their work in ORBi?

BR: The mandate is in fact a "false" mandate. Nothing happens to those who do not deposit their publications.

RP: But you provide incentives for researchers to comply with it?

BR: What happens is that when we make decisions about promoting a researcher, or awarding a grant, we can only take into consideration those publications that the researcher has deposited in ORBi. All staff are told that publications submitted by any means (hard copy, disk, email, etc.) other than depositing them in the repository can no longer be processed in our new system, so they can no longer be taken into consideration.

RP: So ORBi is the only mechanism by which ULg researchers can submit their papers for performance review now?

BR: Correct. This means that everyone is keen to see the repository filled up, so far as their own work is concerned at least.

But it is not just a matter of researchers being worried that they will be undervalued or misrepresented publicly. As you say, we also provide some strong incentives for them to comply.

RP: Can you say something about those incentives?

BR: ORBi publishes permanently updated download statistics — a "hit parade" if you like — showing which are the papers that are most frequently downloaded, and which authors are most frequently consulted. We also provide direct links to any citations those articles attract.

The report, which is generated automatically by ORBi, is presented logically and clearly, and it conforms to the traditional values of the major research sectors. It can also be used to generate a publication list for CVs, and it can be updated and printed at any time, and in a format defined by the author.

As a result of this we have been able to demonstrate to our authors that the system has actually been designed for their own benefit, and in a way that will increase their visibility and readership.

Thus there are a number of obvious advantages to researchers if they deposit their papers in ORBi: the repository provides them with a way to disseminate their work, for free, to the whole world; it provides them with a safe and permanent archive (as much for their on-going work as for their completed work); and it provides them with a place where they can post their unpublished (and unpublishable) supporting data.

It also provides a single point of entry, but multiple output options, thereby allowing them to generate CVs and publication lists etc.; and it provides a tool to evaluate the quality of their research; and an efficient personal marketing tool.

RP: Does the University mandate apply only to journal articles, or does it include books, presentations and other forms of research output as well?

BR: Our mandate is composed of two elements:

- The references (metadata) of *all* publications of *all* ULg author published since 2002 have to be put in ORBi

- The full-text of *all* scientific articles published since 2002 and *all* doctoral theses have to be deposited. For older articles and for other types of publications (chapters, books etc.) it is optional (In practice, authors generally deposit more full-text than required!)

That said, all categories of publication are welcome, although the classification for performance evaluation purposes is extremely rigorous. A conference abstract or a popular book, for instance, cannot be included in a list of peer-reviewed international journal articles.

So, many different types of work can be deposited, but each item is clearly recognised and labelled for what it is.

Certainly my hope is that many additional types of information will be stored in ORBi — including raw data, negative results, unpublished or unpublishable results, etc. In fact, raw data can already be deposited. It's what we call "additional material", and it can be uploaded by the authors as an accompaniment to their full-text. But what is important is to label things appropriately.

RP: The deposit figures you gave me suggest there are around 25,000 records in ORBi that do not include the full-text? Is that problematic?

BR: That figure is correct. Around 60% are available in full-text, and around 50% of those are available OA. But the non-full-text items could be abstracts from conferences, or they may be works that were published before 2002. As I said, our mandate requires that any

research published after 2002 must include the full-text, but earlier papers may be abstracts only.

RP: Mandates tend to vary in their requirements. What, in your view, is the optimum mandate?

BR: Mine!

RP: Why?

BR: Because it does not impose sanctions on anyone who chooses to be refractory. Of course, they cannot expect any help or support from the institution, and they will feel largely underestimated by the authorities, by their colleagues, by external researchers, and by the public at large. But that's the only consequence of not depositing. Nevertheless, that does generally provide a sufficient stimulus to encourage everybody to comply!

The other point to make is that the repository is totally public; it is even accessible directly via a link from the staff directory. Nobody wants people to think that they have not published anything, or published less than they have actually written or co-authored.

RP: Was the introduction of an OA mandate the result of a personal initiative by you?

BR: Yes, it was.

Entirely feasible task

RP: Do researchers deposit their papers into ORBi themselves, or is the process mediated by librarians?
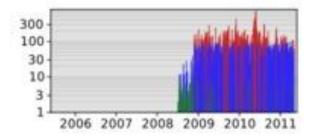
BR: We prefer that they do it themselves. In terms of quality, it is much better that way, and the deposit takes place more quickly.

Some, however, ask their secretary to do it for them, if they have one; others may even hire someone to deposit their work for them. Unfortunately, the quality of the metadata is lower in such circumstances as intermediaries are inevitably less familiar with the details of the publication.

RP: Depositing is not an insignificant task then?

BR: It can be a huge initial workload, if one has published a lot of papers, until all the publications are in. But once a researcher has reached cruise mode it is an entirely feasible task.

If people are clearly struggling to do it, however, we will provide help — usually this is when it is necessary for them to scan in and OCR old texts because the manuscripts have been lost.

ORBi activity chart

RP: Clearly the system works. Today ORBi is the [most active]() institutional repository of its type in the world (Ranking first of 1,418 IRs). But is there any evidence to show that making their papers OA has increased the impact and/or citation counts for the University's researchers? And is there any evidence that by making its research OA the University has enhanced its reputation, status or profile within the research community?

BR: At first, there was nothing to speak of, and it took a lot of convincing on my part to keep the momentum going. To help in this I used my [blog](), which is widely read within the University, and I took every opportunity I could to expound on the subject.

It has put a very heavy burden on me but it has proved worthwhile — recently I have begun to receive a lot of feedback from researchers, who say they have a clear impression that they are being read more than they were before.

Some are also now beginning to put together some solid data to show that they are cited more often than they used to be. And many report that papers that they have in the repository under temporary embargo are being requested as reprints much more often than used to happen.

Of course, this tends to be all rather impressionistic. I don't have any objective calculations to demonstrate this effect. But I think it would be difficult, if not possible, to do so convincingly anyway.

I would add that one thing many people, including myself, have noticed is that our old papers have begun to live a new life. For instance, one of my articles dating back to 1985, and which had been completely forgotten, has begun a new career, and is now being downloaded frequently!

Essential argument for OA

RP: I am told there are about 10,000 research universities in the world. According to [ROARMAP]() there are still only about 120 institutional mandates. What has the University of Liège — and the other institutions that have introduced mandates — realised that the vast majority of research institutions appear not yet to have realised?

BR: Frankly, I don't know. Perhaps the difference lies in the degree of concern felt by the university leader(s) and their skill, patience and stubbornness in persuading their authors to play the game. So perhaps one could say that the difference lies in the institution's ability to make OA philosophy a major moral value to which a majority of its members feel able to subscribe.

At the beginning here at ULg compliance was low and resistance was quite strong. Any pretext was considered good enough to avoid participating. More recently, I have begun to receive frequent positive comments about how pleasant and unexpectedly useful a tool the repository is.

RP: I guess this tells us that university leaders need to be persistent in their advocacy. But tell me, when you talk about the "degree of concern" felt by university leaders what kind of concern are you referring to? To put it another way, what is the essential argument for OA from the perspective of the head of a university?

BR: Concern about the cost of scholarly journals; concern about having an inventory of the university's production; and concern about having a showcase of the university's research performance.

RP: A number of research funders have also introduced green OA mandates, and some have established their own central repositories — e.g. PubMed Central. Do you welcome such initiatives?

BR: Establishing their own repository is certainly a useful thing for a funder to do. It is absolutely essential for them to possess copies of all the literature produced from research that they have funded. But this will always be an incomplete collection of the corpus since it will only contain the results of research that they themselves have funded. Only institutional repositories can provide complete coverage.

RP: Essentially you are talking about the difference between trying to create a centralised system (when there is no single central authority) rather than exploiting the networked nature of the Web to create a distributed model based on aggregation rather than centralisation. You are saying that the latter inevitably provides a more complete picture?

BR: Yes. And for this reason funders' repositories should really only aim to harvest from institutional repositories. To do that, of course, their repositories will need to be compatible with institutional repositories, which means that IRs also need to be built to recognised standards, and obey certain rules.

For instance, we need to develop well-defined standards to enable deposited publications to identify any funders who provided support to the researchers that produced it.

RP: Do governments have a role to play in facilitating OA? If so, what role?

BR: If they fund research, yes. Likewise, if they operate research assessment schemes to help them when deciding what subsidies to provide to research institutions they also have a role to play.

RP: Am I right in thinking that you hope to persuade the National Research Fund of Belgium to consider adopting a green mandate?

BR: Absolutely, yes. And I would like to see it directly linked with their eligibility for future grants.

Green vs. Gold

RP: You are particularly associated with green OA. What are your views on the pros and cons of green vs. gold OA?
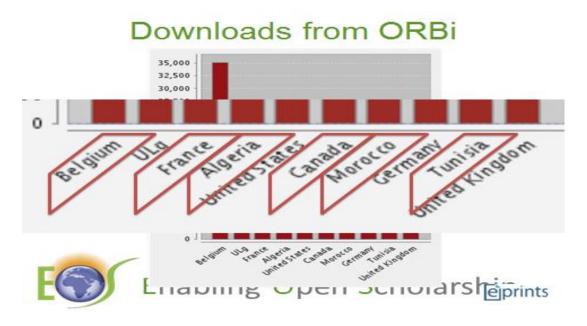
BR: Green OA is a way of responding immediately to the needs of the university, and of providing immediate visibility to an institution's researchers. If green OA grows steadily, as it currently is doing, it will lead the way to gold OA. So for me green OA is a path to OA, even if it is difficult to assess what kind of timeline we face.

RP: Publishers often argue that green OA threatens both their individual businesses and scholarly publishing at large, particularly if a large number of papers are made OA without an adequate embargo period. Do you agree that there are dangers here? If so, how can they be avoided?

BR: I do not believe it to be the case. A few examples demonstrate as much. Certainly for regional publishers, particularly in local languages like French, it is a great plus.

For instance our university presses, who were of course at first very opposed to my policy of free readership, have noticed that green OA (i.e. depositing publications in repositories like ORBi) has served to increase their profile in other French-speaking countries like France, Switzerland and Quebec.

This in turn has increased the number of subscriptions taken out by people who want to browse the entire journal, rather than just read a single article that they found in ORBi. This is an unexpected indirect effect, but it demonstrates that making articles available freely does not harm sales. Rather, it enhances their visibility outside traditional markets.

RP: What in your view is the optimum embargo period?

BR: For the reasons I describe above I do not see the need for any kind of embargo. To date this point has not been understood by publishers. They should see the immediate green OA availability of an article as a trailer for the sale of the full journal.

However, I acknowledge that publishers will view this as a risky strategy, so the benefits will need to be demonstrated over time.

In the meantime, I would say a 6-month embargo is reasonable.

RP: Does the University of Liège support gold OA?

BR: Not in a very coercive way. However, we provide an opportunity to publish OA papers directly through PoPuPS.

RP: That would be the [Portal for the Publication of Scientific Journals](#)? Would I be right in thinking that PoPuPS is a publishing platform developed to allow University of Liège researchers to publish their own journals?

BR: Yes. It is already publishing 13 gold OA journals online. And since 2006 we have also operated a programme called [Bictel/e](#). This is a repository of ULg theses. All our OA initiatives are [described](#) on the web.

We also financially support, by the way, any authors who want to publish in OA journals such as those published by BioMed Central *(*[BMC](#)).

RP: Do you mean that the University of Liège has a [Gold OA fund](#), or that it subscribes to [membership programs](#) operated by OA publishers like BMC, which allows researchers to publish OA at no cost to themselves, or at least at a discounted rate?

BR: We have a limited OA fund, but we have indeed purchased discount options at BMC, and we use the fund to support those of our researchers who publish with BMC.

Enabling Open Scholarship

RP: You are also Chairman of the organisation EnablingOpenScholarship ([EOS](#)), which was launched in September 2009. What is the purpose and mission of EOS, and what successes has it had to date?

BR: EOS aims to convince university leaders all over the world of the need for OA, and to tutor them in the process.

Apart from a few "conversions" we have not had much success so far. But we have only very recently become a legal entity under Belgian law (indeed, the process is not fully completed yet), so our activities have been somewhat limited to date.

RP: What do university leaders need to be told about OA, and how is EOS going about that?

BR: They have to understand how important it is for their institution to free itself from the burden of paying far too much to fill its libraries with journals, especially in light of the current explosion in such publications.

And they have to understand that their researchers produce, control the quality of, and consume knowledge. But while these researchers contribute to all three stages of the process, the institutions end up paying for the knowledge, and at least twice.

RP: Do you mean that research institutions (often funded by governments) create the knowledge in the first place, their researchers then produce the papers and undertake the peer review, but the institutions have to buy the knowledge back from publishers in the form of journal subscriptions?

BR: Exactly!

University leaders also need to realise that green OA is a way to achieve gold OA.

And they should see the benefit for their researchers and for their institution of providing a showcase for their work by depositing their papers in their IR. It is inconceivable nowadays that an institution can remain unaware of most of its own published research output. No factory would accept that. Those who have no interest in OA *per se* should at least see the value in a university maintaining an inventory of the work it produces.

Finally, they should understand the major contribution an IR can make to their institution's reputation.

RP: What sort of response do you get from your counterparts in other universities when you talk to them about OA?

BR: Five years ago, I used to get a very cool reception. I would be told it was far too much fuss — and for what benefit?

Today, however, there is a great deal of interest — in Belgium, France, Italy, Spain and Portugal so far.

Other rectors and vice-chancellors should now all join in so that the movement will become irresistible.

Not just a change, a global revolution.

RP: What do you think are the principle obstacles to OA today?

BR: The obstacles I see are insufficient mobilisation by university (and research centre) leaders to the cause; researchers' fear of the legal issues raised by OA; researchers' worrying that OA means giving up publishing in fashionable prestigious journals with a high reputation — journals in which they know their papers will be seen by colleagues all around the world, and which have a high impact factor and so on.

This means that what is needed is a transformation in the current culture of evaluation. Only then can we expect things to change dramatically.

RP: What would you say you have learned from your experience of introducing OA to the University of Liège?

BR: I have developed a much broader view on the principles of publication. It would take too long to explain here, but I have built up a personal philosophy on the subject. And this has led me to completely rethink the goals and methods of communicating the progress of science, and of knowledge.

I hope someday to be able to explain this more clearly. Maybe when I retire I will write a book on the subject!

RP: When and how do you think the research community will achieve universal OA?

BR: Universal OA will take much longer than I thought earlier. But every step is useful in itself.

RP: In what ways do you expect the research process to change in a world with universal OA?

BR: This is an even larger topic to discuss, and worth a second book! But I believe it will bring a lot more transparency in science, particularly when it comes to open data.

I expect a tremendous change in the way we will be doing research, and reporting it. Indeed, not just a change, a global revolution.

RP: Finally, on a personal note, your colleague — and EOS convenor — Alma Swan tells me that you are keen gardener and a superb photographer. I wonder if both of these interests could have played a role in your conversion to OA: every gardener wants a good storehouse for his produce I think; and every photographer wants to have a portfolio of their work to showcase their talents. Am I on the right track?

BR: You are completely wrong about the gardening. I just help my wife occasionally!

I do however love photography — although superb may be an overstatement (Thank you Alma!). And I agree that I have a perfect filing system for the tens of thousands of pictures I have taken over the past 43 years, and there are only very few I would not be able to find easily.

That said I have been anticipating a publication repository for my scientific work for almost as long a period of time. Fortunately, it has now become a reality and I wish it had been available all that time.

You know I am convinced that scientists today are spoiled for choice when it comes to the tools now available (including being able to know at any time who is citing your work and how), and I just wish that they would fully realise how nice and useful it is to have.

I myself am a blogger and a tweeter, so I am truly convinced that there is a new field of communication opening up in science, and we are only just witnessing the onset…

RP: That's a good note to end on. I just want to add that your photographs are indeed superb. I liked especially the photo of the three men digging up the roads of London in 1975 in order to lay utility pipes. Perhaps that is the situation that the OA movement currently finds itself in: it is in the process of creating the necessary infrastructure for the global revolution in scholarly communication you refer to. And that sometimes requires getting your hands dirty, and accepting the fact that people tend to complain about the disruption, and worry that they might fall down one of the temporary holes. But since OA is a worthwhile cause, such inconveniences will just have to be tolerated. Oh, and like all large construction projects, the task always takes much longer than originally anticipated.

Thank you for taking time to speak to me, and have fun in the garden!