

## On the way to Open Science and Open Doctrine : how to share knowledge between principles, laws and implementation

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If the action is long-standing for free access to texts and caselaw by the FALM movement<sup>1</sup> (especially in common law countries) as well as by the European Union, its member states and the various signatory states of the conventions of the Hague (see in particular on this subject the conclusions and recommendations<sup>2</sup> dating from 2012 issued by these two entities), what about the free sharing of scientific knowledge both from the point of view of the legal organization of the latter and from the practical implementation of a better sharing of legal doctrine?

Principles have been in place for more than 15 years. The Open Access Initiative announced in 2002 in Budapest and developed in 2003 in the Berlin Declaration<sup>3</sup> opened the way (see on this subject, In the shadow of Oldenburg, communication<sup>4</sup> of Mr. Jean Claude Guédon). This gradually translated into legal norms. Starting with the recommendation of the European Union, transformed into a mission with a permanent site<sup>5</sup> "Horizon 2020". All these actions have set themselves the goal of the widest possible sharing of knowledge, without hesitating to come into conflict with the economic models in place.

In France, article 30 of the Law for a Digital Republic<sup>6</sup> constitutes the first result of the work of the activists of digital commons<sup>7</sup>. But this measure is poorly applied, there is little publicity on the part of the public authorities, and none on the part of the players in the knowledge market. Clear principles, texts that follow, and a laborious concrete transposition. Would this be a symbolic configuration of Open Science? Will this change? We can hope for it. The French government has confirmed its commitment<sup>8</sup> to the development of open science in the Etalab 2018-2020 action plan.

This intervention will present :

I - The Organization of Open Science in France conditioned almost totally by the permanent international confrontation with the economic models of the major publishers, each adapting itself to the successive evolutions of the other - but also the practical steps to guarantee a capture and effective access to shared documents

II - Its concrete implementation applied to the world of French legal knowledge

### I. Open Science in France

Open science means free access online to any outputs of publicly funded scientific research (blogs, peer-reviewed, articles, data, software, hardware, ...). It is gaining strength worldwide, thanks to more than 20 years of lobbying: first by librarians, then by public funding agencies, and more recently by researchers. After 20 years of resistance by publishers, today open access to peer-reviewed articles is accepted by the few major publishers who control the market (*Elsevier, Springer Nature, Wiley-Blackwell* ...). In order to preserve their huge margin profits, typically 40% (*i.e.*, more than those of *Google* or *Apple*), they have designed the “gold open access” model, where readers no longer pay to access articles, but researchers (or their institutions) have to pay them “article processing charges”. Of course, their amount is decided by the publishers themselves.

For more than thirty years the *Centre national de la recherche scientifique* (CNRS) was the world’s largest producer of peer-reviewed articles, but in 2017 the Chinese Academy of Science became ranked first, CNRS retrograded to second and Harvard University to third (<http://www.scimagoir.com/rankings.php?year=2011>). In any case, the leading position of CNRS means that it cannot afford to pay for publishing without facing the risk of bankruptcy, or being obliged to drastically reduce its production of articles. Unfortunately, the strategy of publishers is to impose the “gold open access” model in order to keep their control of scientific publications. This strategy of publishers has managed to confuse many researchers who understand “open access” as meaning “gold open access”. CNRS does not want to give publishers complete control over the dissemination of research results and therefore strongly supports alternative models. Indeed, many public institutions are rich enough to provide free services to researchers in the form of publishing platforms (“diamond open access”) and archiving platforms (“green open access”), as they already do for instance with computing centers and networks. Thanks to these platforms researchers can freely share and preserve their research outputs.

In 1999, *Marin Dacos* developed the platform <http://revues.org> with the open source software *Lodel* (under GNU GPL License) that he co-created. In 2007 CNRS hired him to create the *Centre pour l'Édition*

*electronique Ouverte* (CLEO) in Marseille to develop the platform *OpenEdition* (<https://www.openedition.org/>). In 2018 CLEO published in open access 5426 books, 482 journals, 2612 blogs and 38431 announcements of conferences. Standard services are free for both readers and authors, and only additional premium services are charged.

In 2014, *Antonin Delpuech*, then student in computer sciences at *Ecole normale supérieure* (ENS) in Paris, created the open source platform *Dissemin* (<https://dissem.in>) to help researchers to deposit their articles in open repositories, his motto is : 'spot your own paywalled papers, liberate them in one click'. In 2015 he created, with two other students and a researcher from ENS, the non-profit association *Committee for the Accessibility to Publications in Sciences and Humanities* (CAPSH) that supports *Dissemin's* development. Presently *Dissemin* harvests about 100 millions scientific articles from many research fields and institutions worldwide, using various metadata sources (e.g., CrossRef and BASE).. *Dissemin* provides researchers with a simple interface to locate and download articles already in open access and, for those which are not, it allows their authors to upload them in open repositories. Presently *Dissemin* supports three open access repositories which are well-indexed, metadata-rich and owned by a public or a non-profit institution: Zenodo funded by the European Commission (<https://zenodo.org>), Hyper Articles en Ligne (HAL) funded by CNRS (<https://hal.archives-ouvertes.fr>) and Open Science Framework (OSF) funded by the US National Science Foundation (<https://osf.io>). *Dissemin's* source code is written in *Python* and available for free under an open source license on <https://github.com/dissemin/dissemin/>.

In 2017, the French policy to foster open science has been clearly stated in the *Jussieu Call for Open Science and Biodiversity* (<http://jussieucall.org>). Its goal is the 'development of innovative scientific publishing models [...], open source tools, [...] a secure and stable body of law across different countries to facilitate the availability of text mining, [...] national and international infrastructures which generate the preservation and circulation of contents'. It explains that its 'primary aim should be to pool local and national initiatives or to build an operational framework to fund open access publishing [...] and address the needs of the scientific community'. More than 120 institutions from many different countries have already signed it, and others are welcome to join them.

## **II. Towards the Open Doctrine in Law**

The French situation of free access to the Doctrine progresses little by little since the creation of the first free legal journals, in 1996 after the opening of the Internet in France: the magazine Neptunus on university initiative and the newsletter of the Court of Cassation on public initiative. In 20 years more than a hundred magazines<sup>9</sup> have emerged. These magazines offer quality content. At the same time, university research has changed its regulatory context to get its actors to report and then submit their work in digital databases created for this purpose, as was the case for other disciplines in the context of Open Science.

This evolution is at a turning point. How to manage to concentrate in a same digital place the multitude of works published online in various forms: articles, memoirs, theses. The conservation of these funds at this stage is by no means guaranteed. The platform available to researchers is not yet satisfactory, both for the ease of filing, the rigorous description of documents, the quality of digital research operable thereafter, and finally the official recognition and rating of research by the institutions supervising these researchers. How to get law researchers to submit their work in ONE common platform? Which platform to choose? How to improve it?

It is to better negotiate this turning point that the association Open Access has launched its Open Doctrine program<sup>10</sup>.

Since the beginning of 2018, three axes of the program have emerged :

- A pedagogical axis: to inform and train at best all legal researchers to obtain a systematic repository of their work in a single group of servers
- A technical axis: to ensure a unified, reliable and sustainable integration of these funds, to improve their access
- An institutional axis: promote open access to works with the help of university institutions, work on the valuation of open deposits.

To promote this action and to help open the necessary dialogues will be symbolically created a thesis prize concerning only the legal theses to the freely accessible full text.

## **Conclusion**

Last episode of this confrontation / negotiation of a world of knowledge in profound mutation: researchers in artificial intelligence decide not to participate<sup>11</sup> in a new journal because its operation is contrary to the

principles of open (source and access). Will a dialogue resulting from approaches similar to that attempted by Open Law, resolve this conflict and show a way for Open Science in a viable economic context?

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<sup>1</sup> Declaration on Free Access to Law <http://www.worldlii.org/worldlii/declaration/>

<sup>2</sup> Access to Foreign Law in Civil and Commercial Matters, Conclusions and Recommendations, European Commission & Hague Conference on Private International Law, 2012, [https://assets.hcch.net/upload/foreignlaw\\_concl\\_e.pdf](https://assets.hcch.net/upload/foreignlaw_concl_e.pdf)

<sup>3</sup> Berlin Declaration on Open Access to Knowledge in the Sciences and Humanities, 2003, <https://openaccess.mpg.de/Berlin-Declaration>

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<sup>4</sup> A l'ombre d'Oldenburg : Bibliothécaires, chercheurs scientifiques, maisons d'édition et le contrôle des publications scientifiques, ARL Meeting, Toronto, Mai 2001, Jean-Claude Guédon, Université de Montréal <https://halshs.archives-ouvertes.fr/halshs-00395366/document>

<sup>5</sup> Horizon 2020 - research and innovation framework programme, European Commission, <http://ec.europa.eu/research/participants/portal/desktop/en/home.html>

<sup>6</sup> Loi n°2016-1321 du 7 octobre 2016 pour une République numérique <https://legimobile.fr/fr/lr/jorf/2016/10/8/2016-1321/>

<sup>7</sup> voir notamment les commentaires de M. Lionel Maurel sur son blog SILEX, 31 octobre, Open ACCESS, quelles incidences de la Loi République numérique ? <https://scinfolex.com/2016/10/31/open-access-quelles-incidences-de-la-loi-republique-numerique/>

<sup>8</sup> Etalab, plan d'action Gouvernement Ouvert 2018-2020, engagement 14 construire un Écosystème de la science ouverte <https://gouvernement-ouvert.etalab.gouv.fr/pgo-concertation/topic/5a1bfc1b498edd6b29cb10d4>

<sup>9</sup> voir une présentation de ces revues dans le Wiki de l'association Juriconnexion [http://www.juriconnexion.fr/wiki/index.php?title=Revues\\_libres](http://www.juriconnexion.fr/wiki/index.php?title=Revues_libres)

<sup>10</sup> <http://openlaw.fr/blog/open-doctrine-nouveau-programme-open-law>

<sup>11</sup> Tech Giant AI Researchers Boycott Nature 'Machine Intelligence' Journal <https://www.forbes.com/sites/samshead/2018/04/30/tech-giant-ai-researchers-boycott-nature-machine-intelligence-journal/#52d54bf25e01>