Alternative Models for Open Access Scientific Publication

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*In collaboration with **Antonin Delpeuch**, ENS Paris*

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Cologne, Germany

Who has access to scientific articles ?

Only researchers working in institutions and countries rich enough to afford very costly subscriptions to journals.

Researchers working in companies or in poor institutions, teachers, students, retired researchers, and all citizens who finance public research do not have access to most scientific articles.

Principle of Knowledge as a Commons :

When you give an idea, you do not lose it.

An article which is not read is lost.

$\Longrightarrow$

Knowledge is not a product to be traded,

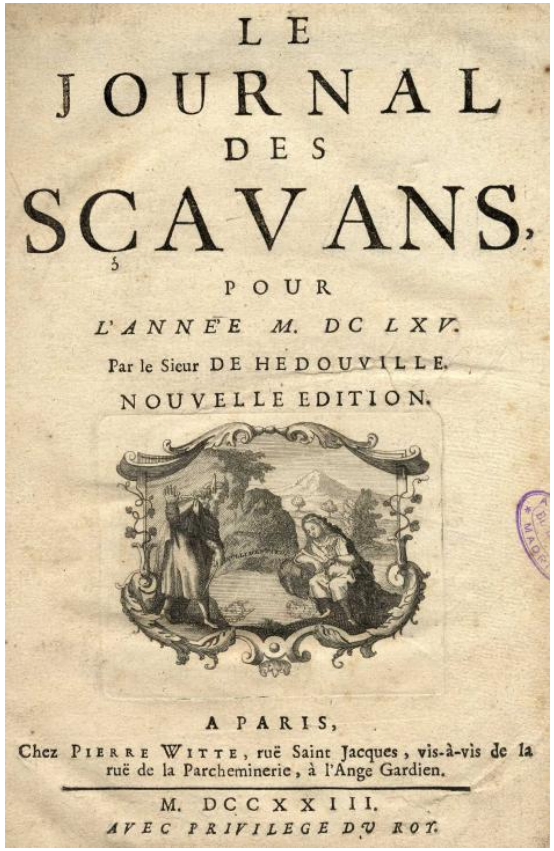
but a Commons to be shared.

Charlotte Hess and Elinor Ostrom
Understanding knowledge as a Commons
MIT Press, 2006

Elinor Ostrom, Nobel Prize in economic sciences for 'her analysis of economic governance, especially the Commons, 2009

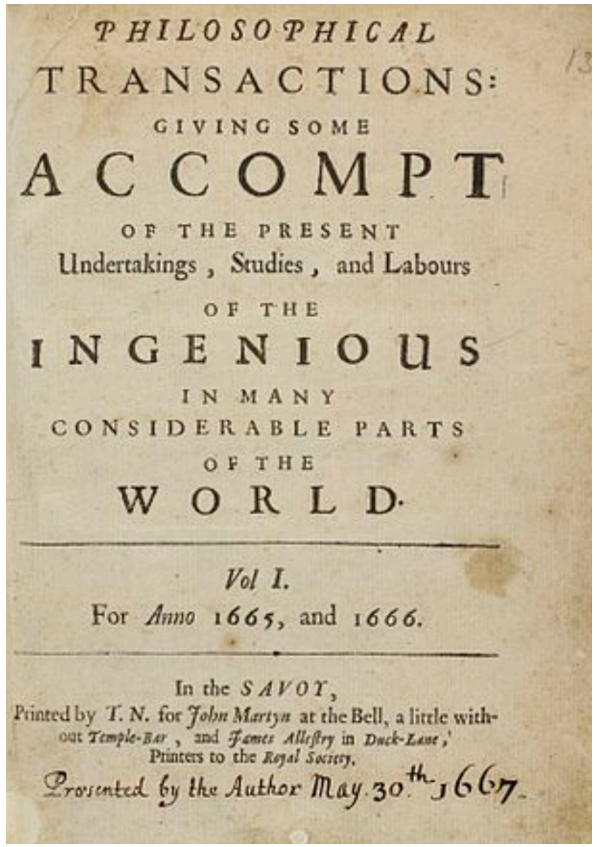
Peer-reviewed scientific journals

Scientific publication in peer-reviewed journals
is the backbone of the present research system.
It was founded in 1665 for sharing ideas and results.
It is also used today for evaluating researchers and projects.



LE
JOURNAL
DES
SCAVANS,
POUR
L'ANNÉE M. DC LXV.
Par le Sieur DE HEDOUVILLE.
NOUVELLE EDITION.

A PARIS,
Chez PIERRE WITTE, ruë Saint Jacques, vis-à-vis de la ruë de la Parcheminerie, à l'Ange Gardien.
M. DCC XXIII.
AVEC PRIVILEGE DU ROY.



PHILOSOPHICAL
TRANSACTIONS:
GIVING SOME
ACCOMPT
OF THE PRESENT
Undertakings, Studies, and Labours
OF THE
INGENIOUS
IN MANY
CONSIDERABLE PARTS
OF THE
WORLD.

Vol I.
For Anno 1665, and 1666.

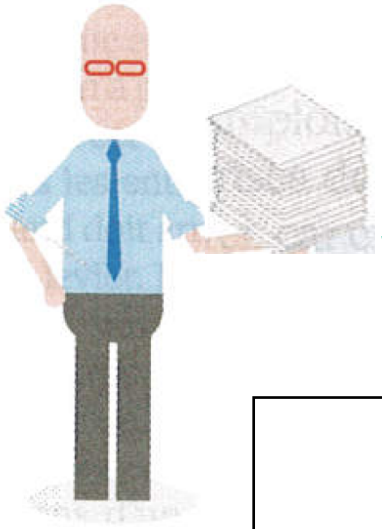
In the SAVOY,
Printed by T. N. for John Martyn at the Bell, a little without Temple-Bar, and James Allestry in Duck-Lane,
Printers to the Royal Society.
Presented by the Author May. 30th. 1667.

How are peer-reviewed articles produced ?

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

this is paid
by taxpayers

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



Librarians negociate subscription contracts,
pay them, control access to the journals
and curate collections of articles.

Researchers give their copyright for free!

30-40%
profit margin!

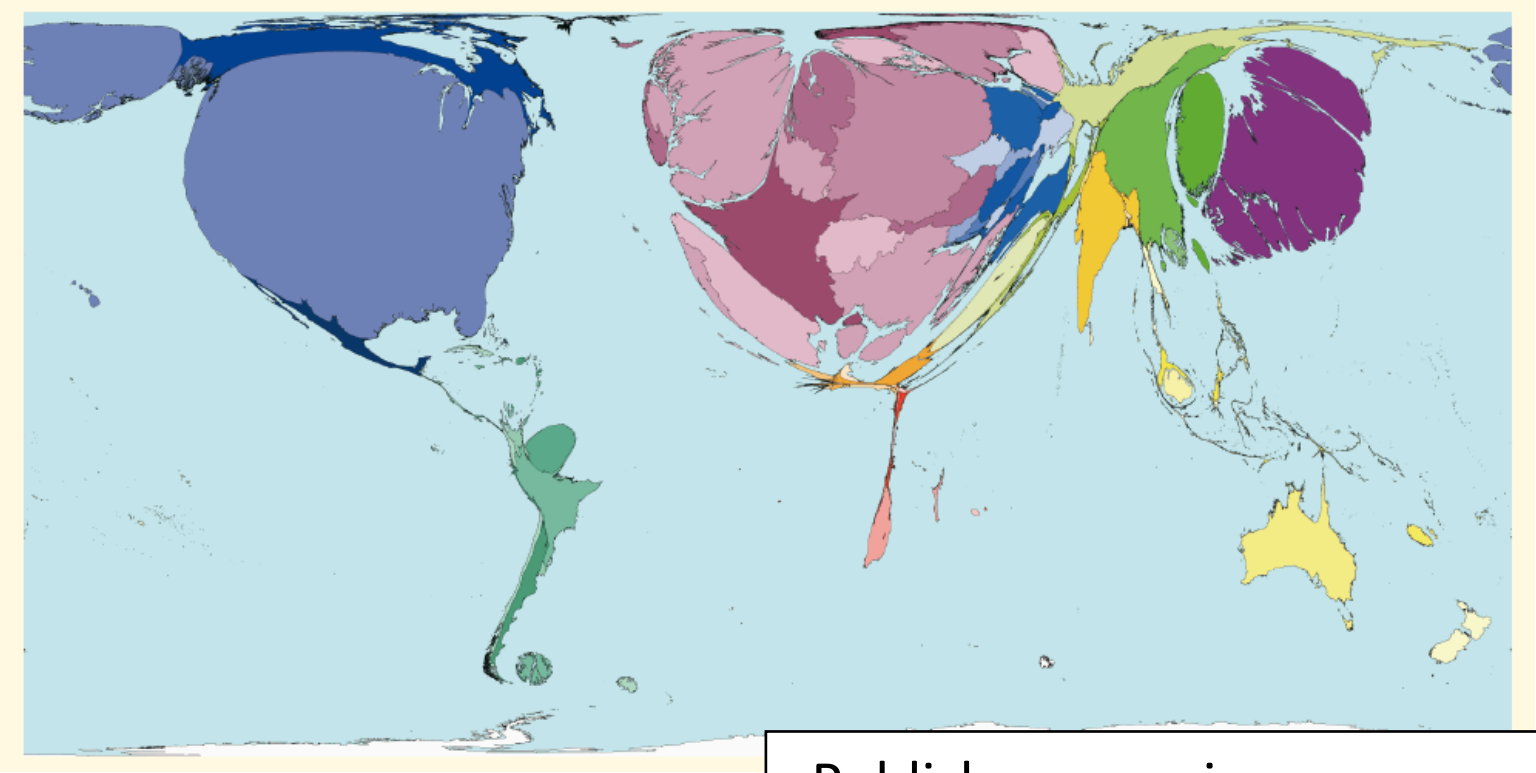
Before publishing the accepted papers,
Publishers require that researchers
transfer them their copyright for free.

$\Longrightarrow$

Publishers own intellectual property of
the text, figures and data contained in articles,
this for more than 100 years. They can thus
sell articles at the prices and conditions
they set, with non disclosable contracts.

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

Density per country of published articles



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

Publishers now impose on us their
Gold Open Access model,
which flips subscription costs
into article processing charges

$\Longrightarrow$

researchers might get bankrupted
or stop publishing!

We need alternative models

`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 for the French Minister of Research, 29 June 2012

⟹

Diamond Open Access

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

British Library, London

The diamond open access model

1

Authors keep their copyright and make
Their article available in open access
using a Creative Commons license CC-BY.

2

The editorial board owns the journal (title and assets) while
editors and referees peer-review articles for free,
since it is part as their academic duty.

3

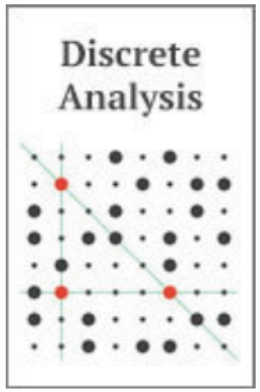
The publisher is no more the journal's owner but
becomes a service provider, that the editorial board
selects and hires by contract.

Two diamond open access journals

//www.ipol.im *ISSN : 2105-1232* *DOI : 10.5201/ipol*

IPOL Journal · Image Processing On Line

Founded in 2010 by Jean-Michel Morel, it has 41 editors.
It is financed by CNES, ERC and 13 institutions from 5 countries.
Each article contains the text, the algorithm and its source code,
which all are peer-reviewed. The journal platform also provides
online demonstration facility and an archive of experiments.
IPOL is thus an Open Science and Reproducible Research journal.



http://discreteanalysisjournal.com *ISSN : 2397-3129*

Founded in 2015 by Tim Gowers, it has 12 editors.
It is an overlay journal on the open repository arXiv.
It is financed by Cambridge University (10$/submission).

We need publishing platforms

1

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

2

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

3

Reading and publishing will be free to anyone.
Publishing platforms will allow researchers to experiment new ways of publishing, *e.g.*, open peer-reviewing.

Two publicly-owned publishing platforms

Brasil
+
África do Sul
Argentina
Brasil
Chile
Colômbia
Costa Rica
Cuba
Espanha
México
Peru
Portugal
Venezuela
+
Bolívia
Paraguai
Uruguai

SciELO
Scientific Electronic Library Online

Created in 1999,
it publishes
1249 journals
in Open Access,
financed by public
agencies from Brazil
(FAPESP, CNPq,
BIREME) and from
15 countries.

revues.org
CENTRE POUR L'ÉDITION ÉLECTRONIQUE OUVERTE
CENTRE FOR OPEN ELECTRONIC PUBLISHING

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

Green open access is a wise model

Today researchers are very dependent on
'The Most Profitable Obsolete Technology in History'
because publishers control bibliometry and *'Academic Capital'*,
they use as marketing tools to insure their control.

Vincent Larivière, Stéphanie Haustein, Philippe Mongeon
The Oligopoly of Academic Publishers in the Digital Era
PLOS one, 10th June 2015

The gold open access model leads to the creation
of predatory journals of very poor quality, even fake journals.
To avoid this and to guarantee a smooth transition to open access,
researchers would like to preserve the main traditional journals
which are useful, having a good reputation and good practices.

$\Longrightarrow$

The wisest solution is the green open access model!

Dissemin to develop green open access

http://dissem.in
//association.dissem.in
https://github.com/dissemin

‘Spot your own paywalled papers.
Liberate them in one click!’

To find the papers of one researcher

Bienvenue sur dissemin

Dissemin est un service gratuit pour aider les chercheurs à vérifier que leurs publications sont librement accessibles pour leurs lecteurs. Notre service identifie les papiers qui ne peuvent être obtenus qu'avec des souscriptions payantes, et vous permet de les mettre en ligne en quelques clics sur Zenodo, un dépôt innovant soutenu par l'UE.

Vous hésitez toujours ? Lisez ce qui suit ou jetez un œil à la FAQ.

Analyser mes publications ou Chercher un collègue

par nom Peter Sewell

ou par ORCID identifiant (par exemple, 0000-0001-2345-6789)

Recherche

David Kaloper-Meršinjak, Hannes Mehnert, Anil Madhavapeddy, **Peter Sewell** 2015

Supplementary material for the publication "Not-quite-so-broken TLS: lessons in re-engineering a security protocol specification and implementation"

Télécharger | Zenodo.

Texte intégral: Indisponible

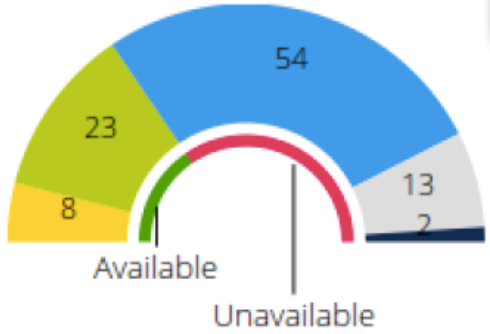
Maison d'édition: Association for Computing Machinery (ACM)

Prépublication : dépôt autorisé. Mettre en ligne

Postdocument : dépôt autorisé. Mettre en ligne

Version publiée : dépôt interdit.

Policy details (opens in a new window). *Data provided by* SHERPA/RoMEO

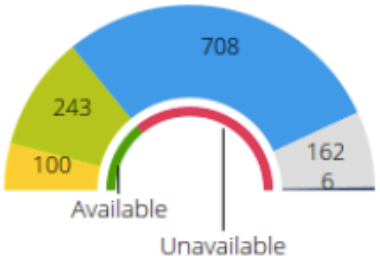


- Available from the publisher 8
- Available from the author 23
- Could be shared by the authors 54
- Unknown/unclear sharing policy 13
- Publisher forbids sharing 2

To find the papers of an institution

http://dissem.in/institution/1/

Département de géosciences



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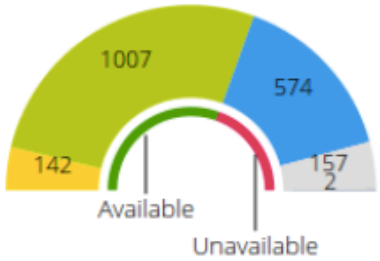
- Publisher forbids sharing 6

Département d'informatique



- Available from the publisher 142
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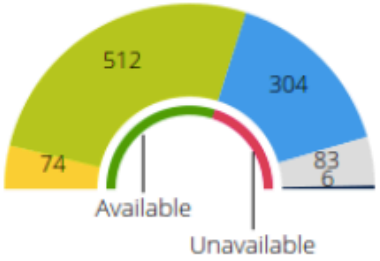
- Publisher forbids sharing 2

Département de mathématiques et applications



- Available from the publisher 74
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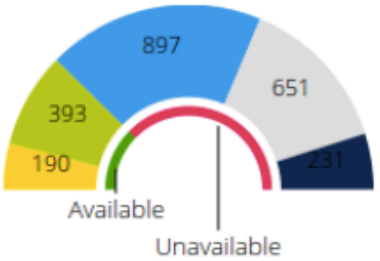
- Publisher forbids sharing 6

Département de chimie



- Available from the publisher 190
- Available from the author 393
- Could be shared by the authors 897
- Unknown/unclear sharing policy 651
- Publisher forbids sharing 231

Example of four departments of Ecole Normale Supérieure Paris

The team Dissemin/CAPSH

Dissemin is supported by the nonprofit association CAPSH
(Committee for the Accessibility of Publications
in Sciences and Humanities) founded on 5th September 2015.

Antonin Delpeuch

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Antoine Amarilli

M. F.

Thomas Bourgeat

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,
without having the intellectual property of scientific articles, journals,
peer-reviewing exchanges, publishing platforms and bibliometric data.

$\Longrightarrow$

Scientific publishing tomorrow :

The European Commission should maintain Zenodo and OpenAIRE
and offer us publishing platforms, as parts of the Open Science Cloud.
We need those tools to develop Knowledge as a Commons.