

Scholarly Communication and Open Access

6th International PhD Summer School

13 Jul 2022 | KTU | Lithuania

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- Background of scholarly communication
- What is wrong with scholarly publishing today?
- Origins and models of Open Access
- Open licences for reuse
- Open Access via Plan S
- Rights Retention Strategy
- Transformative Agreements
- New publication models
- Discussion on Open Access



A photograph of a fragment of a papyrus scroll. The fragment is made of light brown, fibrous material and contains handwritten text in dark ink. The text is written in Greek and is arranged in several lines. On the right side of the fragment, there is a small diagram consisting of a square with a smaller square inside it, and some additional markings.

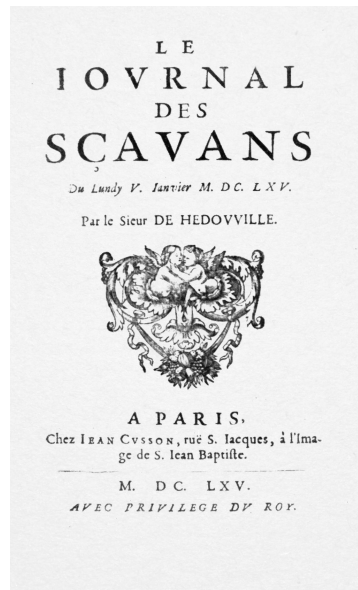
Learned societies 350 years ago

Journal des sçavans

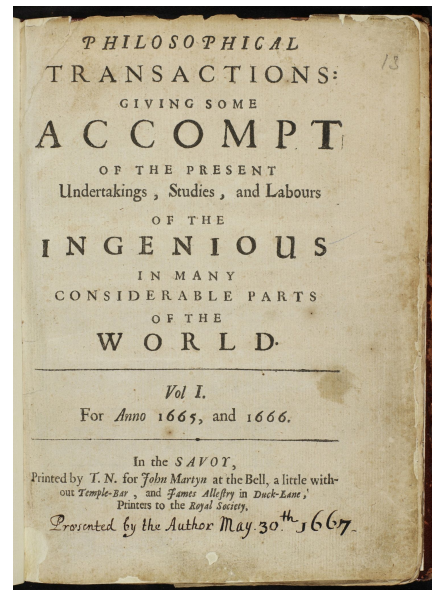
- Monday, 5 January **1665**
- Louis XIV „Le Roi Soleil“, Denis de Sallo, Versailles, Racine, Molière, ...

Philosophical Transactions of the Royal Society

- Friday, 6 March **1665**
- Charles II, Boyle, Wren, ...



Journal des Sçavans



Philosophical Transactions

Both pictures are , downloaded from <https://en.wikipedia.org/> on 29 Sep 2020

Scholarly Communication then and now

- Original cycle: the scientist wrote -> the learned society revised and edited for print -> printed and sold for a subscription
- Timeliness was not crucial
- Nature (1869), Science (1880), Elsevier (1880)
- ...
- „Publish or Perish“
- „Serials crisis“ – already in 30's !!!
- Scholarly communication turned **merchandise**
- Publishers found **bonanza**



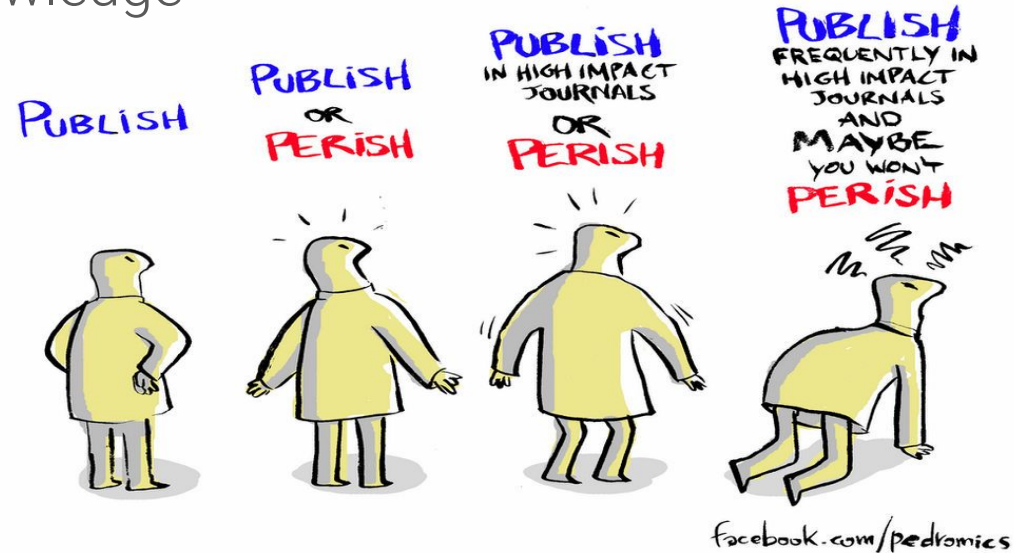
Why do we communicate our research?

Idealistic answer

- to advance science and society
- to disseminate a new knowledge

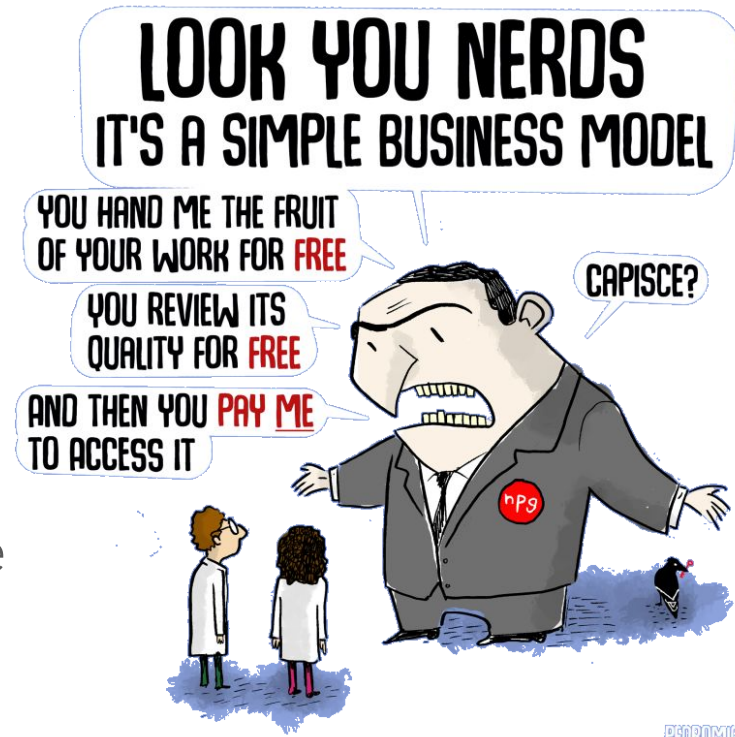
Realistic answer

- to advance our careers



Publishing scenario

- Authors (especially in STM) have to pass their **intellectual property right /copyright** to publisher so as to get their article published
- Publishers capitalize on that and happily satisfy author's wishes: number of articles published increases 5 % per annum
- Publishers admittedly largely innovated the journals compared to print era, but the **rise of subscription prices is unacceptable!!**



- STM publishing market generates revenue of **\$ 25.7 billion**
- **10,000 publishers**
- **42,500 peer-reviewed journals**, of which 22,500 are in Scopus and 11,800 in DOAJ (increase 4 % each year)
- **> 3 million articles a year**, of which about 260,000 are in Gold OA (increase 5 % each year)
- **Authorship**: China 19 %, USA 18 %, India 6 %, DE, UK, JP 5 %

Revenues

Region	Percentage
USA	41%
Europe&Middle East	27%
Asia&Pacific	26%
Other	6%

Authorship

Country	Percentage
Other	42%
China	19%
USA	18%
India	6%
Germany	5%
UK	5%
Japan	5%

Public money flow - during research process

Authors, reviewers and editors are not paid



- Currently, the **scientific communication system is regulated by market interests of big commercial publishers and outdated research assessment criteria.**
- Authors are giving away their **copyrights** thinking they have no choice
- **Studies and publications are not accessible** because enclosed **behind** expensive **paywalls** (usually thousands of dollars) that nobody can afford (doctors, professionals, SMEs...)
- Research can be **accessed by few** with long **delays**



What is wrong with scholarly publishing?



<https://paywallthemovie.com/>

[Buranyi \(2017\)](#)

The origins of Open Access

- 1970 - anonymous ftp archives, "bulletin boards", USENET
- 1991 - arXiv.org
- 2002 - **B**udapest OA Initiative – George Soros - **altruistic**
- 2003 - **B**ethesda Statement on Open Access Publishing – US NIH – **pragmatic**
- 2003 - **Berlin Declaration on OA** to Knowledge in the Sciences and Humanities
- 2012 - Dame Finch Report – make all publicly-funded UK research OA from 2014
- 2013 - SCOAP³/CERN signed a 3y „**cost-neutral**“ **OA contract** for particle physicists
- 2015 - MPDL „**there is enough money in the system for a transition to OA**“
- 2016 - Europe Competitiveness Council: „**OA by 2020**“
- 2018 - **Plan S** (cOAlition S) ...

What is Open Access?

„**Open Access (OA)** refers to **free, unrestricted** online **access** to research outputs such as journal articles and books. OA content is open to all, with **no access fee**“



(Nature Research)

„**Open Access (OA)** literature is digital, online, free of charge, and **free of most copyright and licencing restrictions**“

(Peter Suber, Harvard 'Open Access' project)



Traditional model versus Open Access

Traditional model	Open Access
<ul style="list-style-type: none"> ● closed access only for institutions (library/consortium) which pay subscriptions to journals ● paid access for all others 	<ul style="list-style-type: none"> ● free access for all to read ● AAM version in repository (🔓) ● VoR version in the journal (🔒)
	

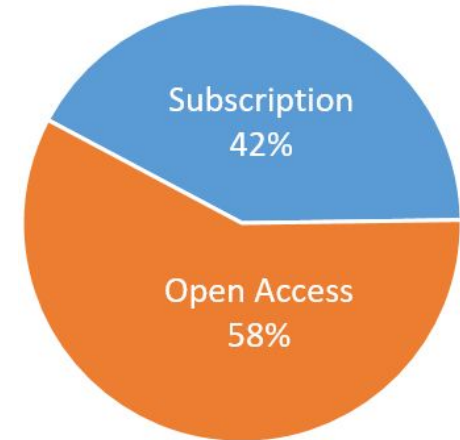
Motivation for Open Access

- **Scientific:** publication paywalls hamper the dissemination of research outcomes within the scientific community
- **Societal:** publication paywalls hamper the uptake of research outcomes by society
- **Ethical:** results from publicly-funded research should remain in the public domain
- **Economic:** the subscription model of publishing has become untenable

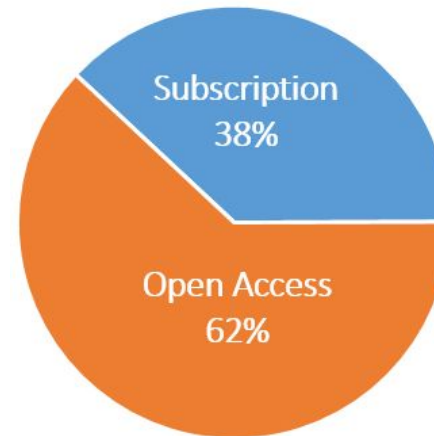
Benefits of Open Access

- opens access to research & to public
- increases visibility & citations
- increases (social) impact
- facilitates reproducibility
- shares & saves resources
- drives innovation
- has global impact
- complies with funder policies

Unique visitors

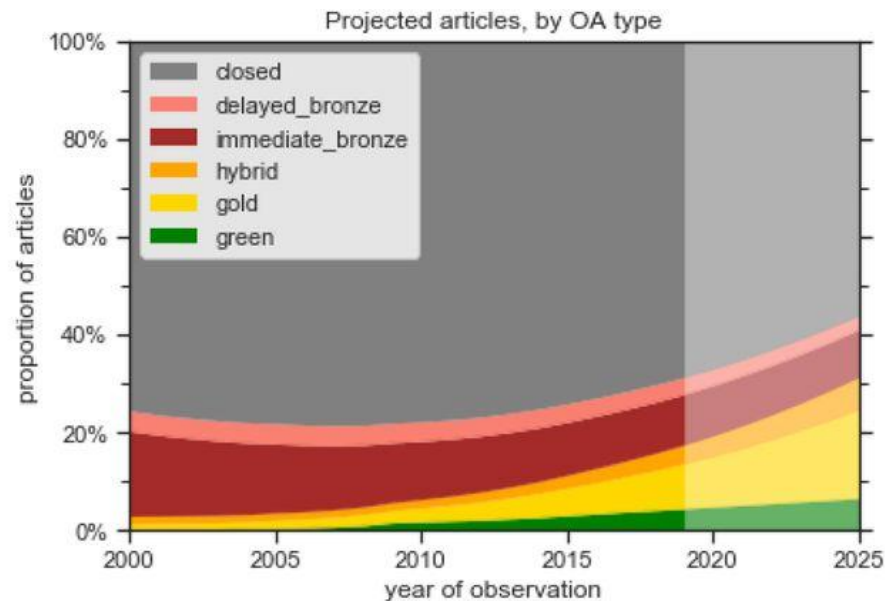
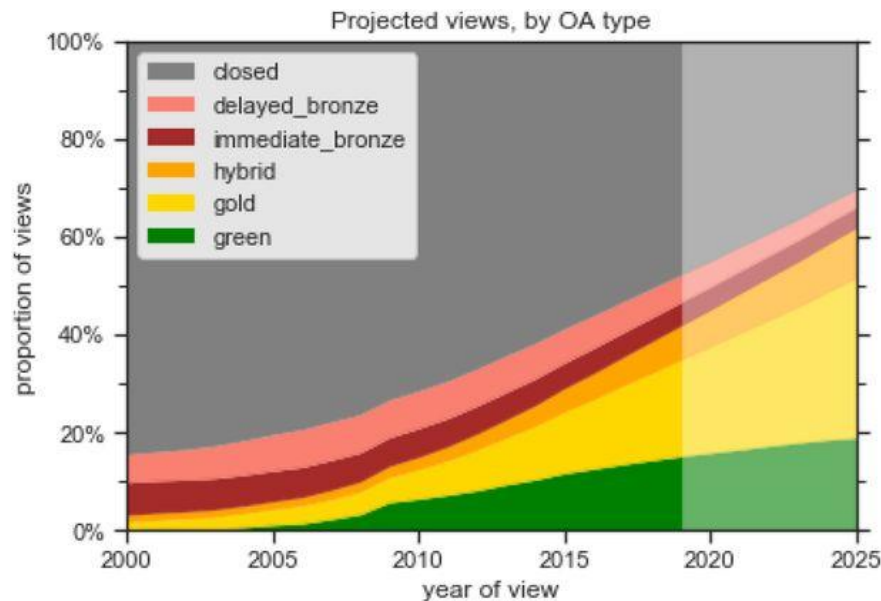


Citation rates

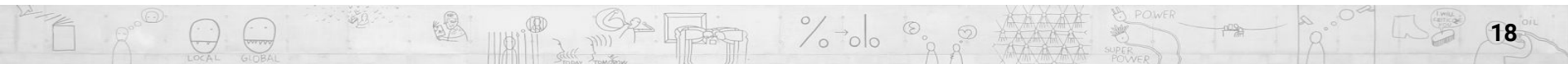


Open Access articles get viewed more

Estimation: “By 2025, 44% of all journal **articles** will be **OA**, and **70% of article views** will be to OA articles.”



This one and two preceding slides: [H. Piwowar et al. \(bioRxiv, 2019\)](https://doi.org/10.1101/000000)



Open Access routes

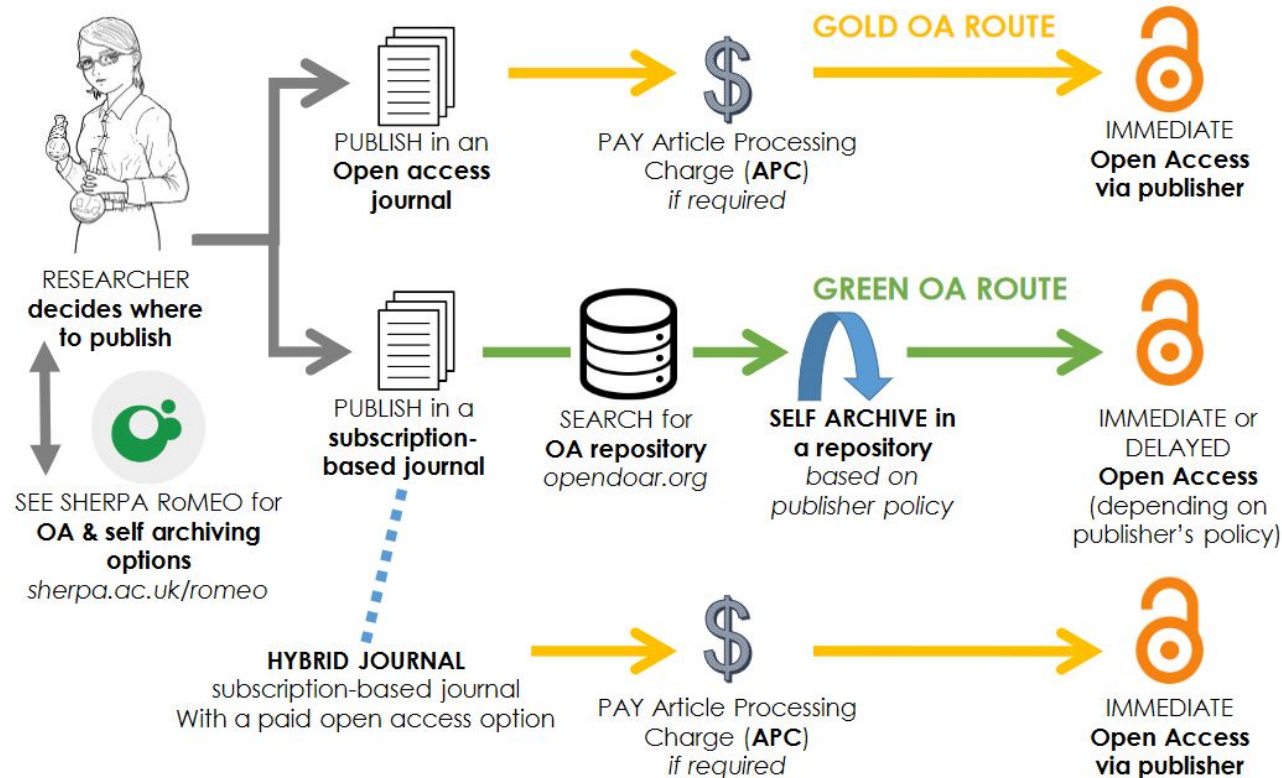


Gold OA journals/platforms:

publisher - that may or may not charge publishing **fee** - makes the papers **openly available**.

Self Archiving - **author** publishes in a journal and **archives** an openly available version of the manuscript in the repository (institutional, national, ...)

Open Access Publishing



Models of Open Access - variations of Gold



Gold

- published in a fully-OA journal
- author/institution pays for publishing => **immediate open access** on the publisher's site



Hybrid

- published in a toll-access journal, available on the publisher site, with an OA license
- double dipping => up to 70% price increase! APC - Article Processing Charge: 0 – 7000 €



Bronze

- published in a toll-access journal, available on the publisher site, **without an OA license**



Delayed Bronze

- published and available as Bronze OA but after an embargo period



Diamond/Platinum OA

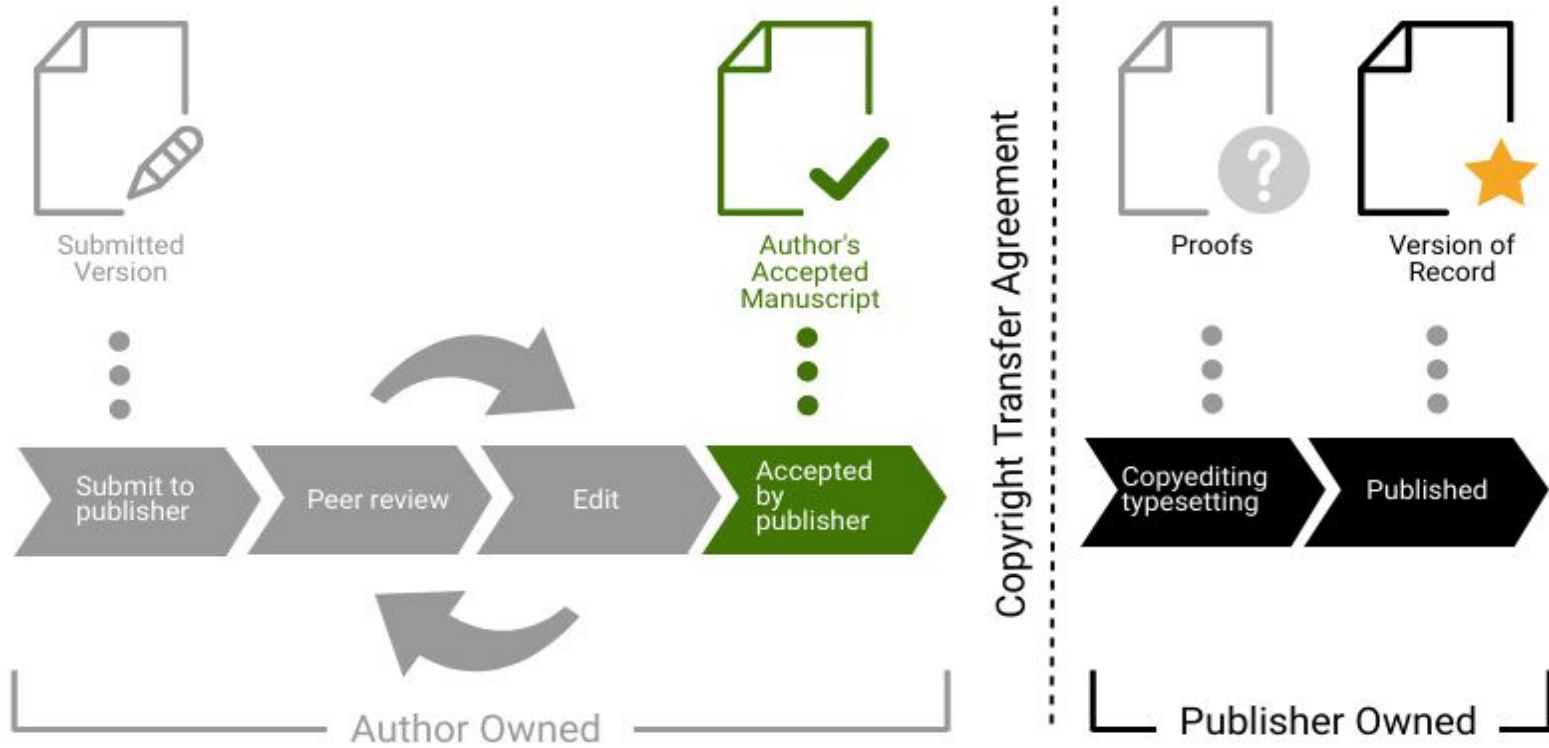
- no payment, **immediate open access** => institutional publishers, learned societies, ...



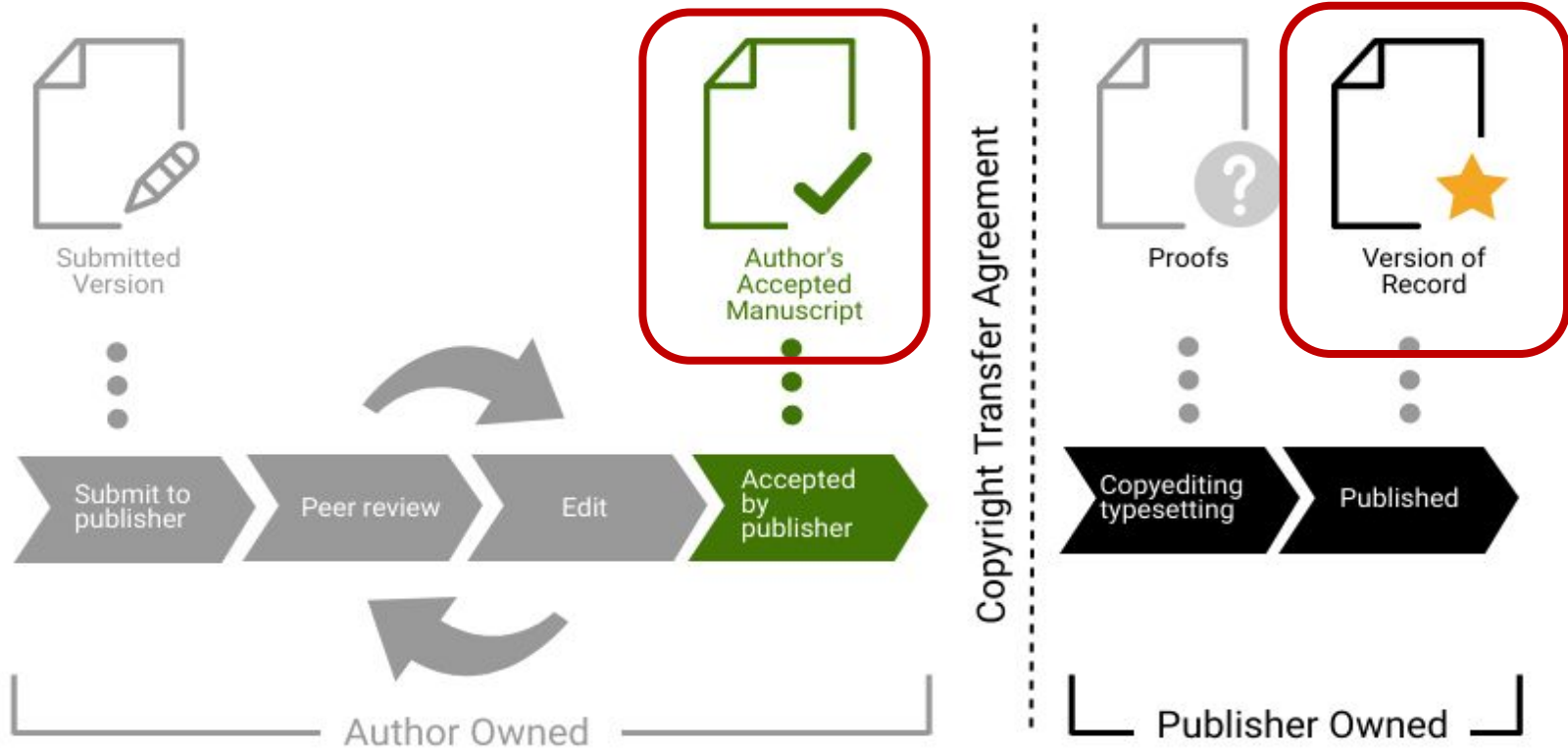
- published in a toll-access journal and a full-text copy is available in an OA repository
- no payment, licensed journals, self-archiving, institutional repositories

- continuing subscriptions => no change in money flow
- delayed access - embargo 6, 12, 24 months!
- unclear what is available in the repository: Author Original Manuscript (AOM) × Author Accepted Manuscript (AAM) × Version of Record (VoR) ?
- unclear which services index full-text of the articles in the repository
- [DOAR \(Directory of Open Access Repositories\)](#)

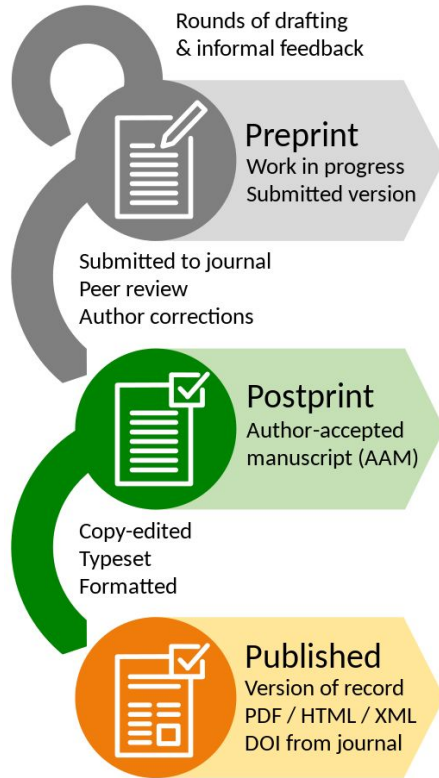
Publishing process → transfer of copyright



Publishing process → transfer of copyright



Different versions and terminology



Submitted Version (pre-print)

- The version of the work the author submits to the publisher

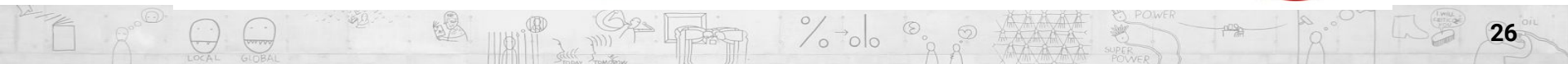
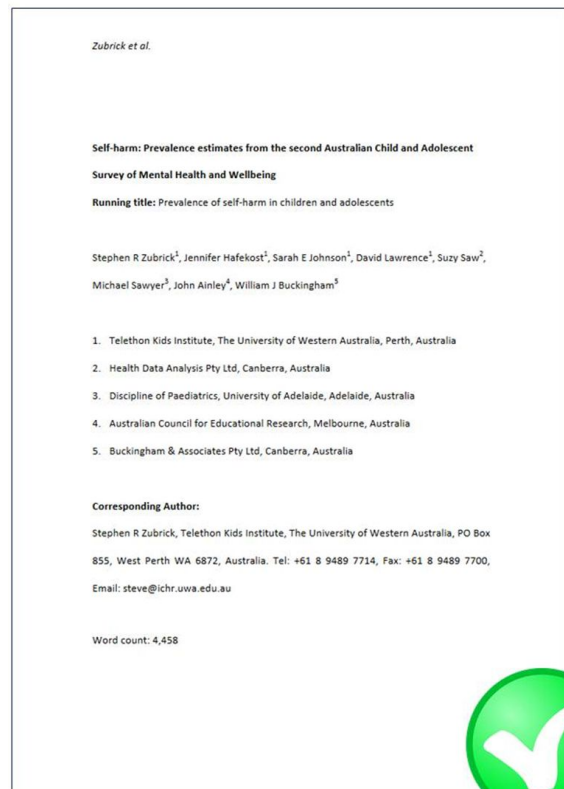
Author Accepted Manuscript (AAM) - post-print

- The author's final, peer reviewed and corrected manuscript,
- Typically **can** be posted to repositories (sometimes after **embargo**)

Version of Record (VoR) - published version

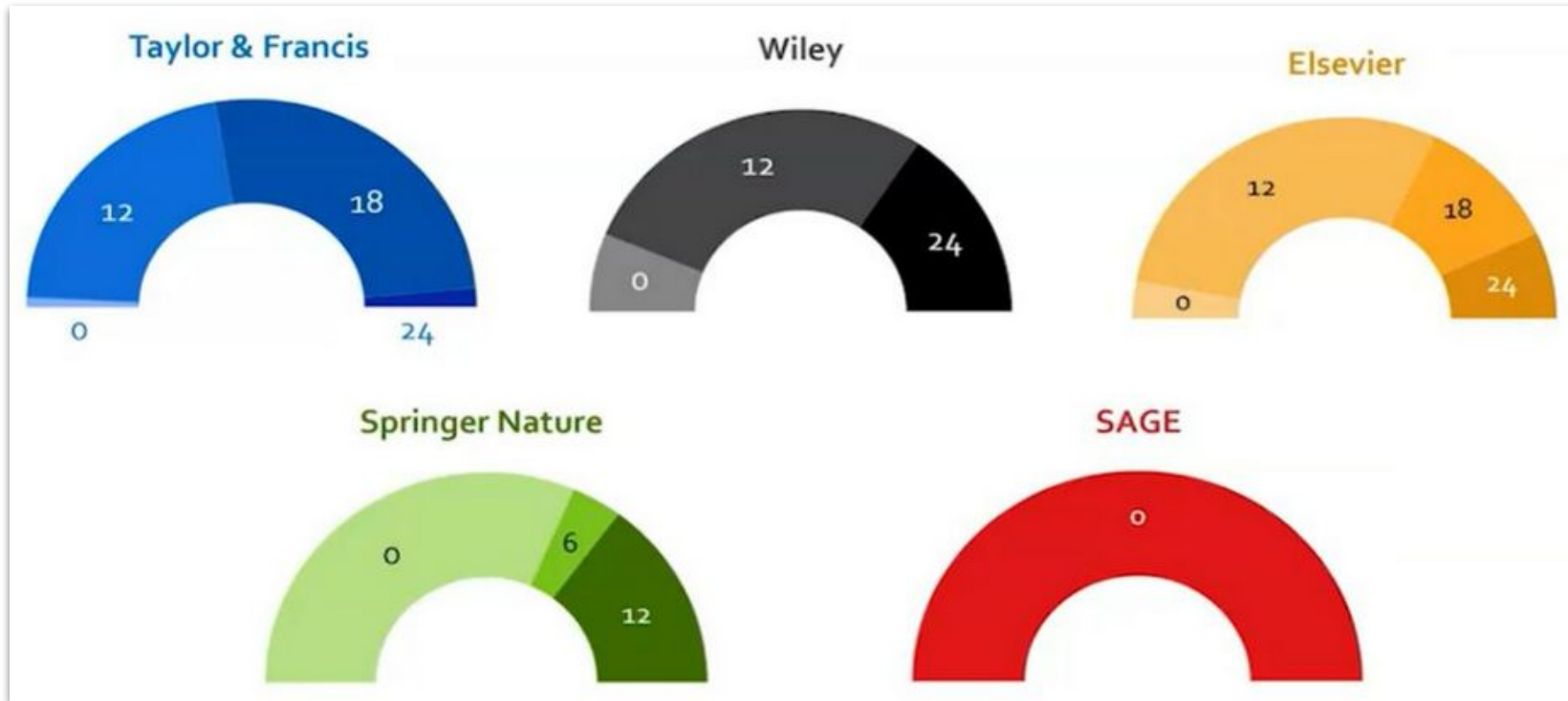
- Provide by the publisher
- Final version of the paper, includes layout and copyediting done by **publisher**
- Typically **cannot** be posted to repository or website

Author Accepted Manuscript vs Version of Record



Embargo periods by 5 Big publishers (months)

“Pay now or wait a year: Embargos as a selective barrier to access”



When to self-archive and which version?

When to self-archive?



Embargo periods

If you have published in a *non-Open Access journal* you have to observe the embargo period before self-archiving. These vary but will be in your contract or *Sherpa/Romeo*.



SHERPA RoMEO is an online resource that aggregates and analyses publisher open access policies from around the world and provides summaries of self-archiving permissions and conditions of rights given to authors on a journal-by-journal basis.

Sherpa Romeo

About

Search

Statistics

Help

Support Us

Contact

Admin

Search

Enter a journal title or issn, or a publisher name below:

Journal Title or ISSN

Search

Publisher Name

Search

Browse by Country

Browse by Publisher

Sherpa Romeo

Types of repositories where to self-archive

Many repositories are Open Access, meaning that the material contained within it is free to access for everyone.



Institutional Repository

- A collection of papers stored by a university or research institution. It is managed by library staff to house their own authors' works



Subject-based Repository

- An online collection which relates to the specific subject area. Examples include: [PubMed](#), [Europe PMC](#) and [PubChem](#)



General (multidisciplinary)

- An online collection that includes articles from variety of subject areas. Examples include: [Zenodo](#), OpenAIRE

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- ResearchGate and Academia.edu are social networking platforms whose primary aim is to connect researchers with common interests.
- A Facebook or LinkedIn experience for the research community.
- Both services are commercial companies. Although Academia.edu has a “.edu” URL, it isn’t run by a higher education institution. The domain name was registered before the rules that would now prohibit this use went into effect, and the address was grandfathered in and later sold to the company.

Image adopted from twitter
[@pcmasuzzo](#) (CC-BY-SA)

<https://osc.universityofcalifornia.edu/2015/12/a-social-networking-site-is-not-an-open-access-repository/>

Directory of Open Access Journals (DOAJ)

The screenshot shows the DOAJ website interface. At the top, there's a navigation bar with the DOAJ logo, a 'SUPPORT' link with a heart icon, and an 'APPLY' dropdown. Below this is the title 'DIRECTORY OF OPEN ACCESS JOURNALS' and a large heading 'Find open access journals & articles.' There are two radio buttons for 'Journals' (selected) and 'Articles'. A search bar contains the text 'In all fields' and a yellow 'SEARCH' button. A red box highlights the 'SEARCH' button and a callout box next to it stating '69 % of fully OA journals no APCs'. At the bottom, there are five statistics: 80 LANGUAGES, 130 COUNTRIES REPRESENTED, 12,451 JOURNALS WITHOUT APCs (highlighted with a red box), 17,922 JOURNALS, and 7,698,245 ARTICLE RECORDS. The background features a colorful abstract graphic on the right and a row of small icons at the bottom.

DOAJ

SUPPORT ♥ ▾ APPLY ▾

DIRECTORY OF OPEN ACCESS JOURNALS

Find open access journals & articles.

☒ Journals ☐ Articles

SEARCH

69 %
of fully OA
journals
no APCs

80 LANGUAGES	130 COUNTRIES REPRESENTED	12,451 JOURNALS WITHOUT APCs	17,922 JOURNALS	7,698,245 ARTICLE RECORDS
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☐ CC BY (8919)

☐ CC BY-NC (3421)

☐ CC BY-NC-ND (3922)

☐ CC BY-NC-SA (1705)

☐ CC BY-ND (305)

☐ CC BY-SA (1299)

☐ CC0 (274)

☐ Public domain (2)

<https://doaj.org/>

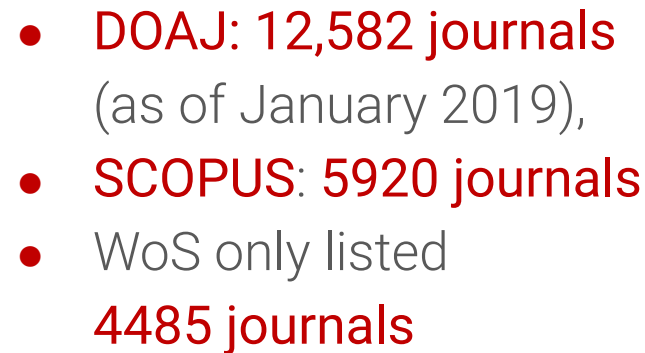


Image by: Tom Ojhoek

<https://blog.doaj.org/2019/09/17/myth-busting-all-open-access-journals-can-be-listed-in-doaj/>

The spectrum of rights, Licences



Copyright

All Rights Reserved

- Re-use requires the permission from the copyright owner.



Creative Commons

Some Rights Reserved

- Re-use is permitted without permission under the specifications shared in the license.



Public Domain

No Rights Reserved

- May be used without permission.

What is Creative Commons licence?

The CC licences = legal tool to make Open Science reality

- provide a simple **standardised way** for individual creators, companies and institutions to share their work with others on flexible terms without infringing copyright.
- The CC licences **allow users to reuse, remix and share the content legally**.
- Offering your work under a CC licence **does not mean giving up your copyright**. It means **permitting users to make use of your material** in various ways, but only on certain conditions.



Understanding Licenses

Rights



Share



Remix

Obligations



BY - Attribution to the creator



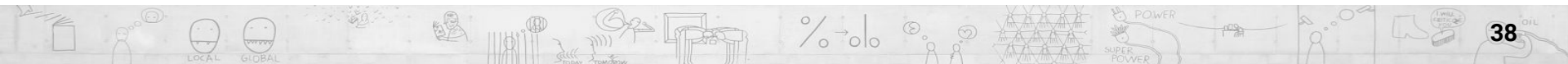
SA - Share Alike



NC - Non Commercial

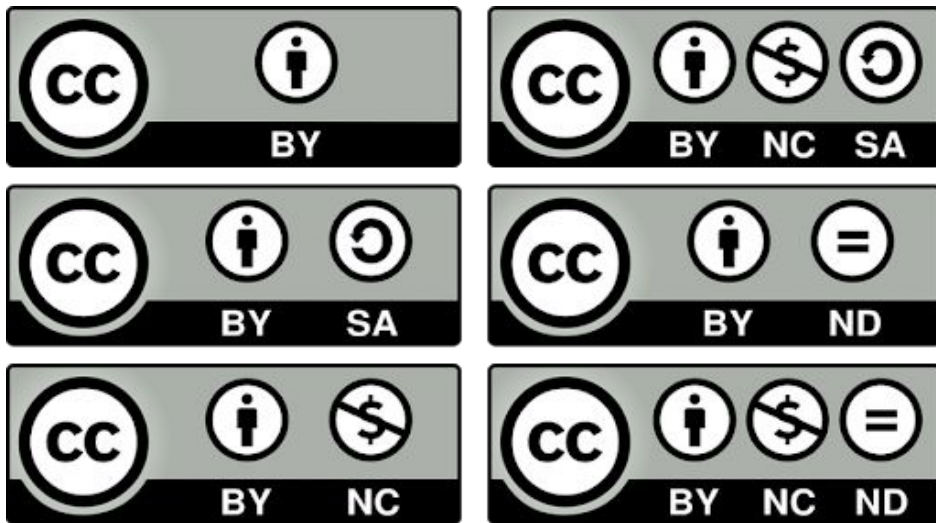


ND - No Derivatives



The Licenses

Opening the article is not sufficient, you have to specify what could be done with your work. By a **CC** license you give other people the **right to share, use, and build upon** a work that you have created.



The notion of Creative Commons was coined by Lawrence Lessig, the Net lawyer in 2001

Waiver licence "no copyright reserved"



Know your rights: understanding CC Licences

CREATIVE COMMONS LICENSES

OVERVIEW FOR STUDENTS AND TEACHERS

ATtribution REQUIRED

<p>BY</p> <p>You can use the work and do whatever you like with it as long as you give attribution.</p>	<p>BY-SA</p> <p>If you add to or change the work, you must share it with the same BY-SA license.</p>	<p>BY-ND</p> <p>You can use the work as long as you don't change it in any way.</p>	<p>BY-NC</p> <p>You can use the work and add to it or change it but you can't make money from it.</p>	<p>BY-NC-SA</p> <p>If you change the work, you must share it with the same license and you can't make money from it.</p>	<p>BY-NC-ND</p> <p>You can use and share the work but you can't change it or sell it.</p>
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Least restrictive → Most restrictive

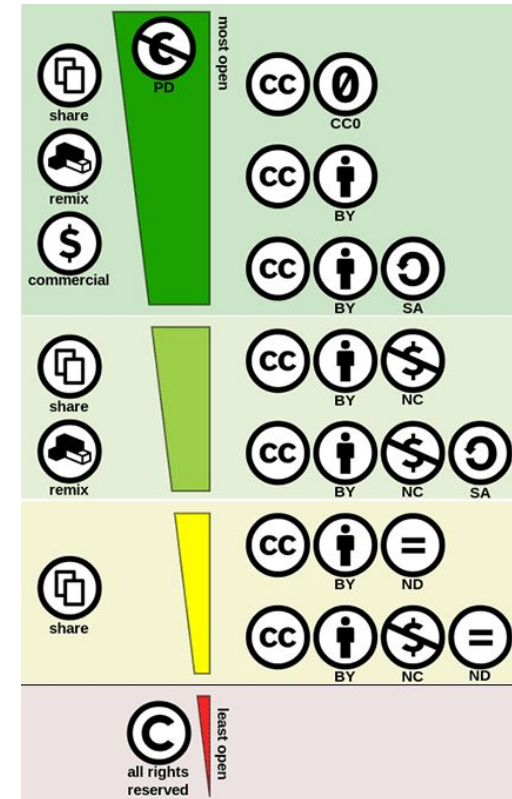
ATtribution FREE OPTIONS

PUBLIC DOMAIN

You can use the work however you like without permission or attribution; the copyright has expired.

CREATIVE COMMONS ZERO

You can use the work however you like without permission or attribution; the creator has released it to the public.



@kathleen_morris

www.kathleenamorris.com



Accelerating the transition to full & immediate Open Access

- cOAlition S behind Plan S
- national research funders
- all articles in Open Access
- access is full & immediate
- 10 principles to implement
- Autor/institution keeps IP
- CC-BY licence on AAM/VoR



- **No** publication should be locked behind a **paywall**
- OA must be immediate, *i.e.* **no embargo periods**
- Publication under an **open licence**, no transfer/licencing for copyright
- **Transparency** about pricing and contracts
- **No hybrid** model of publication, except as a transitional arrangement with a clearly defined endpoint (end of 2024)

⇒ Plan S 10 principles



- ## 10 Principles of Plan S

<https://www.coalition-s.org/principles-and-implementation/>

Plan S: Journal Checker Tool

JOURNAL CHECKER TOOL

BETA

Is this compliant with
Plan S ?

JOURNAL

Powder Technology, ISSN: 18



MY FUNDER

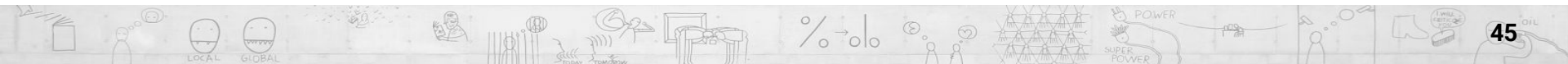
European Commission(Horiz



MY INSTITUTION

By ROR or name

<https://journalcheckertool.org/>



Helping Researchers retain their rights and share their work

Open Access

#RetainYourRights





Plan S

Making full & immediate
Open Access a reality

Did you know that
when you write a paper,
you automatically hold
the copyright on it?
Why would you sign it away?

Publish with Power.

Protect your Rights.

[Plan S: Rights Retention Strategy](#)



#RetainYourRights





Plan S

Making full & immediate
Open Access a reality

The peer-reviewed Author
Accepted Manuscript
(AAM) is your intellectual
creation, your valuable
asset. Don't give it away.

**Publish with Power.
Protect your Rights.**

[Plan S: Rights Retention Strategy](#)



Plan S & Rights Retention

#RetainYourRights

www.coalition-s.org/rights-retention-strategy

Helping researchers
retain their rights
and share their work
Open Access

cOAlition S

Hosted by the European Science Foundation
info@coalition-s.org • www.coalition-s.org

Example where the Author Accepted Manuscript (AAM) is shared CC BY



Funder agreement

- At least the AAMs of all peer reviewed publications are published with a CC BY licence and no embargo



Owned by the author

- Upon submission, the author informs the publisher that the AAM arising from this submission is licensed CC BY in accordance with the grant's open access conditions
- Acceptance following peer review
- Author Accepted Manuscript (AAM)
Upon publication, the author immediately deposits the AAM in an Open Access repository (zero embargo, CC BY licence)



Managed by the publisher

- Licence to Publish
- Version of Record (VoR)



Plan S

Making full and immediate Open Access a reality

Plan S: Rights Retention Strategy

-
- A long horizontal strip of hand-drawn sketches illustrating various concepts related to globalization and technology. The sketches include: a person thinking; two faces labeled 'LOCAL' and 'GLOBAL'; a person at a computer; a person holding a phone; a person at a desk with a monitor; a percentage sign followed by an arrow pointing to another percentage sign; two people talking; a large grid of small squares; a diagram showing 'POWER' flowing from a source to a destination; a person thinking; a person holding a box labeled '50 OIL'; and a person holding a box labeled 'SUPER POWER'.

What is in it for Authors? **Ownership!**

- Authors should not give away to publishers what they rightfully own.
- Ownership of the AAM means authors can **reuse and share** it as they see fit, without restriction imposed by the publisher.
- The publisher can own the Version of Record (VoR)
- Publishers provide the means to organize peer review but ...
 - peer review is career out for free
 - peer review is part of the scholarly discourse
- This process is paid for but ...
 - In subscription journals, by the subscription
 - In Gold OA journals by the APC



Payment for services ≠ claim ownership

I pay a decorator to decorate my house:

- Strip wallpaper
- Sand woodwork
- Undercoat and paint window frames



I pay for services:

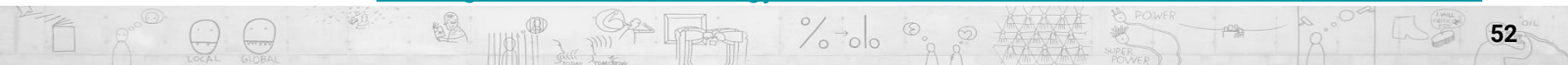
- I do not expect the decorator to own the house after he has painted it
- I do not hand over the keys



<https://pixabay.com/photos/painter-painting-lackierer-3009887/>

<https://pixabay.com/photos/house-keys-key-security-door-key-4521073//>

cOAlition S webinar: [The Rights Retention Strategy and what it means for EU13 & Associated Countries](#)



- Embargoes differ between journals
- Conflicts between publisher's and funder's policy
- Time spent checking, applying, and releasing embargoes for different publishers
- Additional and different restrictions on dissemination:
 - personal website OK, but not in institutional repository.
 - free repositories OK, but not in commercial ones (ResearchGate)
 - invited groups of limited size OK, but not beyond.
- AAM locked up for months

cOAlition S webinar: [The Rights Retention Strategy and what it means for EU13 & Associated Countries](#)

The simplicity of the RRS:

- Always include the CC BY claim:

and

**Your AAM is yours to reuse
and share as you please!**

cOAlition S webinar: [The Rights Retention Strategy and what it means for EU13 & Associated Countries](#)

Webinars for Early Career Researchers

The Rights Retention Strategy for ECRs

by
Johan Rooryck &
Sally Rumsey,
cOAlition S



14:00-15:00 CET

eurodoc

The European Council of Doctoral
Candidates and Junior Researchers

**2 WEBINARS
FOR EARLY-CAREER
RESEARCHERS**

eurodoc.net/2webinars

**MONDAY,
APRIL 19, 2021**

**F1000
Research**

Opportunities of Open Research Europe for ECRs

by Michael Markie,
F1000 Research

15:00-16:00 CET

<http://eurodoc.net/2webinars>

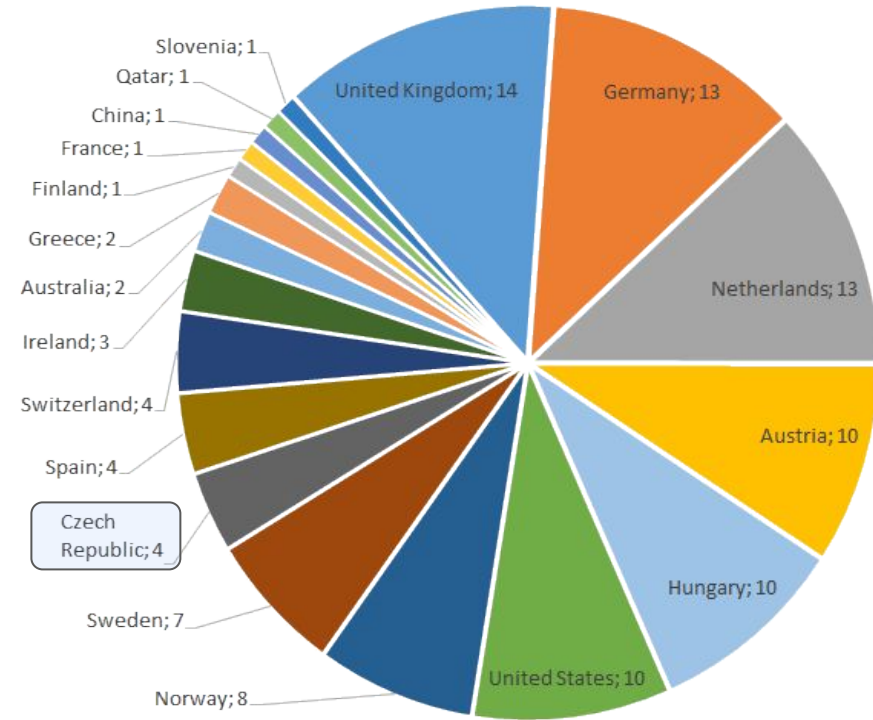
Transformative agreements in the world

Read-and-Publish: The publisher receives payment for reading and payment for publishing bundled into a single contract.

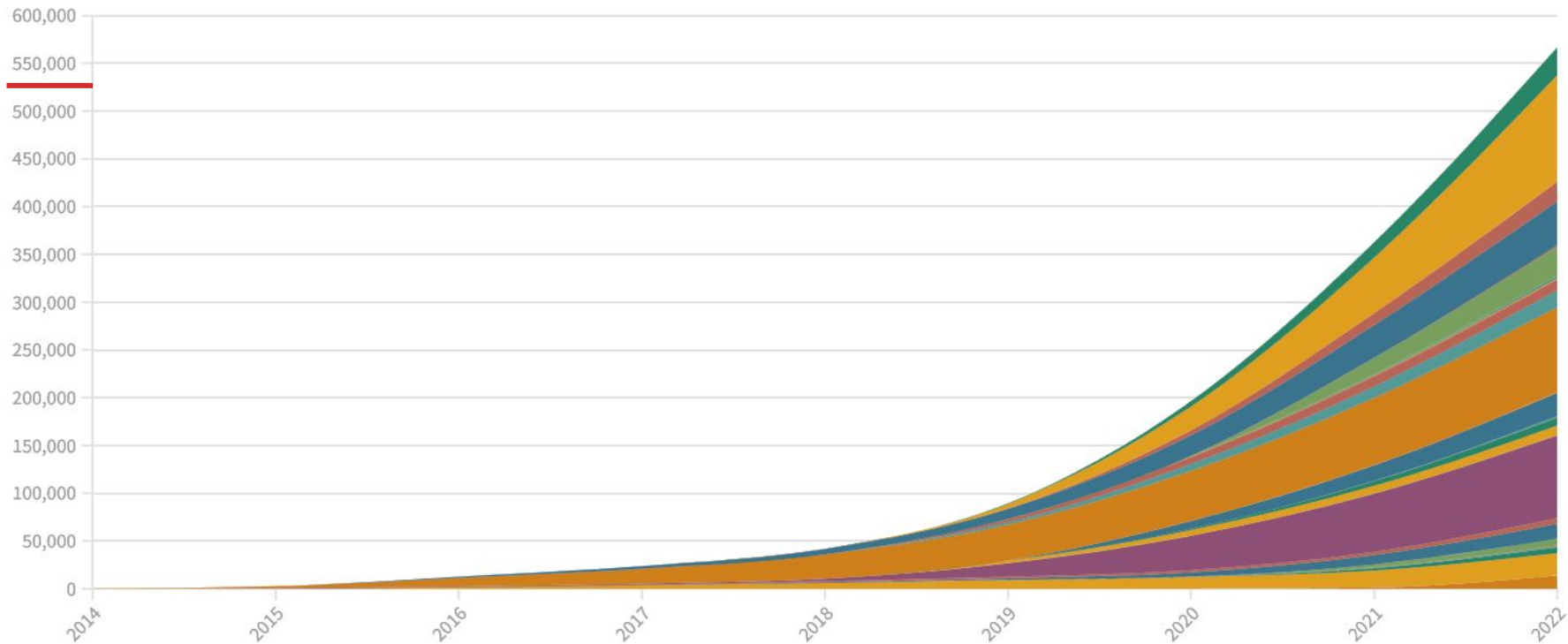
Publish-and-Read: The publisher receives payment only for publishing and reading is included for no additional cost.

<https://scholarlykitchen.sspnet.org/2019/04/23/transformative-agreements/>

Transformative agreements by country



Impact of TAs enabling OA to research articles





Source: [ESAC Transformative Agreement Registry](#) • Click on a country to filter.
Last updated: 08-07-2022

New publication models as alternative or complement to journals

Open Access Publishing Platforms

F1000Research

Search 

 **SUBMIT YOUR RESEARCH**

BROWSE GATEWAYS & COLLECTIONS HOW TO PUBLISH ▾ ABOUT ▾ BLOG MY RESEARCH ▾ SIGN IN


Publish fast. Openly. Without restrictions.

F1000Research is an **Open Research** publishing platform for scientists, scholars and clinicians offering rapid publication of articles and other research outputs without editorial bias.

<https://f1000research.com/>



Open Research Publishing Platforms



European Commission

Research and Innovation

Open Research Europe

Browse Gateways & Collections How to Publish About Blog

Rapid & Transparent Publishing

Fast publication and open peer review for research stemming from Horizon 2020 and Horizon Europe funding across all subject areas.

<https://open-research-europe.ec.europa.eu/>

Wellcome Open Research

BROWSE GATEWAYS & COLLECTIONS HOW TO PUBLISH ABOUT BLOG MY ACCOUNT SIGN IN

Rapid & Transparent Publishing

A new way for Wellcome-funded researchers to rapidly publish any results they think are worth sharing

SUBMIT YOUR RESEARCH BROWSE ARTICLES

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Method Articles



Study Protocols



Software Tools



Systematic Reviews



Data Notes



Research Notes

Antibody
Validation Articles

Opinion Articles



Case Reports



Registered Reports

<https://f1000research.com/>

Benefits for Society

- Reduces the barrier to collaborative research through data sharing, transparency and attribution.
- Reduces research waste and helps to remove the bias in our understanding of research.
- Enables others to build upon new ideas right away, wherever and whoever they are.

<https://f1000research.com/>

ORIGINAL ARTICLE |  Open Access |  

Labour market perspectives for PhD graduates in Europe

Eva Hnatkova , Iryna Degtyarova, Margaux Kersschot, Julia Boman

First published: 08 July 2022 | <https://doi.org/10.1111/ejed.12514>

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