



Another future for peer-reviewed scientific publication

Marie Farge

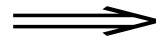
*Centre National   la Recherche Scientifique (CNRS)
and Ecole Normale Sup rieure, Paris*

*May 25th 2015
National Library of Sweden,
Stockholm*

What is scientific publication?

Scientific research is a collaborative endeavour, in both space and time, that advances through discussions, seminars, conferences and published peer-reviewed articles.

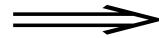
Publishing means making scientific results publicly available for evaluation and use.



This guarantees the validation, reproduction, transmission and conservation of scientific results for the advancement of knowledge.

Who has access to scientific publications ?

Only researchers working in institutions and countries rich enough to afford the very costly subscriptions and Article Processing Charges imposed by publishers.



Researchers working in companies, or in developing countries, high-school teachers, and all citizens who finance public research cannot read scientific publications.

Principle of intellectual commons :

Ideas are not of the same nature as material products.

Ideas are only fruitful if they are exchanged, discussed, criticised, improved, reproduced and explained.

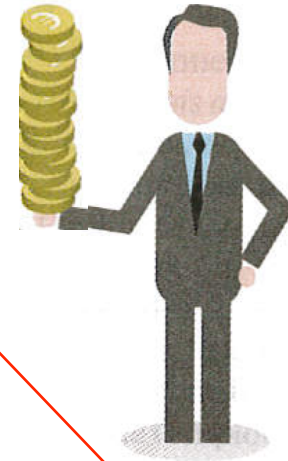
Moreover, when you share your ideas you don't lose them.

Ideas are not goods but intellectual commons.

How are peer-reviewed articles produced ?

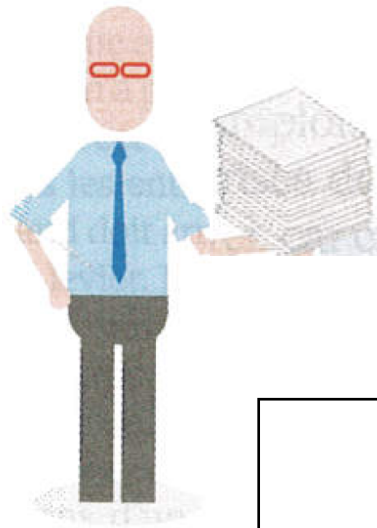


Scientists **write papers**,
prepare them in final format,
review papers of their colleagues,
and are **editors of scientific journals**.



After papers have been accepted
by reviewers and editors,
publishers put them online,
insure their visibility,
occasionally **print them**,
and **sell them**.

this is paid
by taxpayers



Librarians negotiate subscription contracts,
pay them, **control access** to the journals
and **curate the collections**.

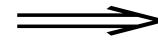
Scientists give their copyright for free!



©L'Obs

30-40% profit !

Before publishing the accepted papers,
publishers require scientists to give them
their copyright for free.

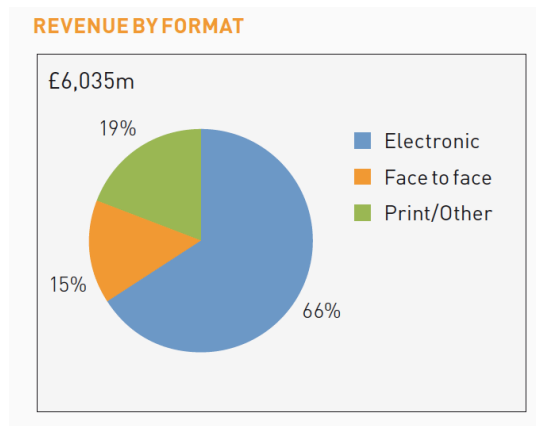


Publishers own the intellectual property,
of the text, figures and data contained in papers
(for more than 100 years), they are thus able to
sell articles at the prices and conditions
they set, with confidential contracts.

Publishers also own scientific journals,
plus all derivative products (such as databases),
plus the bibliometric statistics used to evaluate
research projects and scientists' careers.

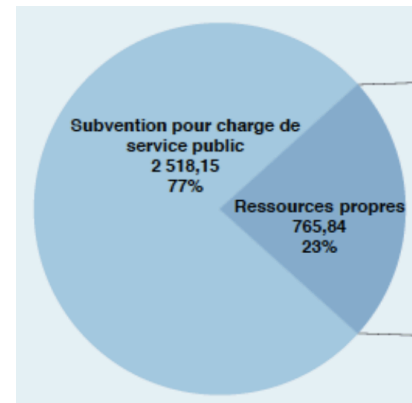
3 companies control scientific publishing

Reed-Elsevier, Springer-Macmillan and Wiley-Blackwell



Reed-Elsevier revenue in 2013:
8.5 Billions €

>>



CNRS budget in 2012:
3.3 Billions €

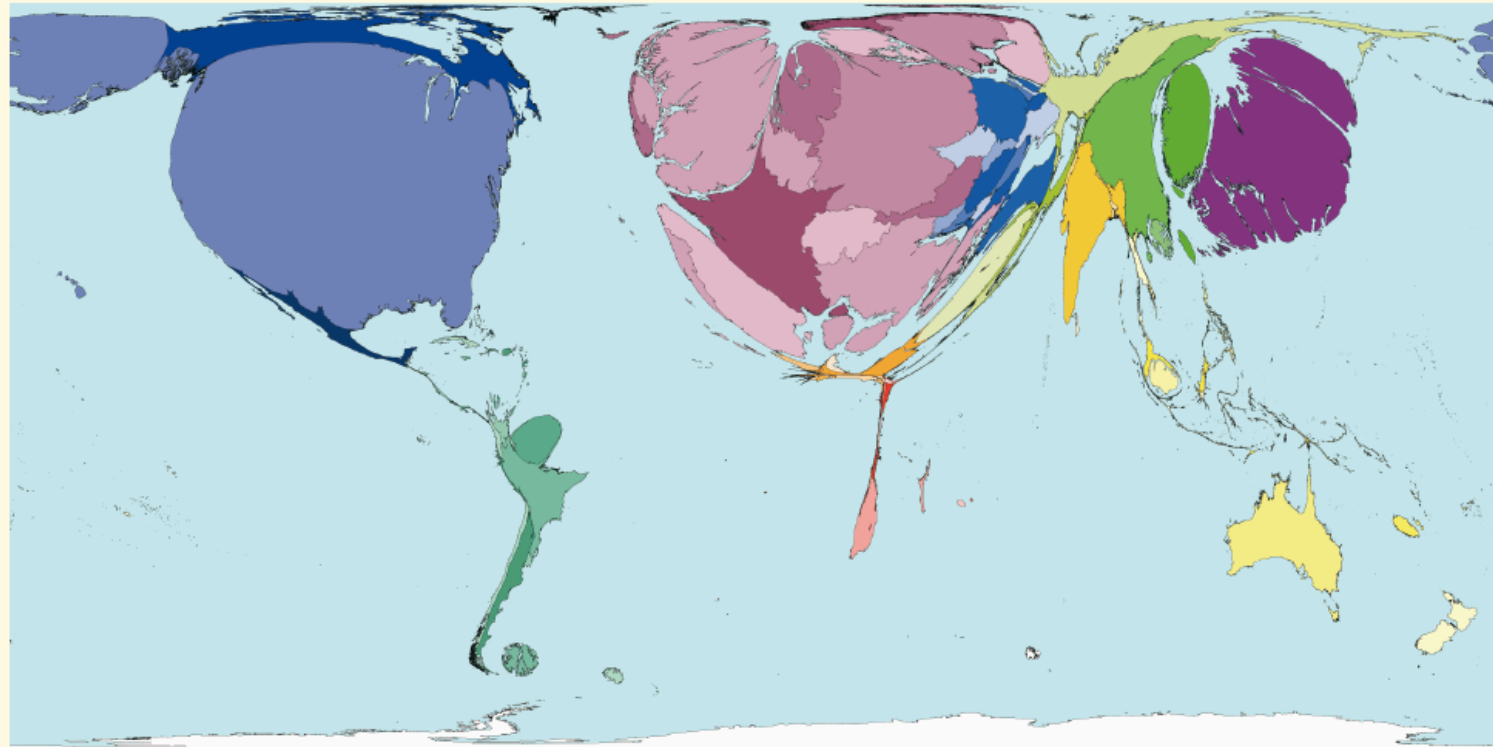
Revenue of Elsevier for peer-reviewed journals in 2013: 2.7 Billions €
Profit: 0.8 Billions € and Profit margin: 39% (+6% compared to 2012)

<http://www.reedelsevier.com>

<http://www.dgdr.cnrs.fr>

Publishers now impose the **Gold Open Access** publishing model, where **authors should pay** them costly **Article Processing Charges**.

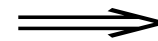
Density of scientific papers per country



<http://www.worldmapper.org>

1	→	1	→	1	→	Centre National de la Recherche Scientifique*
2	→	1	→	1	→	Chinese Academy of Sciences*
3	→	1	→	1	→	Russian Academy of Sciences*
4	→	1	→	1	→	Harvard University
5	→	2	→	1	→	Helmholtz Gemeinschaft*
6	→	3	→	2	→	Max Planck Gesellschaft*
7	→	2	→	1	→	University of Tokyo

<http://www.scimagoir.com>



With the **Gold Open Access** model
researchers might get **bankrupted**
or **stop publishing!**

2 companies control bibliometrics

- Thomson-Reuters with Web of Science and InCites,
- Elsevier with Scopus and SciVal.

*Thomson-Reuters, InCites, Whitepaper using bibliometrics:
A guide to evaluating research performance with citation data
http://wokinfo.com/media/mtrp/UsingBibliometricsinEval_WP.pdf*

`Bibliometrics (sometimes called Scientometrics) turns the main tool of science, quantitative analysis, on itself.'

In order bibliometrics be scientific,
data and algorithms should be open,
tested and validated in an objective way,
but companies refuse this to keep control!

Some publishers manipulate bibliometrics

Form sent by JFS (Journal of Fluids and Structures, Elsevier) to authors requiring them to cite several recent papers published in JFS. This is a dirty trick to increase the Impact Factor of the journal.

List of corrections that must be made

Please attend to the items ticked

1. Consult a recent issue of JFS, to see what the required style and format have to be
2. Indicate who is the corresponding author by an asterisk in the list of authors
3. Submit a double-spaced manuscript
4. Do not give titles (e.g. Assoc. Professor, Ph.D. student or whatever)
5. Add affiliation, immediately below list of authors; e.g. Department of ..., University ..., location, postal code, etc.
- ...
19. Preferably, symbols should be in italics in the figures too
20. Before the figures, there should be pages listing the figure captions, double-spaced also. Do not capitalize every word.
21. You must cite, and include in the references, some JFS papers, including some published recently (in 2010 and 2011).



Journal Impact Factor pervades publication

To address this issue, a group of editors and publishers of scholarly journals met during the Annual Meeting of The American Society for Cell Biology (ASCB) in San Francisco, CA, on December 16, 2012. The group developed a set of recommendations, referred to as the *San Francisco Declaration on Research Assessment*. We invite interested parties across all scientific disciplines to indicate their support by adding their names to this Declaration.

<http://am.ascb.org/dora/>

The Journal Impact Factor is frequently used as the primary parameter with which to compare the scientific output of individuals and institutions. The Journal Impact Factor, as calculated by Thomson Reuters, was originally created as a tool to help librarians identify journals to purchase, not as a measure of the scientific quality of research in an article. With that in mind, it is critical to understand that the Journal Impact Factor has a number of well-documented deficiencies as a tool for research assessment. These limitations include: A) citation distributions within journals are highly skewed [1–3]; B) the properties of the Journal Impact Factor are field-specific: it is a composite of multiple, highly diverse article types, including primary research papers and reviews [1, 4]; C) Journal Impact Factors can be manipulated (or “gamed”) by editorial policy [5]; and D) data used to calculate the Journal Impact Factors are neither transparent nor openly available to the public [4, 6, 7].

Journal Impact Factor is an index publishers use to regulate market, but it pervades the way researchers share their results.

Researchers want to recover control

1

Authors should keep their copyright and make their papers available in free (gratis and libre) open access under a Creative Commons license CC-BY.

2

Journals should be owned by their editorial board in charge of the peer-reviewing, while editors and referees will continue to do this for free.

3

Funding agencies should no longer pay subscriptions and Article Processing Charges directly to publishers as long as market is oligolistic with secret clauses.

Diamond Open Access Model

'... neither author nor reader has to pay and the journal does not belong to the publisher but to the editorial board. The dissemination of the peer-reviewed articles is done through unit services whose role is to make them accessible for free.'

Marie Farge, Note to the French Minister of Research, 29 June 2012

http://wavelets.ens.fr/BOYCOTT_ELSEVIER/MARIE_FARGE



*Diamond Sutra.
The earliest complete survival
of a dated printed book.
China, 11th May 868*

British Library, London

Publicly-owned publishing platforms

1

Funding agencies should provide to the scientific community publicly-owned platforms, developed in open source software, for editing and publishing peer-reviewed journals, with the help of librarians, and publishers as subcontractors.

2

Such publishing platforms would offer to anyone in free (gratis and libre) open access scientific publications, reusable under CC-BY licenses, without authors having to pay to publish their results.

3

Funding agencies would thus control the quality of peer-reviewing, by selecting the journals having good practices and reputable editors.

2 publicly-owned publishing platforms



Created in 1999
it publishes
1251 journals
in Open Access
financed by public
agencies from Brazil
(FAPESP, CNPq,
BIREME) and from
other countries
(e.g., Spain).



Created in 1999
it publishes
399 journals
in Open Access
financed by French
public agencies
(CNRS, EHESS, BSN,
Aix-Marseille and
Avignon universities).

Research as seen by Thomson-Reuters

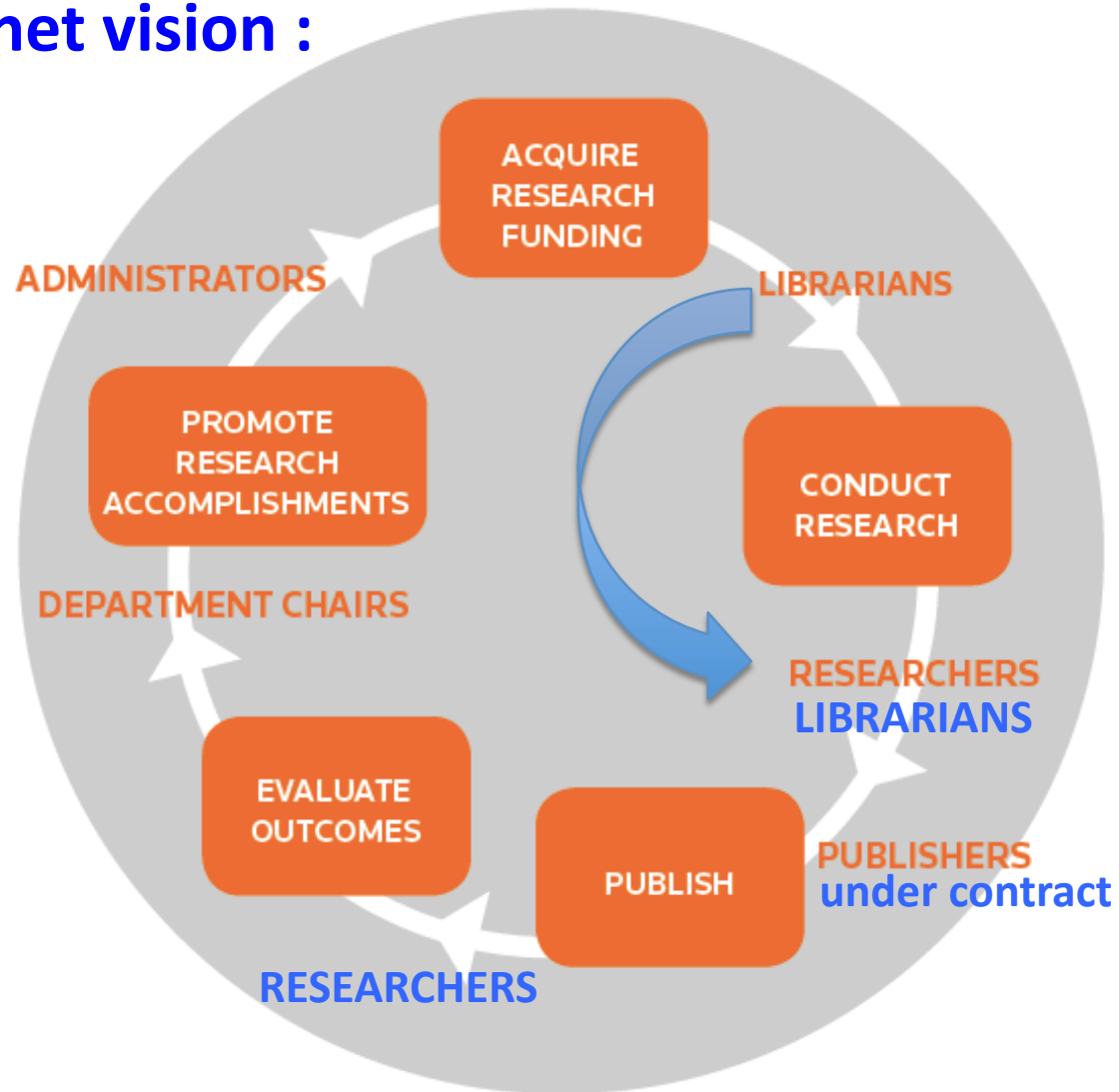
http://wokinfo.com/media/mtrp/UsingBibliometricsinEval_WP.pdf



**This is a
pre-Internet vision...**

THERE ARE VARIOUS ROLES IN THE RESEARCH PROCESS, EACH WITH INDIVIDUAL YET RELATED NEEDS

A post-Internet vision :



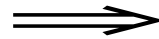
Librarians and publishers under contract will help researchers to peer-review and publish papers online using publishing platforms that funding agencies will provide them as a free service.

Conclusion

Scientific publishing today :

Investments for writing and peer-reviewing papers are public, but ownership of journals and profits from subscriptions and from Article Processing Charges are private.

Publishers should become service providers, to publicly funded and publicly owned publishing platforms, but no longer own the intellectual property of papers and journals.



Scientific publishing tomorrow :

Scientific papers will be available in free (gratis-libre) open access, and their content usable, to anyone and to any institution, for the sake of the advancement of knowledge.

For more information

<http://wavelets.ens.fr>

Click on **Publications**

Paper n° **312** : *Avis sur les relations entre les chercheurs et les maisons d'édition scientifique*, Comité d'Ethique du CNRS, 2011

Paper n° **307** : *Oh! Une idée, c'est si rare!*
Wissenschaftskolleg zu Berlin, 2011

http://wavelets.ens.fr/OAC_ENS_2014

2nd Open Access Colloquium, ENS Paris, 2-3 July 2014

http://wavelets.ens.fr/BOYCOTT_ELSEVIER

Declarations, blogs, newspapers, conferences, videos, interviews, mails related to the movement *The Cost of Knowledge*, that launched a boycott of Elsevier in 2012, followed by >15000 researchers worldwide.