

**Alternative models for open access peer-reviewed journals**

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Scientific publication in peer-reviewed journals is the backbone of the present research system. It is the academic commons that the scientists use to produce, share and assess the scientific knowledge they produce. For the last twenty years the main peer-reviewed journals have gradually become under the control of few major publishers, whose exceptional profits rely on the work that scientists and their funding agencies offer them for free. In 2012, with a group of mathematicians, we initiated the movement 'The Cost of knowledge' (<http://thecostofknowledge.com/>) to denounce this quasi-monopolistic system and propose solutions how to recover control. We will present two of them: the 'Diamond open access' model and the platform 'Dissemin'.

Scientific publishing remains dominated by the subscription model, where institutions pay publishers in order their scientists can read scientific papers. However, the major publishers are now trying to impose the 'Gold open access' model where, in order to publish, authors or their institutions have to pay article processing charges to publishers (who fix the amount at their convenience). The 'Hybrid' model that is presently developing is even better for them, since in this case both readers and authors have to pay publishers.

In 2012 we proposed an alternative model for peer-reviewed journals where neither readers nor authors have to pay, called 'Diamond Open Access' (terminology inspired from the 'Diamond Sutra' of the British Library printed in 868 in China). It is based on three principles:

- authors keep their copyrights and publish their paper under the Creative Commons license CC-BY (only requiring the attribution of the paper to its authors),
- the editorial board owns the journal (its title and assets) and its members are scholars who accomplish the essential task of peer-reviewing for free (as it is the case today of any scientific publishing models), therefore publishers are no more journals' owner,
- if the journal is recognised to be useful to its discipline and as long as the editorial board can prove good peer-reviewing practices, the journal can be published for free using publishing platforms, which are publicly-owned and publicly-funded infrastructures designed (on the model of super-computing centres) for servicing a

large number of journals from different disciplines.

To ensure a smooth transition from subscription to open access, we think that the ‘Green open access’ model is the best solution. Today most publishers allow authors, who publish in toll-access journals, to also deposit their papers in institutional or disciplinary repositories after a certain embargo period (whose duration is decided at their convenience). Several countries (e.g., Germany and France) are presently changing their copyright law to forbid embargos or minimize their duration, since they reduce and distort the dissemination of scientific articles. Indeed, scientists might cite papers they have not been able to read, having only access to abstracts but not to full texts. We have developed ‘Dissemin’ to encourage scientists to deposit the full text of their papers as soon as this is allowed by the journal’s publisher.

‘Dissemin’ is an open source platform (<http://dissem.in>) that helps scientists to find out which articles are in open access, and where to locate them. It harvests the publication metadata, using CrossRef and BASE (Bielefeld Academic Search Engine), and identifies the authors using ORCID or disambiguates their name (for those who do not have an ORCID identifier). For each article not yet available in open access, ‘Dissemin’ checks if the journal’s publisher allows authors to deposit it in an open access repository. It then provides a very simple interface to do so in Zenodo (the OpenAIRE repository hosted at CERN and funded by the European Commission). The author has only to provide the pdf of the full text to ‘Dissemin’, which bundles it with the metadata previously harvested, and after one click only (for author to confirm deposit) the article is made open access.

‘Dissemin’ can also be used by institutions to assess the availability in open access of the publications of their scientists. As example, we recently made a prototype platform for École Normale Supérieure (ENS) Paris, see <http://dissem.in/institution/1/>. Now we would like to streamline this process and make it easy for other institutions to do their repository. Our project is run by the non-profit organisation CAPSH (Committee for the Accessibility of Publications in Sciences and Humanities). We believe the scientific community can benefit from an open source, publisher-independent CRIS-like system, whose purpose is to foster the use of open repositories.

In conclusion, we think that the ‘Green open access’ model is the best solution for smoothly accompanying the transition from subscription to open access. Indeed and in contrast to ‘Gold open access’, it preserves the chance for new innovative models to emerge. We therefore need to take time and demonstrate the viability of alternative solutions, such as the ‘Diamond open access’ model.