Fifth Inaugural Speech

Patrick Flandrin
When the project to organise the Open Science European Conference 2022 was launched, the Académie des sciences enthusiastically offered to host it in the Palais de l’Institut de France, in its beautiful André and Liliane Bettencourt auditorium. We had long hoped that this would be possible, with its promise of direct exchanges and informal meetings. Unfortunately, the prolongation of the Covid-19 pandemic decided otherwise, and we had to move from presence to distance.

It is obviously with regret that we had to give up meeting ‘in real life’ but, to look on the bright side, we can say that what we lose in conviviality, we gain in terms of greater participation than our on-site capacity allows... The registration figures - over 2000 - speak for themselves in this respect, underlining, if it were still necessary, the great interest that the scientific community has in opening up science. Presence or distance, the Académie des sciences is happy and proud to be co-organiser of the event that brings us together during these two days and, on its behalf, I am particularly pleased to welcome you all to this moment of sharing!

When we talk about open science, there is in fact a long association between many of the principles underlying it and the Académie des sciences. Since 2009, the Académie has been committed to thinking in a very general way about the issues surrounding scientific publications. Under the impetus of Jean-François Bach and Denis Jérome in particular, it has issued several opinions and reports in this regard, both on the conditions of access to scientific production and on publication and research evaluation practices.

With regard to access first of all, open science aims to make the products and results of research, most of which come from public funds, «as open as possible and as closed as necessary», in order to democratise knowledge and share scientific advances with as many people as possible. This desire, made possible by digital advances, was clearly stated by the Académie des sciences in 2018, in a statement affirming its support for free and universal access to scientific publications. It was then renewed on the occasion of an international colloquium on Open Science Foresight that it organised in the spring of 2019, during which the
diversity of disciplinary customs and the need to take them into account for any implementation of the principles of openness were appreciated.

It is one thing to be able to access as many research products as possible as freely as possible, but scientific production is constantly increasing. We can be pleased about the increase in knowledge that this represents, but we can also be concerned about the proliferation of information of all kinds that this generates, which can quickly overwhelm us. Today, no one can hope to read everything that is written in their field!

As in any jungle, in order to find one’s way, one needs to have some reference points that help to separate the essential from the superfluous, to extract useful information from the noise. To do this, it is very tempting to rely on purely quantitative indicators: how many publications? in which journals? how many citations? While such criteria may be useful, the Académie des sciences has repeatedly expressed its reservations about an overly accounting approach to evaluation, stressing that, rather than being quantitative, evaluation must be qualitative, based on the intrinsic quality of what is at the heart of the work and not on figures derived from impersonal, simplistic metrics: excellence cannot be read in an Excel table and it is up to researchers to reappropriate the evaluation activity!

This approach is demanding for evaluators, but it should prevail generally in the higher education and research ecosystem. Favouring the qualitative over the quantitative is not only virtuous, it is also an essential springboard for encouraging fewer but better publication, for the greater benefit of all. This is a position that the Académie des sciences defends relentlessly, confident that positive developments in this direction are possible, and it is in this sense that it has signed DORA, the San Francisco Declaration on research evaluation.

However, various obstacles are holding back this virtuous movement, which can be explained in part by the very high costs of disseminating scientific knowledge and the preference given to certain closed journals considered to be very prestigious for the promotion of researchers’ careers and work. To overcome this obstacle, the Académie insists, in a very recent opinion that it has just published, on the need to change publication practices and research evaluation methods. In particular, it recommends improving the system for publishing research products and encouraging bibliodiversity. The Académie recognises that the visibility of validated research results on institutional servers must be taken into account fairly by evaluation committees. As such, it is natural that it should align its own practices with its recommendations. For example, the Comptes Rendus de l’Académie des sciences, a historical publication founded by Arago in 1835, has been available online for more than two years under the Diamond Open.
Access formula, which makes all articles permanently available worldwide, at no cost to either the readers or the authors. This is of course only possible thanks to institutional support, and I would like to thank the CNRS via the centre Mersenne⁷ ⁸.

Opening science and making it the ordinary scientific practice of tomorrow is a matter for all of us, and for the younger generations. We must make as many researchers as possible aware of the advantages and methods of open science and evaluation, starting with doctoral studies. Training students in evaluation and scientific integrity, and encouraging the introduction of teaching modules on these subjects in all doctoral schools, is essential.

The presentations and round tables of these two days will be as much a testimonial of what exists as an incentive to push further the principles of open science that we are calling for.

References

7. Six of the seven disciplinary series of the *Comptes Rendus de l'Académie des sciences* are published with the help of the Centre Mersenne. The *Comptes Rendus Palevol* series is published with the help of the Muséum national d'histoire naturelle, also in open access. https://comptes-rendus.academie-sciences.fr/