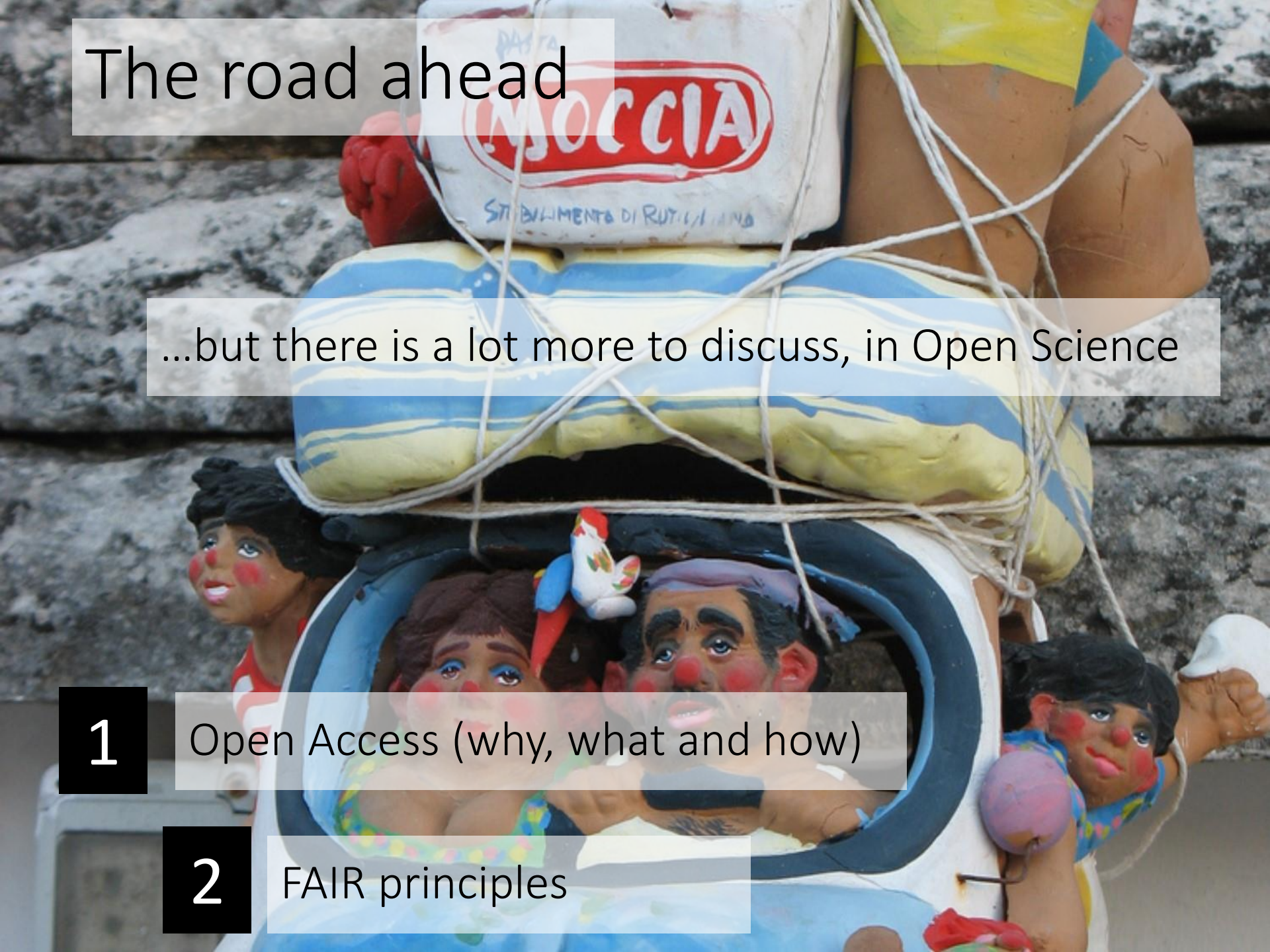
OPEN ACCESS, WHY AND HOW

ICTP, November 17 2021

Elena Giglia
elena.giglia@unito.it
@egiglia



The road ahead

…but there is a lot more to discuss, in Open Science

1 Open Access (why, what and how)

2 FAIR principles


Let’s talk
www.menti.com
6483 0405


WHY

Why do we need Open Access?

Roorick, June 2020

In addition, some publishers only agreed to making this research available on a temporary basis, narrowly focusing on access to Covid-19 related papers. This is hard to justify, as the fight against the disease requires perspectives from multiple scientific disciplines. Publishers temporarily releasing articles from paywalls does not represent Open Access. Full, immediate, and permanent Open Access should not only be required for research papers related to Covid-19, but research on other deadly diseases should also be accessible to researchers, medical professionals, patients and patient organizations, and citizens. So should research on climate change, education, inequality, indeed all research. It is no longer acceptable that 75% of the research literature is still behind a paywall. We don't know which research papers that today remain largely inaccessible could inspire solutions and bright ideas for tomorrow's challenges.

WE DON'T KNOW WHICH RESEARCH PAPERS
THAT TODAY REMAIN INACCESSIBLE
COULD INSPIRE SOLUTIONS FOR TOMORROW

Lessons learned from COVID / 1

Publishing research openly is not just a 'nice to have'

JISC, 2021

by Anne Mills on 18 May 2021

The response to the global pandemic has demonstrated the huge value of open science, and a united front is needed to accelerate the transition toward this new way of working.

creative commons

Now Is the Time for Open Access Policies—Here's Why

Victoria Heath and Brigitte Vézina
March 19, 2020

March 19, 2020

SHARING IS CRUCIAL

> We find ourselves at a pivotal moment in history—we must cooperate effectively to respond to an unprecedented global health emergency. The mantra, "when we share, everyone wins" applies now more than ever.

Lessons learned from COVID / 2

WE NEED DATA [FAIR BY DESIGN] (AND NOT ONLY THE FINAL SYNTHESIS, I.E. THE ARTICLE)

RDA

The Value of RDA for COVID-19

Home » Get involved » The Value of RDA for... » The Value of RDA for COVID-19

13 July 2020 | 16426 reads | Facebook | Twitter

Under public health emergencies, and particularly the COVID19 pandemic, it is fundamental that data is shared in both a timely and an accurate manner. This coupled with the harmonisation of the many diverse data infrastructures is, now more than ever, imperative to share preliminary data and results early and often. It is clear that open research data is a key component to pandemic preparedness and response.

Lessons learned from COVID / 3

TRADITIONAL SUBSCRITPION BASED JOURNALS: FIRST ARTICLES (WITH NO DATA) AT THE EARLIEST IN DEC. 2020
(9-18 MONTHS AVERAGE PUBLICATION TIME)

…AND WE NEED RESULTS IMMEDIATELY…
RESEARCHES SHOULD BE AVAILABLE IMMEDIATELY…NOT SEGREGATED FOR MONTHS WAITING FOR A «PEER REVIEW» WHICH CAN BE DONE IN A MORE EFFECTIVE WAY, OPENLY

VIEWPOINTS REPUBLISH

Opinion: A Lesson of the Pandemic: All Prints Should Be Preprints

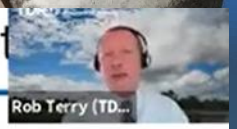
A flourishing of Covid-19 literature dispels the idea that pre-publication peer review is essential for academic rigor.

Visual: Wenjin Chen / Getty Images

2020

Lessons learned from COVID / 4

Use of pre-prints – calling time on subscript



- WHO repository IRIS 150 publications relating to Covid-19 - 25% referencing pre-prints
- NEW development WHO Living Guidelines available online via the MAGICapp
- 3 WHO Living guidelines for Covid-19.
  Therapeutics 6 versions since November 2020.

  Analysis of version 5 March 2021
  - 44% of its references as pre-print
  - 33% unpublished results shared with WHO
  - Therefore < 25% from traditional published literature.....

<25% FROM TRADITIONAL LITERATURE INCLUDED IN WHO GUIDELINES

THEY FAILED US RIGHT WHEN WE NEEDED THEM MORE

https://app.magicapp.org/#/guidelines

Robert Terry OSfair 2021 [min. 16.48-46]

Lessons learned from COVID / 5

NEED TO RETHINK THE ORDER
1) PUBLISH
2) OPEN PEER REVIEW
3) EARN IMPACT
FOR REAL, NOT USING THE TOXIC IMPACT FACTOR
(AWARDING MEDALS BEFORE THE RACE HAS RUN)

Implications of pandemic for publications

- Need to rethink publishing
  - 1st Publish
  - 2nd Open (meta) peer review
  - 3rd Earn impact
- Why have impact factors?! - Like awarding the medals BEFORE the race has run
- Traditional publishing model is no longer fit for purpose too slow and no guarantee of quality
- It feels like we're running electric cars on steam train tracks

Impact Factor is a toxic indicator

Lessons learned from COVID / 6

THE CONCEPT OF JOURNAL IS DEAD
NO SUCH THING AS «VERSION OF RECORD», SCIENCE IS DYNAMIC

Implications of pandemic for publications

- No such thing as the Version of Record – science is dynamic, changing and evolving
- The concept of the 'Journal' is dead = wasteful and biased
- Role for post-published aggregations perhaps Papers of the month
- Open science must create the interoperable links across all stages and disciplines. Links between the paper and the data are indivisible

All public science should be open access

Citizens should demand this

Pre-prints encouraged recognized and rewarded

Robert Terry OSfair 2021 [min. 16.48-46]

[Journals? No thanks]

CRISIS
1) REPRODUCIBILITY
2) FUNCTIONALITY
3) SUSTAINABILITY

EVERY PLAYER IS AT DISADVANTAGE IF THEY MOVE FIRST SO THEY REMAIN LOCKED IN

B.Brembs Sept. 24 2021

REPLACING ACADEMIC JOURNALS

Authors:

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Felix Schönbrodt, LMU Munich, Germany
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Toma Susi, University of Vienna, Austria
Renke Siems, Reutlingen, Germany
Pandelis Perakakis, Complutense University of Madrid, Spain
Varvara Trachana, University of Thessaly, Larisa, Greece

These three crises fuel each other in a vicious cycle: the affordability crisis prevents institutions from combating the functionality crisis. The functionality crisis, in turn, fuels the replication crisis, for instance by making peer-review more cumbersome and by making research data and code harder to discover, access and scrutinize. The journals propagating the replication crisis keep exacerbating the affordability crisis with super-inflationary price increases [12-14]. Thus, all three scholarly crises are interlocked in an ever-deteriorating vicious cycle, at the heart of which lies a public good in private hands: the scholarly literature. In this social dilemma, every player is at a disadvantage if they move (first), so they all remain locked-in: Neither researchers – forced to publish in journals due to the "publish or perish" reality – nor libraries – serving the reading and publishing needs of their faculty – are in a position to initiate reform. The corporate publishers are the only player profiting from this system. They exploit this lucrative situation by using their massive profits not only to resist and delay any research- and public-oriented reform, but to fund a reform of their own and on their own terms. Their 'reform' is not aimed at increasing the reliability of science or decreasing the financial burden on public institutions. Their reform aims to multiply corporate revenue streams and market power even further.

...AND PUBLISHERS ARE GAINING FROM IT

Lessons learned from COVID / 7

Health · **Second Opinion**

'We're opening everything': Scientists share coronavirus data in unprecedented way to contain, treat disease

Feb.1, 2020

raise questions about the way science-as-usual is practised.

Vincent Larivière is an information scientist and professor at the University of Montreal, who studies the way science is disseminated. He said the move to speed up publication and share research is a tacit admission that business-as-usual in research slows down science.

"[They say] we're opening everything because it's important that we advance things fast. Well, the flip side of this argument is that your normal behaviour is to put barriers to science."

"This virus is dangerous and deadly, but there's lots of other diseases that are dangerous and deadly, and for which opening could save lives. So if you really want to go in that direction, just open everything."

University of Montreal researcher Vincent Larivière said the c climate of open science suggests that science-as-usual create barriers. (Amélie Philibert)

...SCIENTIST ARE NOW OPENING AND SHARING DUE TO COVID-19...
THE FLIP SIDE IS THAT OUR NORMAL BEHAVIOUR IS TO PUT BARRIERS TO SCIENCE

nature

Feb 4, 2020

Subscribe

EDITORIAL · 04 FEBRUARY 2020

Calling all coronavirus researchers: keep sharing, stay open

As the new coronavirus continues its deadly spread, researchers must ensure that their work on this outbreak is shared rapidly and openly.

Access is [illegible] sue

The Results Are In of our Open Access Survey

November 1, 2021 * Author: Mary Kennedy

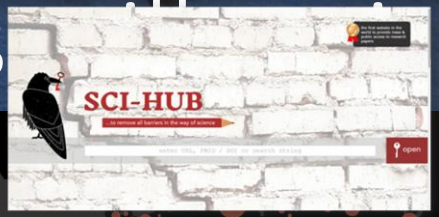
There were three parts to this survey. In the first part, we asked some general questions on the topic of open access. Here is what we found:

Oct.2021

- **83% of the respondents agree that the scholarly community could perform research more effectively if all scientific communication were made freely available under an open access license.**
- **95% of respondents have had the experience of being unable to access a research article they needed due to paywalls.**
- **83% have downloaded an open access book for their research.**
- **Half of the respondents admitted to at least once illegally downloading a research paper that they couldn't access because it was behind a paywall.**

Also, interestingly about **one-fifth of respondents said that the COVID-19 pandemic changed their view of open access research**. One responder commented particularly that they felt this when the

95% HIT A PAYWALL



Who's downloading pirated papers?

EVERYONE

2016

In rich and poor countries, researchers turn to the Sci-Hub website.

Bernard Rentier
@bernardrentier
Following

The single fact that providing free information on universal Science is illegal tells us a lot about how absurd it has become, in the Internet era, to rely on the old research publication model. #FreeOpenAccessNow

Jon Tennant @Protohedgehog
Oh wow. Looks like anyone can now create their own @sci_hub mirror github.com/bsidio/sci-hub You can use this to help accelerate research and society by providing free access to millions of research articles. But it's probably illegal, so don't do it.

Traduci il Tweet

08:37 - 10 mag 2018

March 10, 2018

open access.nl
News and events | What is open access? | In the Netherlands | You

2020

Alternative ways to access journal articles

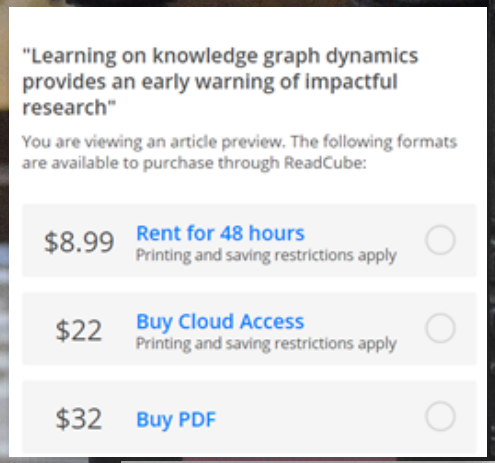
← **Aleksandra Lazic** 2021
A place [Mesto] where [gde] I write [pišem] about [o] science

Ten ways to find open access articles

November 05, 2021

Scholarly communication today…

… WE ARE PAYING COMMERCIAL PUBLISHERS TO LOCK UP A CONTENT PRODUCED BY PUBLIC MONEY YOU AUTHORED FOR FREE, YOU REVIEWED FOR FREE



The purpose of publications in a pandemic and beyond

distinction than dissemination. And when it comes to a global emergency, we're still having to beg publishers for access to our own research so that we might save large swathes of the human

Apr. 22, 2020

AND THEN WE HAVE TO BEG THEM FOR ACCESS DURING A CRISIS

… scholarly communication today…

A new mandate highlights costs, benefits of making all scientific articles free to read

By Jeffrey Brainard | Jan. 1, 2

Jan 1, 2021

10 bn $ in 2020

7.6 billion $

[UNDERESTIMATED] AMOUNT OF MONEY SPENT IN SUBSCRIPTION IN 2016

READING IS NOT FOR FREE

TODAY, WE PAY 3800/5000 $ PER ARTICLE IN THE **SUBSCRIPTION** SYSTEM

WE PAY TO CLOSE

2018

Profit	Company	Industry
10%	BMW	automobiles
23%	Rio Tinto	mining
25%	Google	search
29%	Apple	premium computing
35%	**Springer**	**scholarly publishing**
37%	**Elsevier**	**scholarly publishing**

http://wp.me/ph4jF-km CC-BY Alex Holcombe

36%

ELSEVIER NET GAIN

Darragh Duffy
@darragh_duffy

Elsevier's scientific publishing arm reported profits of £724 million on £2 billion in revenue - a 36% profit margin—higher than Apple, Google, or Amazon- where authors generate the "product", pay open-access fees, reviewers peer review for free & institutions pay to access 😱

[peer review]

Aczel *et al. Research Integrity and Peer Review* (2021) 6:14
https://doi.org/10.1186/s41073-021-00118-2

Nov 14 2021

Research Integrity and Peer Review

RESEARCH Open Access

A billion-dollar donation: estimating the cost of researchers' time spent on peer review

Balazs Aczel[1*], Barnabas Szaszi[1*] and Alex O. Holcombe[2]

Abstract

Background: The amount and value of researchers' peer review work is critical for academia and journal publishing. However, this labor is under-recognized, its magnitude is unknown, and alternative ways of organizing peer review labor are rarely considered.

Methods: Using publicly available data, we provide an estimate of researchers' time and the salary-based contribution to the journal peer review system.

Results: We found that the total time reviewers globally worked on peer reviews was over 100 million hours in 2020, equivalent to over 15 thousand years. The estimated monetary value of the time US-based reviewers spent on reviews was over 1.5 billion USD in 2020. For China-based reviewers, the estimate is over 600 million USD, and for UK-based, close to 400 million USD.

Conclusions: By design, our results are very likely to be under-estimates as they reflect only a portion of the total number of journals worldwide. The numbers highlight the enormous amount of work and time that researchers provide to the publication system, and the importance of considering alternative ways of structuring, and paying for, peer review. We foster this process by discussing some alternative models that aim to boost the benefits of peer review, thus improving its cost-benefit ratio.

Communication

"They take our free labour, package it, and sell it back to us for windfall profits. The result is that one of our core activities - sharing research - is largely governed by the drive to deliver shareholder value. It doesn't have to be that way."

Jefferson Pooley, Muhlenberg College

LSE Impact Blog 2017

For researchers, it's like going to a restaurant, bringing all of your own ingredients, cooking the meal yourself, and then being charged $40 for a waiter to bring it out on a plate for you.

You are the provider, the product, and the consumer.
J. Tennant, 2018

WHY SHOULD YOU PAY TO READ THEM ?

www.plos.org

[reminder #1]

PUBLISHING SHOULD SERVE SCIENCE, BUT IT DOESN'T. SCIENCE SEEMS TO SERVE PUBLISHERS

Nov. 11, 2021

The market

Executive Summary

2 mins read

2020

Academic publishing is undergoing a major transition. Some of its leaders are moving from a content-provision to a data analytics business. This shift is still in its early days. There are actions and strategies that institutions can consider adopting to limit the potential harms, and leverage potential benefits.

FROM CONTENT PROVISION TO DATA ANALYTICS

SPARC

LANDSCAPE ANALYSIS

The Changing Academic Publishing Industry – Implications for Academic Institutions

March 28, 2019

zenodo

Search

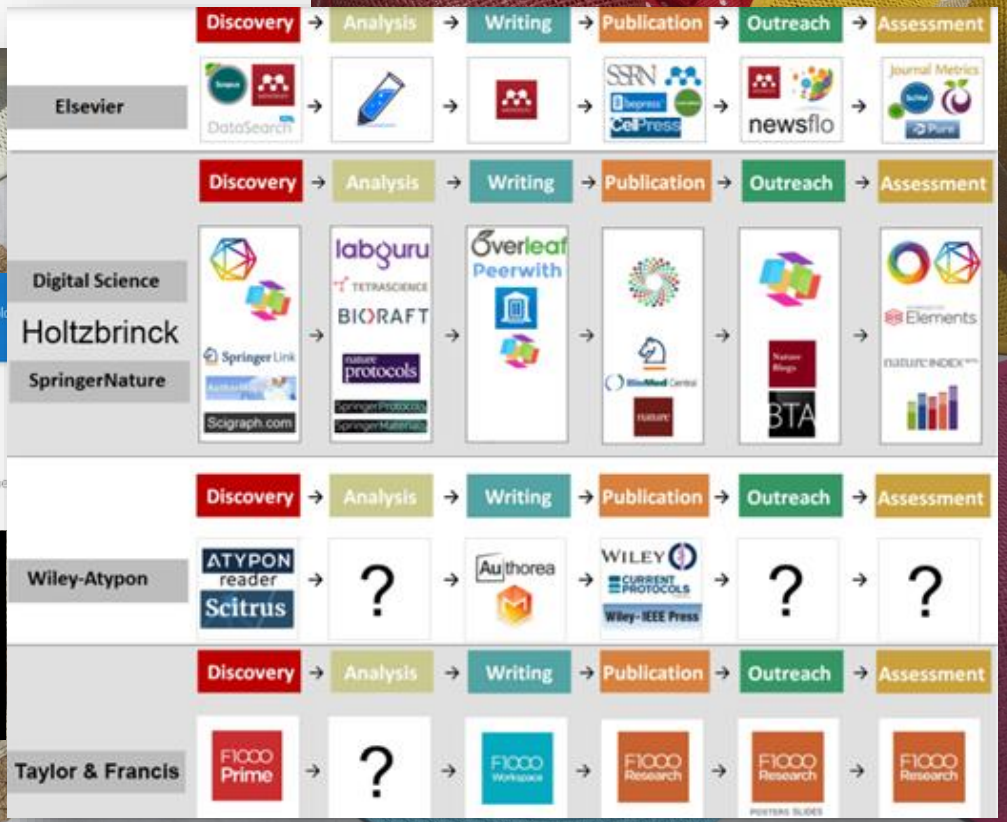
September 24, 2021

Sept. 24, 2021

Replacing academic journals

Björn Brembs; Philippe Huneman; Felix Schönbrodt; Gustav Nilsonne; Pandelis Perakakis; Varvara Trachana; Lai Ma; Sara Rodriguez-Cuadrado

COVERING EVERY STEP OF THE RESEARCH CYCLE



[reminder #2]

THEY ARE BIG BROTHER AND YOU ARE PAYING THEM TO DO IT

Nov.14, 2021

Public interactions with Elsevier's management during the first part of 2021 suggest that Elsevier itself continues to publicly downplay the conflicts of interest among its portfolio of activities. More broadly, little attention seems to be given to the conflicts that arise when Elsevier collects data from researchers and then sells research assessments to academic institutions, funding bodies, and governments.

SPARC update 2021

For example, in September 2020, Brad Allen, chief architect at Elsevier, held a webinar organized by the Harvard Data Science Initiative. During the Q&A, which was open to the public, questions were asked about the ethics of artificial intelligence (AI) and about possible conflicts of interest that the use of AI could present.[2] Though the answers indicated that Elsevier is aware of the ethical issues affecting data science, the presenters offered no concrete steps the company has taken to address them, and this void has not stopped them from selling their products. When asked about conflict of interest w serving both researchers, funders, and governments, Mr. Allen allowed that his answe had not been on point and admitted he had not thought much about it.

Conflicts of interest are not limited to both publishing research and assessing it or to collecting individual researchers' data through productivity tools and selling those dat to universities, funding bodies, and governments. Leslie Chan and George Chen have recently written extensively on the conflict of interest inherent in publishing research and contributing to university rankings.[3] Conversations with senior administrators of academic institutions often reveal the frustration engendered by university rankings, yet

- CONFLICT OF INTERESTS
- ETHICAL ASPECTS COMPLETELY OVER

Market and interests

SPARC update 2021

The fact that Elsevier (and, potentially, other companies) would pursue interests that put them at odds with the interests of the academic community and tolerate internal conflicts of interest should not come as a surprise. The business of publishers is to make money; the "business" of academic institutions is to advance knowledge, not to enable publishers to achieve their commercial goals. Unfortunately, the responsibility for high-lighting and resolving conflicts of interest falls squarely onto the academic community.

THE BUSINESS OF PUBLISHERS IS TO MAKE MONEY,
THE BUSINESS OF ACADEMIA IS TO ADVANCE (AND SHARE) KNOWLEDGE

[Houston, we h

No academic post for fraudster Diederik Stapel, after all

Recently, we reported that social psychologist and renowned data faker Diederik Stapel had found himself a new gig supporting research at a vocational university in the Netherlands — but it appears that was short-lived.

According to multiple news reports, NHTV Breda will not be employing Stapel, after all.

Here's our Google translate of a portion from *De Telegraaf*: Continue reading →

Diederik St

2013

Does scientific misconduct cause patient harm? The case of Joachim Boldt

The Retraction Wa Leaderboard

Who has the most retractions? Here's our unofficial list (see notes on methodology), which we'll update as more information comes to light:

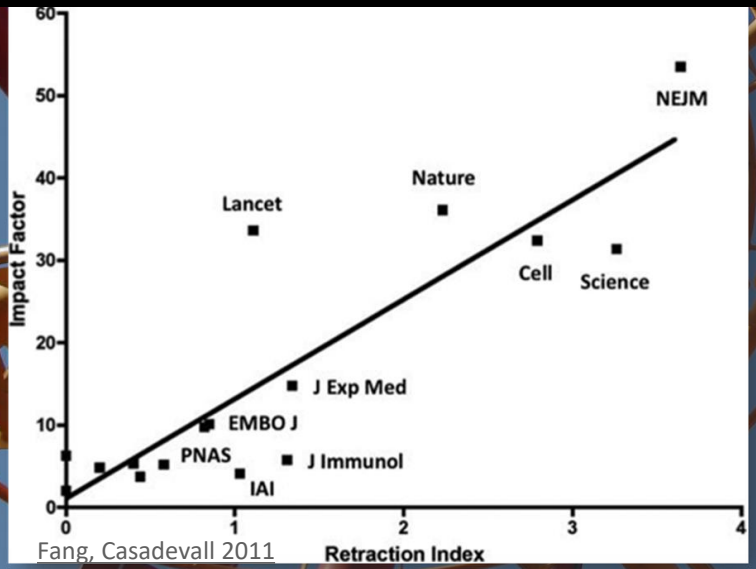
1. Yoshitaka Fujii (total retractions: 183) See also: Final report of investigating committee, our reporting, additional coverage
2. Joachim Boldt (136) See also: Editors-in-chief statement, our coverage
3. Yoshihiro Sato (102) See also: our coverage
4. Jun Iwamoto (78) See also: our coverage
5. Ali Nazari (62) See also:
6. Diederik Stapel (58) See
7. Yuhji Saitoh (53) See als
8. Adrian Maxim (48) See a

https://retractionwatch.com/

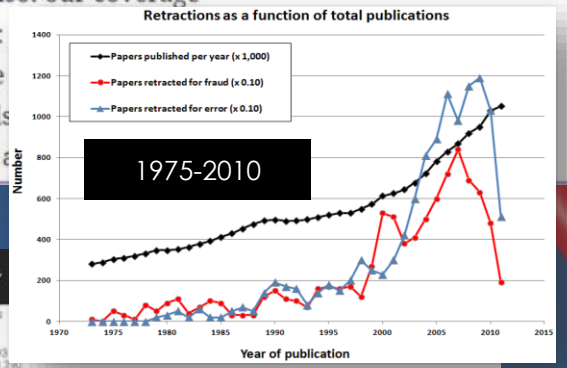
Retraction Watch

Tracking retractions as a window into the scientific process

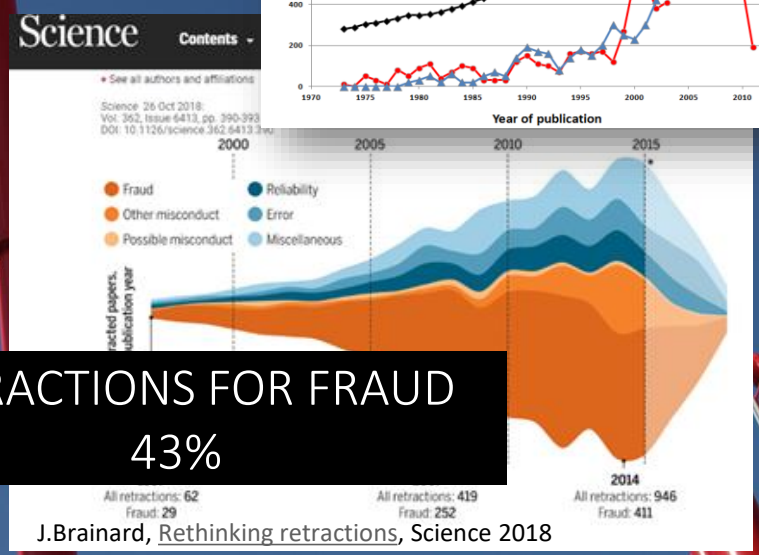
DIRECT CORRELATION
#RETRACTIONS/IMPACT FACTOR



Fang, Casadevall 2011



1975-2010



J.Brainard, Rethinking retractions, Science 2018

RETRACTIONS FOR FRAUD
43%

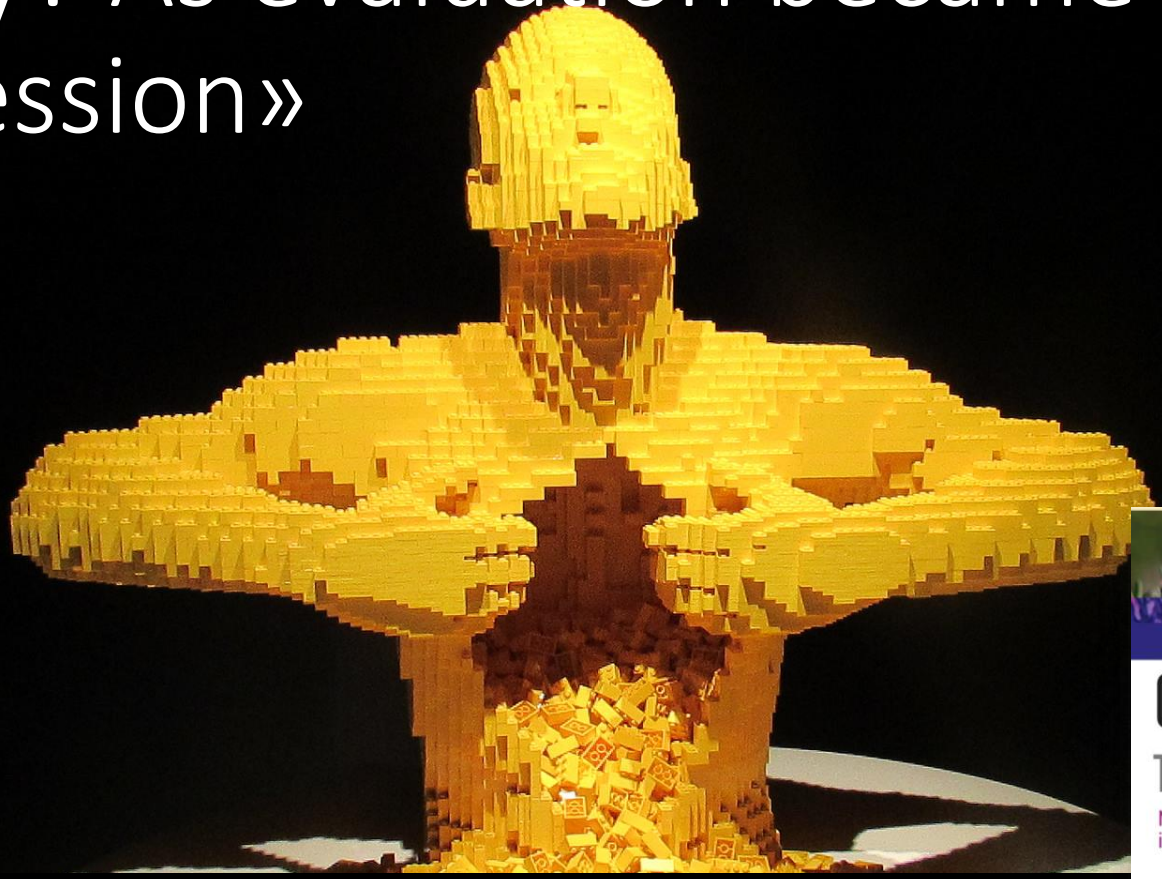
ROYAL SOCIETY OPEN SCIENCE

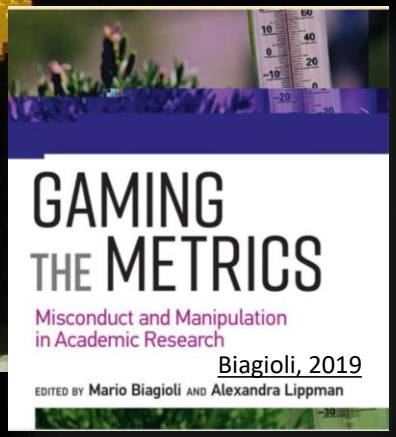
rsos.royalsocietypublishing.org

The natural selection of bad science

P.Smaldino, 2016

… why? As evaluation became an «obsession»





Biagioli, 2019

THE ROYAL SOCIETY
The future of scholarly scientific communication
Conference 2015

2015

EVALUATION BECAME AN OBSESSION

- «not only are we failing to provide the right incentives, we are providing perverse ones»
- Goodhart's law: «**when a measure becomes a target, it ceases to be a good measure**»
- «**people game the system at every level**»

… evaluation is the key

EVALUATION
- AFFECTS THE BEHAVIOUR
- PROMOTES COMPETITION OVER COLLABORATION
- MAINTAINS HIGH JOURNALS PRICES BASED ON PRESTIGE
- FAILS TO RECOGNIZE RESEARCH OUTPUTS LIKE DATA, CODE, BLOGS…

International Science Council

metrics designed to assess the importance and impact of research as an aid to evaluation, with publication outputs in traditional scientific journals being the major focus. These metrics in turn affect the behaviour of researchers, such as their choice of journals, as they seek to maximize their performance as measured by the metrics used. They can contribute to the maintenance of high journal prices, promote intense competition rather than openness and sharing, and fail to recognize research contributions such as the production of datasets, software, code, blogs, wikis and forums.

ICSU 2014

…Open Science might help

Open Science Depends on Open Minds

Neelie Kroes

Iscriviti 851

Qeios

Open Access | Lic. Info | Cite

https://doi.org/10.32388/838962

Open Science

'Open Science' stands for the transition to a new, more open and participatory way of conducting, publishing and evaluating scholarly research. Central to this concept is the goal of increasing cooperation and transparency in all research stages. This is achieved, among other ways, by sharing research data, publications, tools and results as early and open as possible.

Open Science leads to more robust scientific results, to more efficient research and (faster) access to scientific results for everyone. This results in turn in greater societal and economic impact.

https://www.accelerateopenscience.nl/what-is-open-science/

…Open Science in HEU

FOCUS ON THE ENTIRE PROCESS NOT ONLY ON THE FINAL OUTPUT (ARTICLE)

OPEN SCIENCE≠OPEN ACCESS

UNESCO

Lutz Möller
@moellerl

Nov.15 2021

A Milestone! While formal adoption will take place next week, #unescoGC has had its final discussion and endorsement on the landmark @UNESCO #OpenScience Recommendation. Unanimously! More than 50 governments voiced unconditional strong support. Great Day!

Traduci il Tweet

UNESCO RECOMMENDATION

Open Science

WEBINAR June 2021

NOT ONLY PAPERS.
ALL THE IN-BETWEEN IS SCIENCE…

REDEFINE «EXCELLENCE»

recognize that formal papers and manuscripts are not the only units of scientific knowledge

redefine research excellence towards *values*: leadership, diversity work, mental health support

put science back at the heart of society

invest in tools, services, and community-driven initiatives to help make science better by engaging more people to participate in the process

tell it like it is: redefine failure, nurture slower, responsible science, shift the focus from the outputs to the practice

@pcmasuzzo
Oct.5, 2020

TAKE BACK CONTROL, ENGAGE COMMUNITIES

TELL IT LIKE IT IS: REDEFINE «FAILURE», SHIFT THE FOCUS FROM OUTPUTS TO PRACTICE


WHAT

Open Access

Open Access

Berlin Declaration

1. The author(s) and right holder(s) of such contributions grant(s) to all users a free, irrevocable, worldwide, right of access to, and a license to copy, use, distribute, transmit and display the work publicly and to make and distribute derivative works, in any digital medium for any responsible purpose, subject to proper attribution of authorship (community standards, will continue to provide the mechanism for enforcement of proper attribution and responsible use of the published work, as they do now), as well as the right to make small numbers of printed copies for their personal use.

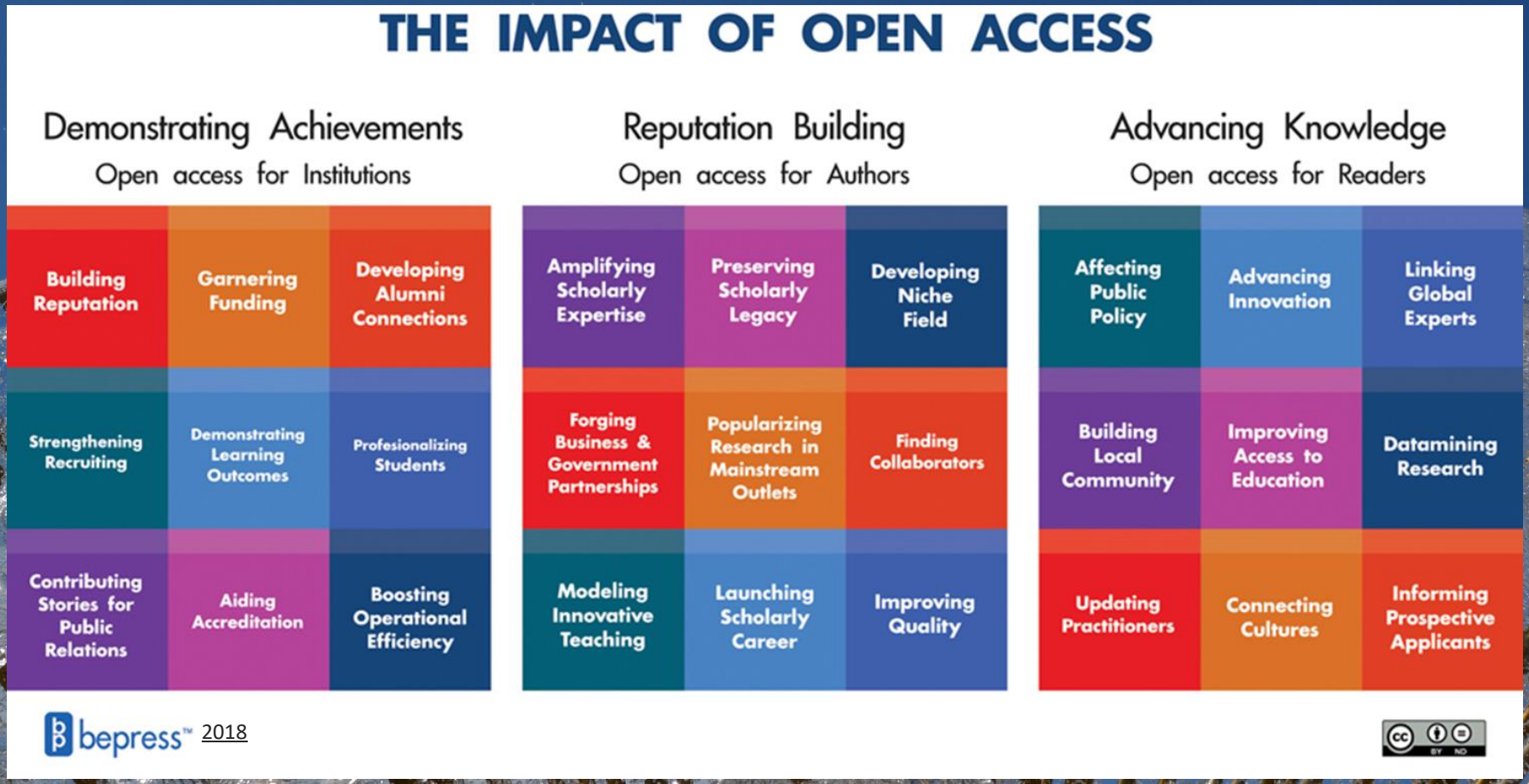
The pillars


KNOWLEDGE IS A COMMON
SCHOLARLY COMMUNICATION IS A GREAT CONVERSATION
THE RESULTS OF PUBLICLY FUNDED RESEARCH MUST BE PUBLICLY AVAILABLE

Benefits

… transparency on public funds…

Benefits / knowledge spread



…INCREASED AND FASTER CIRCULATION OF IDEAS…

BOOSTING THE CREATION OF KNOWLEDGE

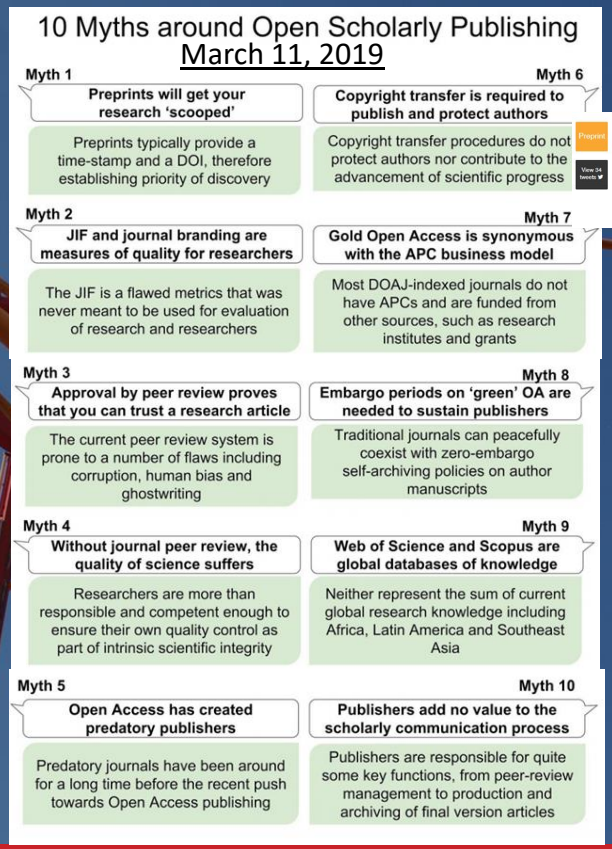
…and you have to do it [Horizon Europe]

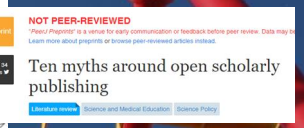
Giglia 2021


HOW

How Open Access works / green and gold

[Houston, we have a problem] / 2





OPEN ACCESS (PERCEPTION)

- JOURNALS ONLY
- ALWAYS PAYING FOR PUBLISHING
- ALWAYS PREDATORY PUBLISHERS

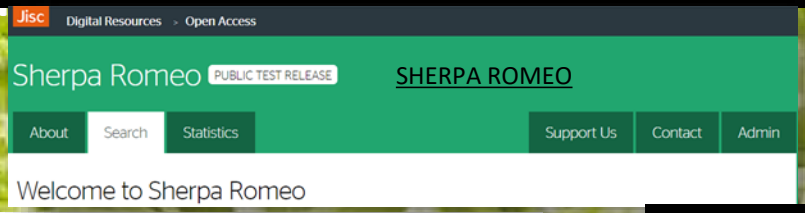
Green road – deposit/self archiving

AUTHOR SELF-ARCHIVES
IN AN OPEN ACCESS REPOSITORY
THE ALLOWED VERSION OF THE PAPER ,
WHEREVER IT WAS PUBLISHED,
ACCORDING TO PUBLISHERS' COPYRIGHT POLICIES

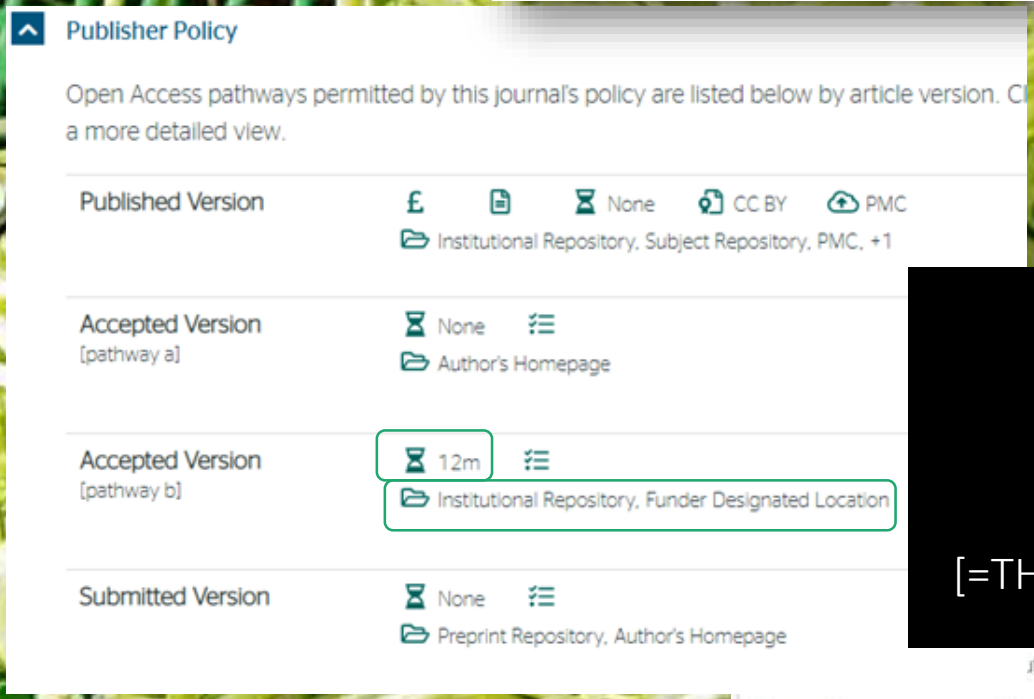

© Mel Brooks
You – can – do - it!!!!!!!
…EVEN MORE: IN HORIZON EUROPE YOU **MUST** DO IT!
YOU CAN DO IT EVEN ACCORDING TO THE CURRENT EVALUATION CRITERIA…
THEY ARE NOT MUTUALLY EXCLUSIVE…

Depos

82% COMMERCIAL PUBLISHERS ALLOW (Elsevier, Wiley, Springer…), CHECK ON SHERPA ROMEO:



SHERPA ROMEO

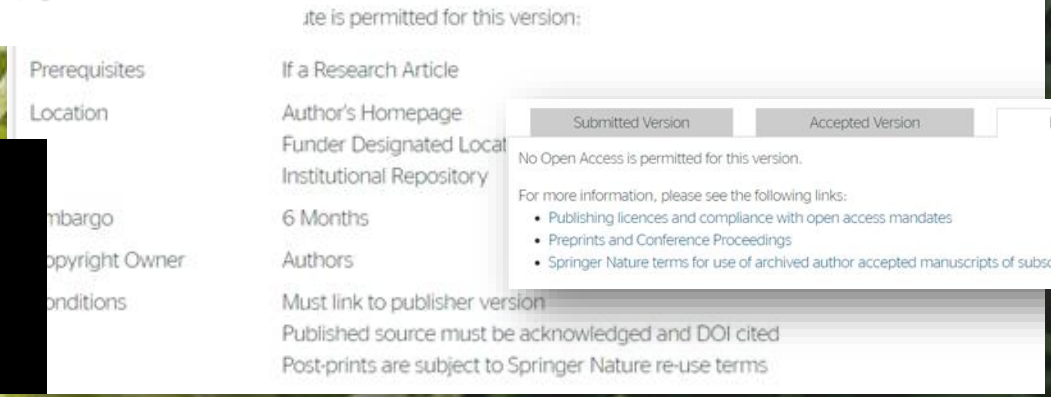


IF YOU FIND IT DIFFICULT, IT'S NOT OUR FAULT. CLAUSES ARE IMPOSED BY PUBLISHERS (TO WHOM YOU TRANSFERRED YOUR RIGHTS)

…CLAUSES:

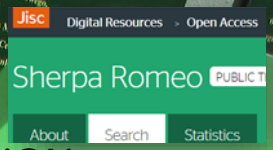
- RARELY «VERSION OF RECORD», MORE OFTEN **«AUTHORS' ACCEPTED MANUSCRIPT»**
- POSSIBLE **EMBARGO**

[=THE PAPER IS DEPOSITED BUT IT REMAINS IN CLOSED ACCESS FOR «X» MONTHS]



BEWARE: PUBLISHERS HAVE THEIR SAY ONLY IF YOU TRANFERRED ALL YOUR RIGHTS

Definitions



PREPRINT/SUBMITTED VERSION:
THE FILE YOU SUMBIT TO THE JOURNAL,
IT DOES NOT CONTAIN YET REVIEWERS' COMMENTS

AUTHOR'S ACCEPTED MANUSCRIPT:
FINAL REVISED VERSION, WITH REVIEWERS' COMMENTS BUT WITHOUT THE PUBLISHER LAYOUT

VERSION OF RECORD:
PUBLISHED VERSION,
WITH THE PUBLISHER LAYOUT

- EMBARGOES **START ON THE DAY OF ONLINE PUBLICATION** («AHEAD OF PRINT»)
- **EMBARGOES APPLY TO THE ALLOWED VERSION**

(I.E. 12 MONTHS ON THE POSTPRINT MEANS THAT AFTER 12 MONTHS THE **POSTPRINT** BECOMES VISIBLE, NOT THAT AFTER 12 MONTHS YOU CAN DEPOSIT THE FINAL PDF WITH THE PUBLISHERS' LAYOUT)

Arsenate toxicity on the apices of *Pisum sativum* L. seedling roots: Effects on mitotic activity, chromatin integrity and microtubules

Stefania Dho, Wanda Camusso, Marco Mucciarelli, Anna Fusconi

Abstract

Arsenic (As) is one of the most to
plant growth. Despite the growing
this element on meristem activity
study, short-term experiments wit
whether plant growth impairment
was studied by evaluating api
fragmentation and microtubule or
that arsenate, at the lowest co
parameters, whilst the other conc
mitotic and labelling index (after b
(through immunofluorescence). T
metaphases increased, as did the
mitotic spindles, which closely
ana/telophase bridges were virtua
onwards. These data point to a p
the main targets of As.

Keywords

Pea; Arsenic; Apical meristems; Aberrations; Immunofluorescence; TUNEL test

1. Introduction

Arsenic (As) is a toxic element, frequently found in soils and water. A main natural source of As is the erosion of mother rock, even though a consistent part of As environmental pollution comes from human activities (Meharg and Hartley-Whitaker, 2002 and Patra et al., 2004). The As in unpolluted fresh water is usually in the range 1–10 μg/l. According to EPA and WHO, the maximum permissible As concentration in drinking water is 50 μg/l (Mandal and Suzuki, 2002).

Arsenic is a well-established human carcinogen (Qin et al., 2008a) and has been shown to be genotoxic in a variety of *in vitro* studies (Hughes, 2002). In plants, it severely affects growth and development, and its toxicity is strongly dependent on the concentration, exposure time and physiological state of the plant (Singh et al., 2007). However, plants vary in their sensitivity to As, and a wide range of species have been identified in As-contaminated soils (Meharg and Hartley-Whitaker, 2002). Besides, hyperaccumulators such as *Pteris vittata*, which tolerate high internal As content, may also use this As to defence themselves against herbivore attack (Mathews et al., 2009).

Higher plants take up As mainly as arsenate (V), the dominant form of phytoavailable As in aerobic soils. According to Meharg and Hartley-Whitaker (2002), As competes with phosphate for plant phosphate transporters. Upon absorption, most arsenate is rapidly reduced to arsenite (III), due to an arsenate reductase activity (Xu et al., 2007), hence, the arsenate cytoplasmic concentration is generally not high enough to exert toxicity (Meharg and Hartley-Whitaker, 2002). Both As species interfere with various metabolic pathways: arsenate, as an analogous chemical to phosphate, may replace phosphate in the ATP and in various

Environmental and Experimental Botany 69 (2010) 17–23

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Arsenate toxicity on the apices of *Pisum sativum* L. seedling roots: Effects on mitotic activity, chromatin integrity and microtubules

Stefania Dho[a], Wanda Camusso[a], Marco Mucciarelli[b], Anna Fusconi[a,*]

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ABSTRACT

Arsenic (As) is one of the most toxic pollutants in the environment, where it severely affects both animal and plant growth. Despite the growing literature data on As effects on plant development, alterations induced by this element on meristem activity of the root have not been explored to any great extent. In the present study, short-term experiments with arsenate have been conducted on *Pisum sativum* L. seedlings to assess whether plant growth impairment is due to DNA/chromosome or mitotic microtubule damages. Root growth was studied by evaluating apical meristem activity and cell elongation. Mitotic aberrations, DNA fragmentation and microtubule organization of the apical cells were also analyzed. The results have shown that arsenate, at the lowest concentration (0.25 μM), slightly increases root growth and some related parameters, whilst the other concentrations have a dose-dependent negative effect on root growth, on the mitotic and labelling index (after bromo-deoxyuridine administration), and on the mitotic arrays of microtubule (through immunofluorescence). The main effects on mitosis occurred for 25 μM As. The percentage of metaphases increased, as did the irregular metaphases and c-mitoses. This was related to alterations in the mitotic spindles, which closely resemble those induced by colchicine. Chromosome breaks and ana/telophase bridges were virtually absent, whilst DNA fragmentation only increased from 25 μM arsenate onwards. These data point to a poor clastogenetic activity of As and implicate that microtubules are one of the main targets of As.

1. Introduction

Arsenic (As) is a toxic element, frequently found in soils and water. A main natural source of As is the erosion of mother rock, even though a consistent part of As environmental pollution comes from human activities (Meharg and Hartley-Whitaker, 2002; Patra et al., 2004). The As in unpolluted fresh water is usually in the range 1–10 μg/l. According to EPA and WHO, the maximum permissible As concentration in drinking water is 50 μg/l (Mandal and Suzuki, 2002).

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Higher plants take up As mainly as arsenate (V), the dominant form of phytoavailable As in aerobic soils. According to Meharg and Hartley-Whitaker (2002), As competes with phosphate for plant phosphate transporters. Upon absorption, most arsenate is rapidly reduced to arsenite (III), due to an arsenate reductase activity (Xu et al., 2007), hence, the arsenate cytoplasmic concentration is generally not high enough to exert toxicity (Meharg and Hartley-Whitaker, 2002). Both As species interfere with various metabolic pathways: arsenate, as an analogous chemical to phosphate, may replace phosphate in the ATP and in various phosphorylation reactions, leading to the disruption of the energy flow in cells. The toxicity of arsenite is mainly ascribed to its reaction with sulphydril groups of proteins that interfere with their functions (Meharg and Hartley-Whitaker, 2002; Patra et al., 2004).

Exposure to high concentrations of As induces the production of reactive oxygen species (ROS) (Singh et al., 2007; Wang et al., 2007; Lin et al., 2008; Shri et al., 2009) and the conversion of arsenate to arsenite is regarded as one of the causes of ROS generation (Wang et al., 2007). Oxidative stress induced by As can damage cells, mainly through lipid peroxidation of membranes (Singh et al., 2007) and DNA fragmentation, as has been demonstrated in leaves and roots

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doi:10.1016/j.envexpbot.2010.02.010

Green road –self archiving

BENEFIT OF SELF ARCHIVING:

- ZERO COSTS, IMMEDIATELY FEASABLE
- YOU KEEP PUBLISHING ON THE JOURNALS EVALUATION CRITERIA ASK YOU TO
- BUT YOU «LIBERATE» YOUR PAPER BY DEPOSITING IT IN AN OPEN ARCHIVE

-THEY CAN CLOSE TOMORROW
- THEY CAN BE BOUGHT TOMORROW

…two of a kind

OFFICE OF SCHOLARLY COMMUNICATION
UNIVERSITY OF CALIFORNIA

HOME » FEATURES » A SOCIAL NETWORKING SITE IS NOT AN OPEN ACCESS REPOSITORY

A social networking site is not an open access repository

	Open access repositories	Academia.edu
Supports export or harvesting	Yes	No
Long-term preservation	Yes	No
Business model	Nonprofit (usually)	Commercial. Sells job posting

https://goo.gl/RnUszK

LC
Lenz Caemmerer

Attorneys
and Notaries

ResearchGate vs. publishers

ResearchGate vs. Publishers: The Saga Continues…

Last updated **May 8, 2018**

May 2018

NEWS

ResearchGate bows to pressure from publishers on copyrighted material

BY REBECCA TRAGER | 15 NOVEMBER 2017

Networking site has moved 1.7 million journal articles from five major publishers so they are no longer accessible to the public

Nov. 15, 2017

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

..two of a kind

A note on recent content takedowns

23rd September 2021

23 sett 2021

ResearchGate

ResearchGate recently received demands from two publishers — Elsevier and the American Chemical Society (ACS) — to remove certain content that they alleged infringed their copyrights. These types of requests are not really new: we have received many similar requests fr
past, and, in accordance with applicable law, have complied with them. But these mos
requests were notable because of the number of articles involved. Although privately s
were not affected, the demands by Elsevier and ACS resulted in the removal of around
public files. In the context of a community of over 20 million researchers this is unfortu
than existential, but it has sparked an acute reaction from many of our members who
importance of open science

ELSEVIER «ONE OF THE LARGEST OPEN ACCESS PUBLISHERS» ☺ HAD MORE THAN 200.000 PAPERS REMOVED

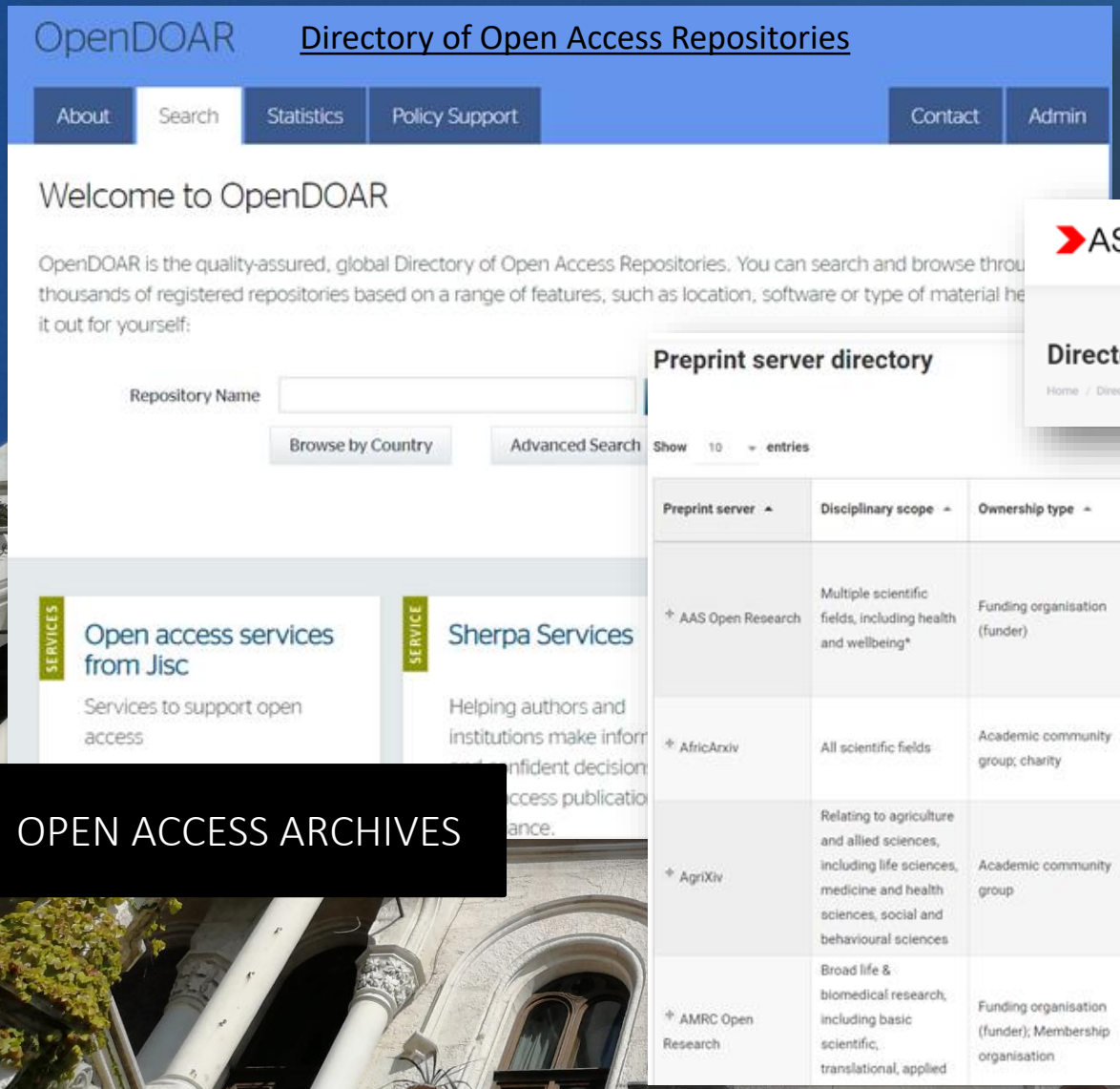
The decision by Elsevier and ACS to simply remove content is disappointing to the entire research community, not just because of the loss to science and researchers, but because there is a better way. Publishers such as Springer Nature and Wiley are working with us to explore the opportunities that openness unlocks for all actors in the scholarly publishing ecosystem, with the researcher at the center. Specifically, through our content syndication program, these publishers have placed their content on ResearchGate (not taken it away) and made it seamlessly available to eligible researchers. This drives the consumption of content, reaches new audiences, and makes discovery and access easier for the researcher. This is the path for a brighter future in science.

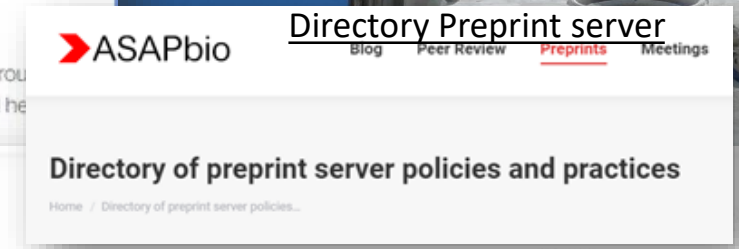
To all authors who were
urge you to comply with
time, we will continue to
all.

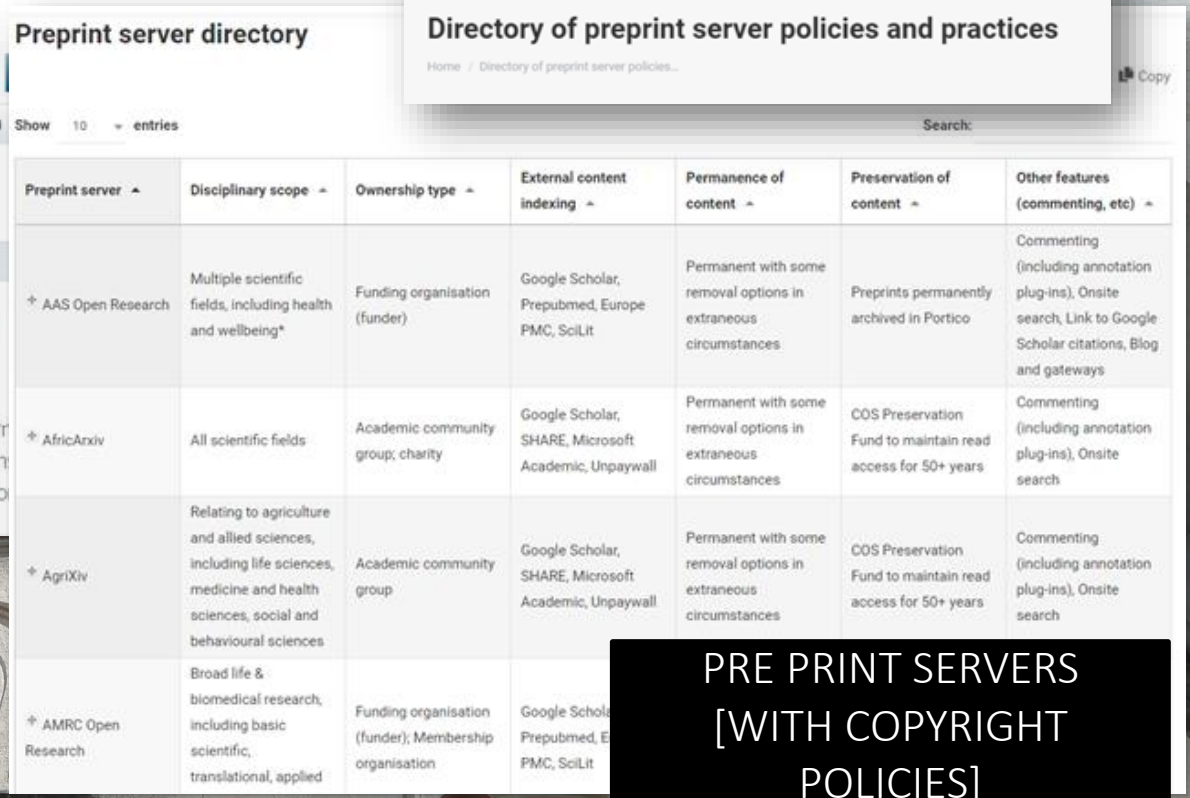
We started ResearchGate with the clear vision to transform science into an open endeavour. Initially we met with great resistance from the publishing industry, which was entrenched in a model that put its profits above the needs of the researcher. Over the past decade, however, we've seen the majority of publishers — under pressure from the research community, funders, institutions, and libraries —

To all publishers: the future of academic publishing is open. Let's work together to unlock its true potential.

Looking for a repository?







OPEN ACCESS ARCHIVES

PRE PRINT SERVERS [WITH COPYRIGHT POLICIES]

Embargo?

mrgunn
@mrgunn

Segui

In risposta a @brembs e @ReaderMeter

The whole point of the embargo is so that subscribers can get their money's worth. As you know, I wish everything was open access, but I'm just putting out there why embargoes exist.

IF PUBLISHERS REALLY ADDED VALUE TO THE PAPER, THEY SHOULD NOT IMPOSE ANY EMBARGO AS ANYONE WOULD WILLINGLY PAID FOR THAT «PLUS»...

Bastian Drees
@BastianDrees

Segu

In risposta a @mrgunn, @brembs e @ReaderMeter

The other way round: Any publisher that adds significant value (for the reader) beyond just hosting a text document in a repository does not have to fear any self-archiving and does not need embargoes. https://twitter.com/BastianDrees/status/981773607234887680

Björn Brembs
@brembs

Following

In risposta a @ReaderMeter e @mrgunn

Every publisher with an embargo policy does obviously not believe they add any value themselves. So why should we?

Embargo?

arXiv.org > cs > arXiv:1604.05363 https://arxiv.org/pdf/1604.05363.pdf

Search...

Help | A

Computer Science > Digital Libraries

[Submitted on 18 Apr 2016]

Comparing Published Scientific Journal Articles to Their Pre-print Versions

Martin Klein, Peter Broadwell, Sharon E. Farb, Todd Grappone

Academic publishers claim that they add value to scholarly communications by coordinating reviews and contributing and enhancing text during publication. These contributions come at a considerable cost: U.S. academic libraries paid $1.7 billion for serial subscriptions in 2008 alone. Library budgets, in contrast, are flat and not able to keep pace with serial price inflation. We have investigated the publishers' value proposition by conducting a comparative study of pre-print papers and their final published counterparts. This comparison had two working assumptions: 1) if the publishers' argument is valid, the text of a pre-print paper should vary measurably from its corresponding final published version, and 2) by applying standard similarity measures, we should be able to detect and quantify such differences. Our analysis revealed that the text contents of the scientific papers generally changed very little from their pre-print to final published versions. These findings contribute empirical indicators to discussions of the added value of commercial publishers and therefore should influence libraries' economic decisions regarding access to scholarly publications.

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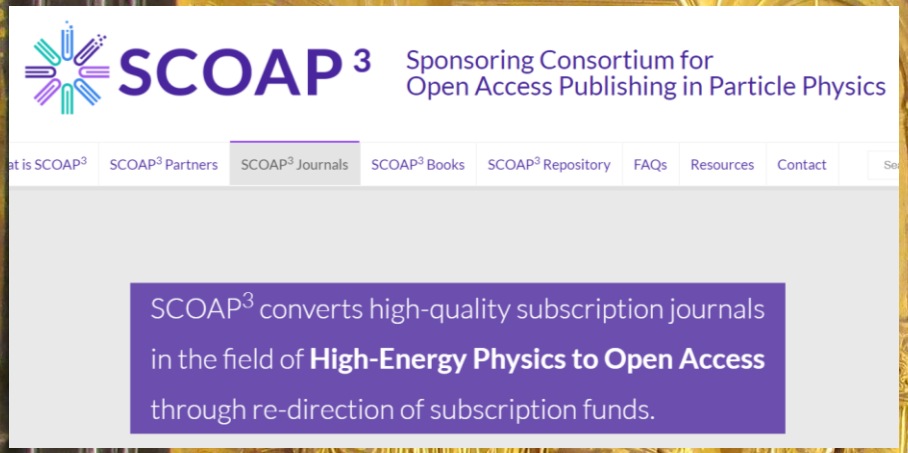
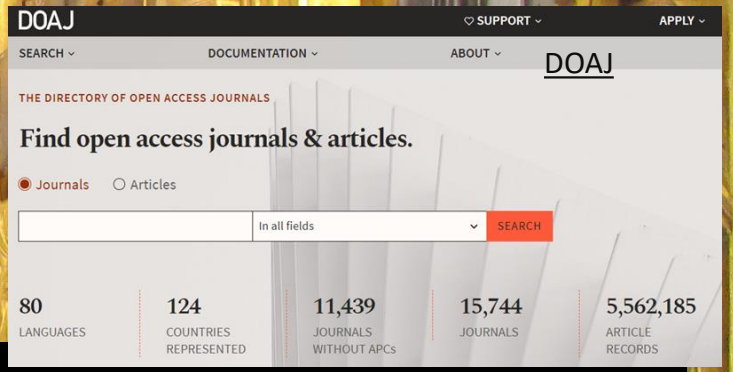
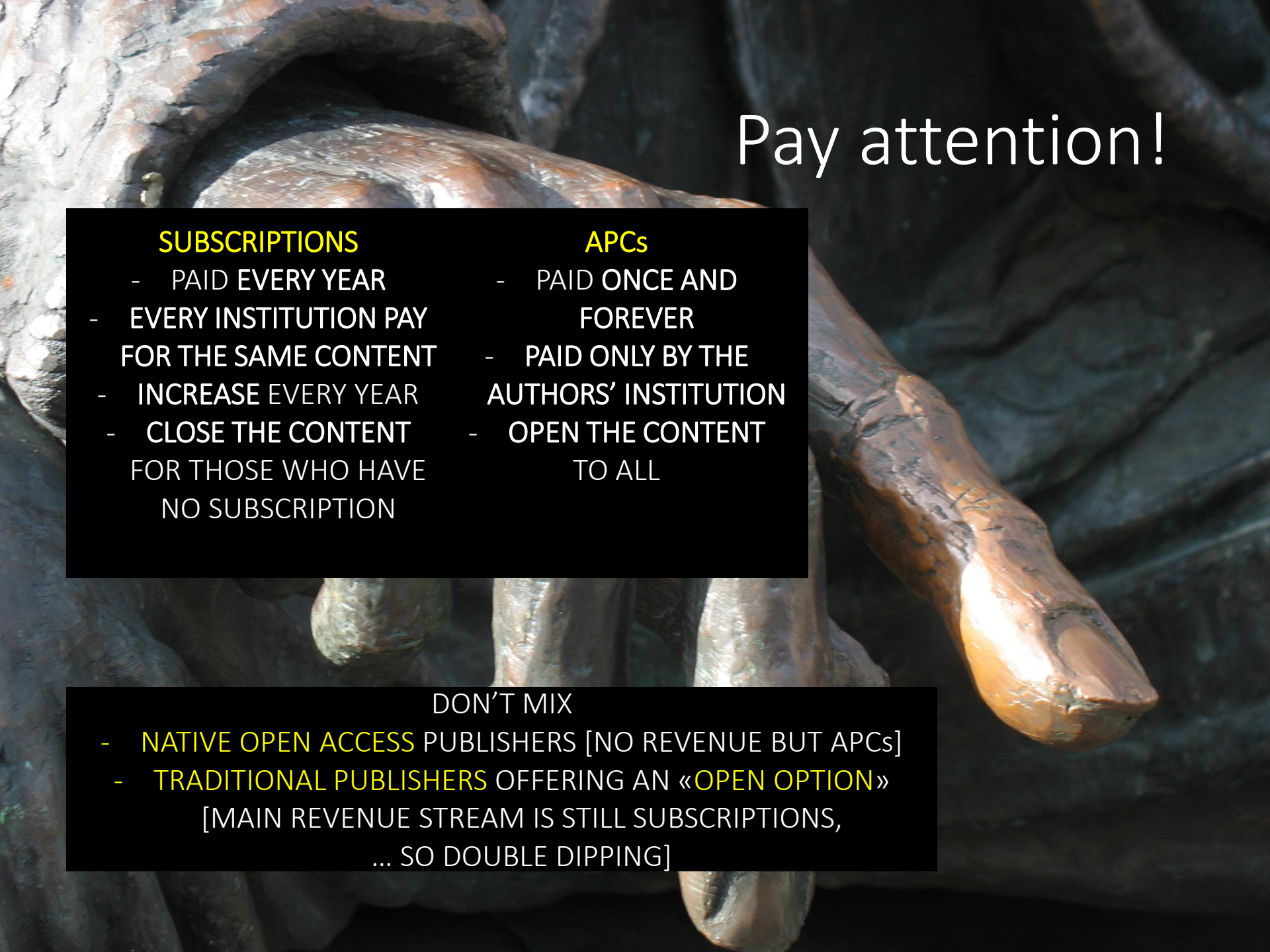
Gold road
Publishing in Open Access





- YOU MIGHT HAVE TO CHANGE YOUR PUBLISHING VENUE
- MORE THAN 17.000 OPEN ACCESS JOURNALS LISTED IN DOAJ, DIRECTORY OF OPEN ACCESS JOURNALS [STRONG SELECTION CRITERIA]
- 29% ASK FOR APC - ARTICLE PROCESSING CHARGES, GOING FROM 250 A 2900 $ PER ARTICLE (IT'S THE SAME LOGIC OF THE STAMP…)
- EVEN TRADITIONAL COMMERCIAL PUBLISHERS ASK A FEE FOR FIGURES, MORE PAGES…



Pay attention!

SUBSCRIPTIONS

- PAID **EVERY YEAR**
- **EVERY INSTITUTION PAY FOR THE SAME CONTENT**
- **INCREASE** EVERY YEAR
- **CLOSE THE CONTENT** FOR THOSE WHO HAVE NO SUBSCRIPTION

APCs

- PAID **ONCE AND FOREVER**
- **PAID ONLY BY THE AUTHORS' INSTITUTION**
- **OPEN THE CONTENT** TO ALL

DON'T MIX

- NATIVE OPEN ACCESS PUBLISHERS [NO REVENUE BUT APCs]
- TRADITIONAL PUBLISHERS OFFERING AN «OPEN OPTION»

[MAIN REVENUE STREAM IS STILL SUBSCRIPTIONS,
… SO DOUBLE DIPPING]

[how to chose in D

Three tips to choose a publishing venue using the Directory of Open Access Journals (DOAJ)

Published on January 11, 2021

Jan. 11, 2021

Andrea Chiarelli
Senior Consultant at Research Consulting | Enhancing the effectiveness and impact of research

4 articles ✓ Following

Tip 1: Find a good match

First of all, I set out to find a journal that suited my research topic (which will sound obvious to anyone who has published academic articles in the past!). This was straightforward on the DOAJ website, as I simply **entered "small business" in the search field** and I was provided with ten options covering small business strategy and entrepreneurship.

Tip 2: Think about the essentials

After identifying journals with an appropriate scope, I started thinking about
should-haves and could-haves. I admit I haven't done this in the past, when p
better known publishers, but this was certainly an oversight on my part! Thi
what I wanted to get out of my publishing experience proved really insightfu

To begin with, I considered what I felt would be essential (**must-haves**). In
interested in finding a journal that could offer:

- a permissive open access licence (e.g. Creative Commons);
- high-quality, double-blind peer review; and
- Digital Object Identifiers, or DOIs (rather than Handles - see **this page** if you'd like to learn about the difference between the two).

Tip 3: Consider what could elevate your publishing experience

The must-haves I set helped me narrow down the results shown by the DOAJ website after filtering by scope. I then moved on to consider the features that my ideal journal **should have**. Particularly, I was interested in:

- article-level citation metrics (views, download, citations);
- indexing in relevant databases and search engines;
- a digital preservation strategy; and
- a reasonable peer review and publication time.

- TOPIC (AND COSTS)
- WHAT IS ESSENTIAL FOR YOU
- WHAT ADDS VALUE

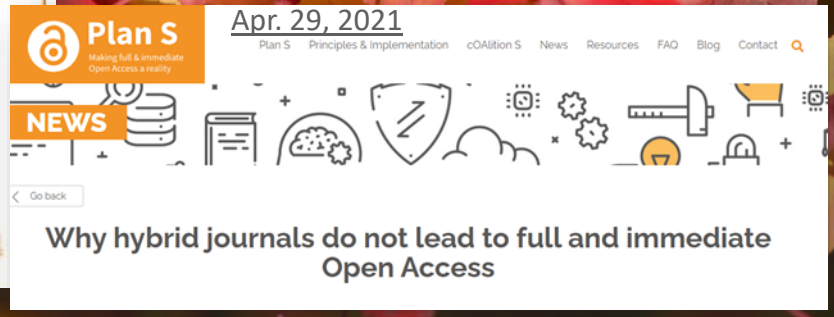
«red road» / HYBRID

GOLD ROAD IS NOT THE «OPEN CHOICE» OFFERED BY TRADITIONAL COMMERCIAL PUBLISHERS (ELSEVIER, SPRINGER, WILEY…)

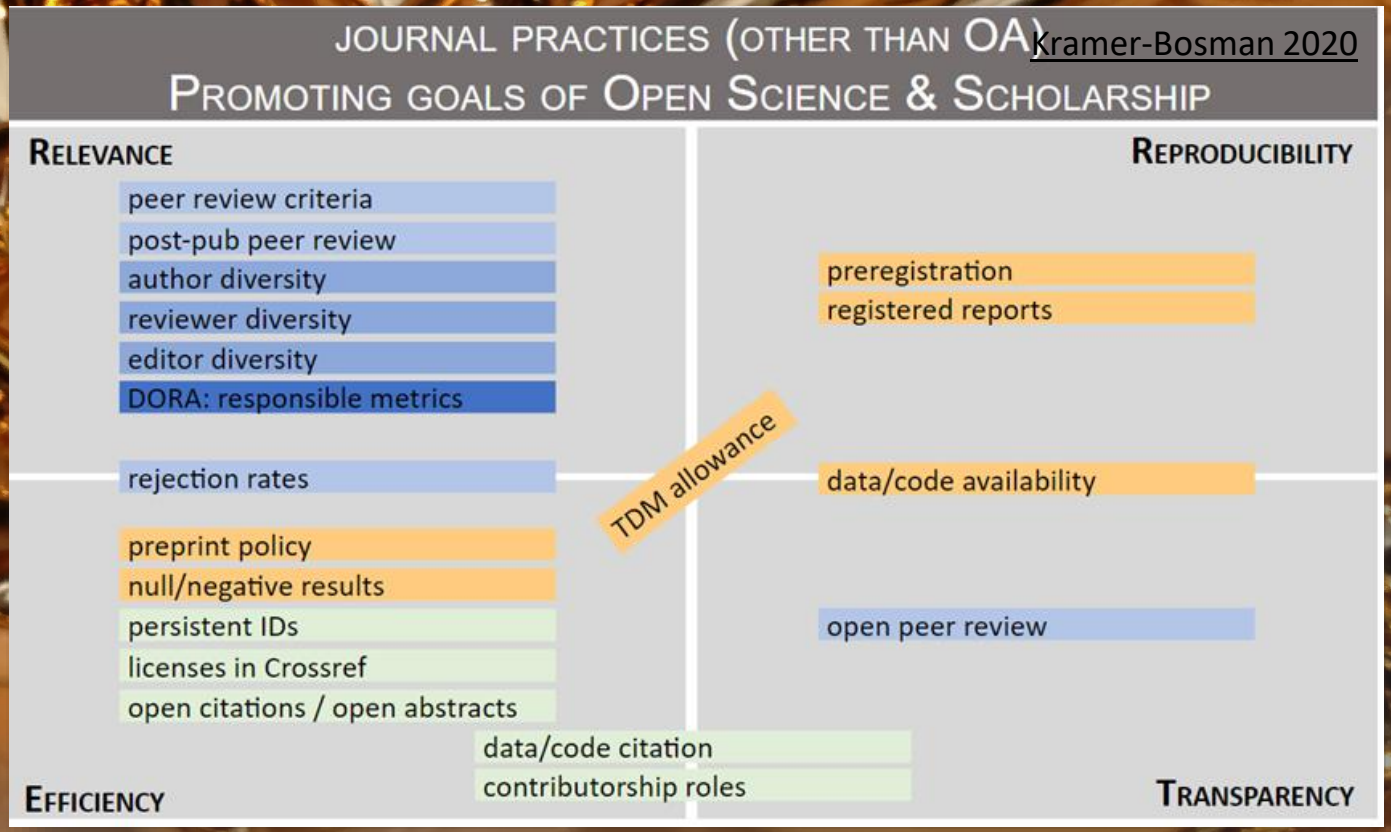
PAYING A 3000 $ APC,
YOUR SINGLE ARTICLE BECOMES OPEN ACCESS,
BUT THE JOURNAL IS STILL BY SUBSCRIPTION

SO, YOU PAY TWICE…

[TO BE AVOIDED – YOU GET THE SAME RESULT SELFARCHIVING FOR FREE]



Are OA journals different?



Dec. 2020

Elsevier looking into "very serious concerns" after student calls out journal for fleet of Star Trek articles, other issues

An undergraduate student in the United Kingdom has taken to task the editors of a purportedly scholarly journal for having

Springer Nature geosciences journal retracts 44 articles filled with gibberish

Nov. 4 2021

Springer Nature has retracted 44 papers from a journal in the Middle East after determining that they were rubbish.

The articles, which showed up in the *Arabian Journal of Geosciences* starting earlier this year, many of which involve at least some researchers based in China, and from their titles appear to be utter gibberish — yet managed still to pass through Springer Nature's production system without notice.

The retractions follow the flagging of more than 400 papers by the publisher for concerns about "serious research integrity" breaches in the articles. Those concerns were first surfaced by a commenter on PubPeer and by a group of researchers who have been identifying and exposing nonsense papers.

Predatory?

ONLY
2%-5%

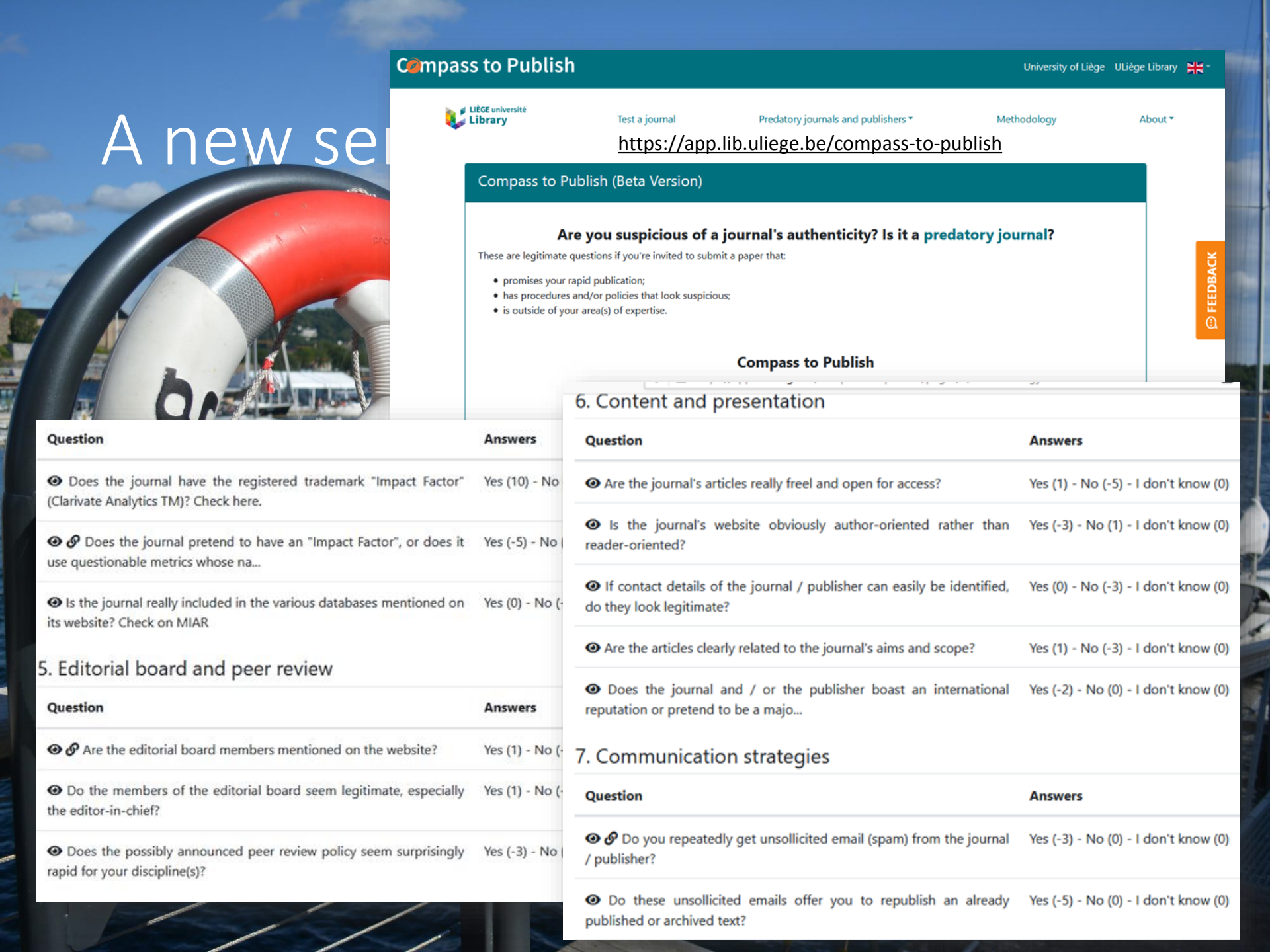
QUALITY DEPENDS ON EDITORIAL PROCESS NOT BUSINESS MODEL

(Springer 107 retractions for false review, Elsevier 7 journals retracted, paid by Big Pharma)

IF REVIEWS WERE PUBLIC…

…AND IF YOU WEREN'T UNDER THE PUBLISH OR PERISH PRESSURE, WOULDN'T YOU BE MORE CAREFUL IN CHOOSING YOUR PUBLICATION VENUE?

A new ser



Compass to Publish

University of Liège ULiège Library

LIÈGE université Library

Test a journal | Predatory journals and publishers | Methodology | About

https://app.lib.uliege.be/compass-to-publish

Compass to Publish (Beta Version)

Are you suspicious of a journal's authenticity? Is it a predatory journal?

These are legitimate questions if you're invited to submit a paper that:

- promises your rapid publication;
- has procedures and/or policies that look suspicious;
- is outside of your area(s) of expertise.

Compass to Publish

FEEDBACK

Question	Answers
Does the journal have the registered trademark "Impact Factor" (Clarivate Analytics TM)? Check here.	Yes (10) - No
Does the journal pretend to have an "Impact Factor", or does it use questionable metrics whose na...	Yes (-5) - No
Is the journal really included in the various databases mentioned on its website? Check on MIAR	Yes (0) - No

5. Editorial board and peer review

Question	Answers
Are the editorial board members mentioned on the website?	Yes (1) - No
Do the members of the editorial board seem legitimate, especially the editor-in-chief?	Yes (1) - No
Does the possibly announced peer review policy seem surprisingly rapid for your discipline(s)?	Yes (-3) - No

6. Content and presentation

Question	Answers
Are the journal's articles really freel and open for access?	Yes (1) - No (-5) - I don't know (0)
Is the journal's website obviously author-oriented rather than reader-oriented?	Yes (-3) - No (1) - I don't know (0)
If contact details of the journal / publisher can easily be identified, do they look legitimate?	Yes (0) - No (-3) - I don't know (0)
Are the articles clearly related to the journal's aims and scope?	Yes (1) - No (-3) - I don't know (0)
Does the journal and / or the publisher boast an international reputation or pretend to be a majo...	Yes (-2) - No (0) - I don't know (0)

7. Communication strategies

Question	Answers
Do you repeatedly get unsollicited email (spam) from the journal / publisher?	Yes (-3) - No (0) - I don't know (0)
Do these unsollicited emails offer you to republish an already published or archived text?	Yes (-5) - No (0) - I don't know (0)

[just to recap]

DEPOSIT SOM[illegible]
ALREADY PUBLISH[illegible]

YOU PUBLISH DIRECTLY IN OPEN

DEPOSIT

PUBLISH

INSTITUTIONAL/ DISCIPLINARY REPOSITORIES

- **«LIBERATE» YOUR PAPER** PUBLISHED IN A SUBSCRIPTION JOURNAL
- YOU **KEEP PUBLISHING IN THE MOST PRESTIGIOUS JOURNALS** AND YOU ARE COMPLIANT WITH THE CURRENT ASSESSMENT CRITERIA

DOES NOT CHANGE THE CURRENT SYSTEM BASED ON JOURNALS

ALWAYS CHECK ON Sherpa Romeo

FULLY OPEN ACCESS JOURNALS

THEY CAN BE
- **GOLD** (you pay APCs)
- **DIAMOND** (none pays)

- YOUR PAPER IS **IMMEDIATELY OPEN**
- **TEAR DOWN PAYWALLS**

- THERE MIGHT BE COSTS
- IT MIGHT NOT BE THE «MOST PRESTIGIOUS» JOURNAL

PUBLISHING PLATFORMS, PREPRINT SERVERS, OPEN NOTEBOOKS….

- THEY ARE **REALLY INNOVATIVE**
- THEY **CAN DISRUPT THE CURRENT DISFUNCTIONAL SYSTEM**

- THEY ARE STILL **NOT «RECOGNIZED»** IN RESEARCH EVALUATION/FOR CAREER
- YOU NEED TO BE «BRAVE» IF YOU WANT TO GO **EXCLUSIVELY** FOR THESE TOOLS
- …BUT REMEMBER THE CASE OF PREPRINTS IN AUSTRALIA: YOU DRIVE THE CHANGE!

IF YOU WANT TO BE OPEN YOU CAN PUBLISH IN…

DEPOSIT TO BE OPEN

Plan S ✓

TRADITIONAL SUBSCRIPTION BASED JOURNAL

THEN YOU HAVE TO DEPOSIT YOUR PAPER IN THE INSTITUTIONAL REPOSITORY (CHECK THE ALLOWED VERSION AND POSSIBLE EMBARGO IN SHERPA ROMEO)

NOTE: IF YOU ARE FUNDED BY PLAN_S OR HORIZON EUROPE YOU HAVE TO RETAIN RIGHTS TO GIVE IMMEDIATE ACCESS, NO EMBARGO ALLOWED

NO NEED TO DEPOSIT – YOU ARE ALREADY OPEN

Plan S ✗

HYBRID JOURNAL (SUBSCRIPTION BASED, OFFERING AN «OPEN CHOICE»)

TO BE AVOIDED… YOUR INSTITUTION PAYS TWICE, FOR THE SUBSCRIPTION AND THE APC FOR YOUR SINGLE ARTICLE
+ NOT ADMITTED IN PLAN_S
+ ADMITTED BUT NOT REIMBURSED IN HORIZON EUROPE

Plan S ✓

SUBSCRIPTION JOURNAL UNDER TRANSFORMATIVE AGREEMENT

THANKS TO SOME TRANSFORMATIVE AGREEMENTS /SCOAP3 NEGOTIATED, **YOU ARE ALLOWED TO PUBLISH FOR FREE [A LIMITED AMOUNT OF] OPEN ACCESS ARTICLES** IN JOURNALS STILL BY SUBSCRITPION BUT SHIFTING TO OPEN ACCESS.

Plan S ✓

FULLY OPEN ACCESS JOURNAL

YOU CAN CHOOSE A FULLY OPEN ACCESS JOURNAL IN DOAJ

YOU MIGHT HAVE TO PAY APCs BUT PLAN_S IS PAYING FOR YOU

HORIZON EUROPE WILL REIMBURSE

DOAJ DIRECTORY OF OPEN ACCESS JOURNALS

PlanS

There are three routes for being compliant with Plan S:

	Open Access publishing venues (journals or platforms)	Subscription venues (repository route)	Transition of subscription venues (transformative arrangements)
Route	Authors publish in an Open Access journal or on an Open Access platform.	Authors publish in a subscription journal and make either the final published version (Version of Record (VoR)) or the Author's Accepted Manuscript (AAM) openly available in a repository.	Authors publish Open Access in a subscription journal under a transformative arrangement.
			cOAlition S funders can contribute financially to Open Access publishing under transformative arrangements.

JOURNAL CHECKER TOOL

BETA

Journal checker

Is this compliant with Plan S ?

JOURNAL

By ISSN or title

+

MY FUNDER

By funder name

Plan S Rights Retention Strategy

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

Summary

cOAlition S has developed a *Rights Retention Strategy* to give researchers supported by a cOAlition S Organisation the freedom to publish in their journal of choice, including subscription journals, whilst remaining fully compliant with Plan S.

cOAlition S Organisations will facilitate this by changing their grant conditions to require that a Creative Commons Attribution licence (CC BY[1]) is applied to all Author Accepted Manuscripts (AAMs[2]) or Versions of Record (VoR[3]) reporting original research, supported in whole or in part by their funding.

- JOURNAL CHECKER
- RIGHTS RETENTION STRATEGY

[PlanS]

Apr. 2021

Plan S
Making full & immediate Open Access a reality

Plan S | Principles & Implementation | cOAlition S | News | Resources | FAQ | Blog | Contact

Go back

The Rights Retention Strategy and publisher equivocation: an open letter to researchers

20/04/2021

cOAlition S strategy of applying a prior licence to the Author's Accepted Manuscript (AAM) is designed to facilitate full and immediate open access of funded scientific research for the greater benefit of science and society. It helps authors exercise their ownership rights on the AAM, so they can share it immediately in a repository under an open licence.

The manuscript – even after peer-review – is the intellectual creation of the authors. The RRS is designed to protect authors' rights. The costs that publishers incur for the AAM, such as managing the peer-review process, are covered by subscriptions or publication fees. Delivering such publication services does therefore not entitle publishers to limit, constrain or appropriate ownership rights in the author's AAM.

Some subscription publishers have recently put in place practices that attempt to prevent cOAlition S funded researchers from exercising their right to make their AAM open access immediately on publication.

Publisher practices

Confusing and misleading guidance to authors

For example, some publishers indicate that they do not "support" rights cOAlition S funded researchers do not need the publisher's permission to immediately share their AAM zero embargo with a CC BY licence, as long as the publisher has been given notice of the prior licence. The July 2020 letter to publishers made this clear, and these requirements are reinforced by funded researchers who are required to include specific language with every submission.

Other publishers suggest that authors can only comply with funders' requirements by using a gold open access route. That is simply incorrect. The JCT provides guidance here.

Rejecting submissions to a subscription journal that carry the RRS language and re-routing these submissions to full Open Access journals

To avoid the possibility that an AAM in a subscription journal is made open access without embargo, the publisher may try to re-route the submission to a fully open access journal in which they publish. Such a re-routing process should be explicitly highlighted at the start of the submission process.

Modifying submission systems such that authors are required to agree to paying an open access fee (Article Processing Charge)

In this example, publishers only allow articles to be submitted to a hybrid journal if the author agrees to pay an APC, even though the publisher is aware that the cOAlition S funder will not cover these costs and that the author may not have access to alternative funds for the APC. We urge researchers to be cautious about what they sign or select on their submission screens.

Encouraging authors to breach their funder's grant conditions

Some publishers, who recognise that from a copyright perspective the prior licence trumps any conflicting provision in a subsequent licence, are now asking authors to agree to specific terms within their publishing agreements to try and stop them sharing their AAM immediately on publication.

BEWARE OF MIDLEADING GUIDANCE BY PUBLISHERS

https://www.coalition-s.org/price-and-service-transparency-frameworks/

Plan S Price Transparency Frameworks: guidance & requirements

The Fair Open Access Breakdown of Publication Services and Fees

Service baskets	Components		Specify	%	Price
1. Journal operations	- Journal support and submission system - Platform development and maintenance - Helpdesk & other support staff		In/out house		
2. Publication	- Triaging - Organization peer review - Other Editorial assistance - Indexing - Archiving	- Typesetting - Copy-editing - Language editing - Proofreading	Rejec-tion rate		
3. Fees	- Scientific editors fees - Scholarly societies fees		Agree-ments		
4. Communication	- Dissemination - PR & marketing	- Community support - Advocacy			
5. General	- Management & administration - Other business costs - Taxes	Can be allocated elsewhere since it is not a service			
6. Surplus		- Can be allocated elsewhere - Cross-subsidizing of titles?			
7. Discounts & waivers			Policy		
Total publication fee per article (Average for: i. all journals of a publisher, ii. one journal, iii. a subset of journals)					

Rules:
- Baskets 1-7 represent the minimum information required.
- These can be extended to a maximum of 10 baskets as publishers see fit for their operations.
- For Baskets 1, 2 and 5, several components must be specified, though 5 can be allocated elsewhere.
- Components can be joined together or extended.

PRICES BREAKDOWN YOU KNOW WHAT YOU PAY FOR

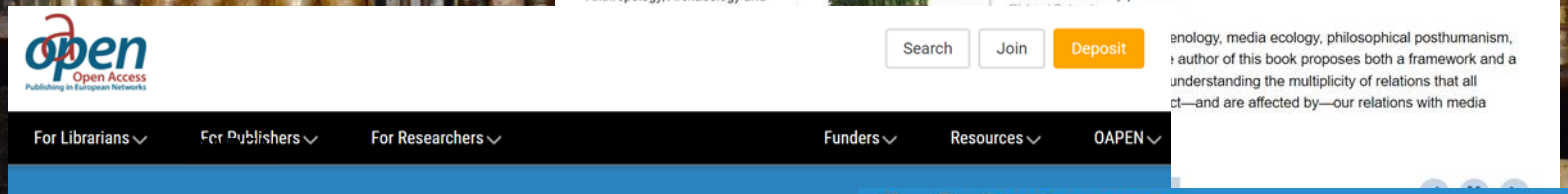
OA books

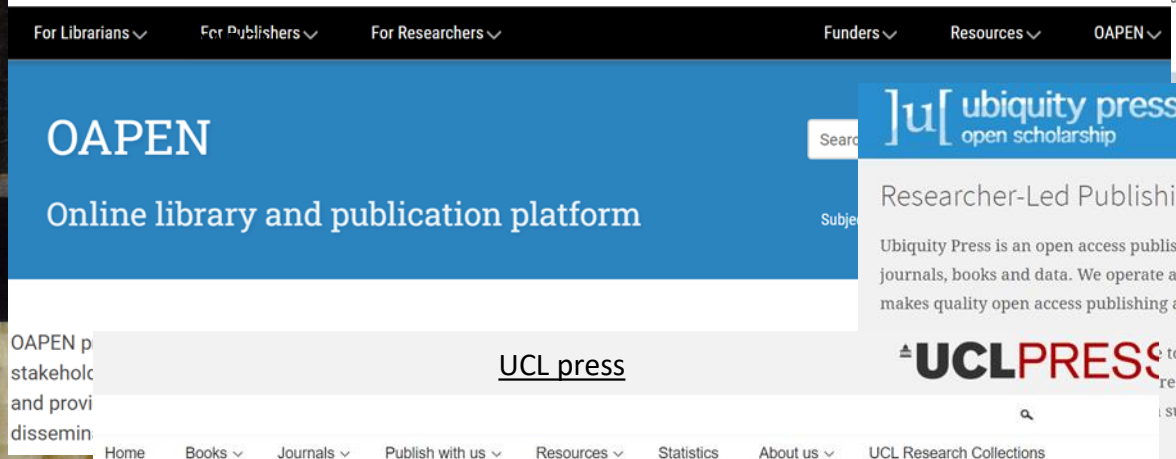
Open Book Publisher

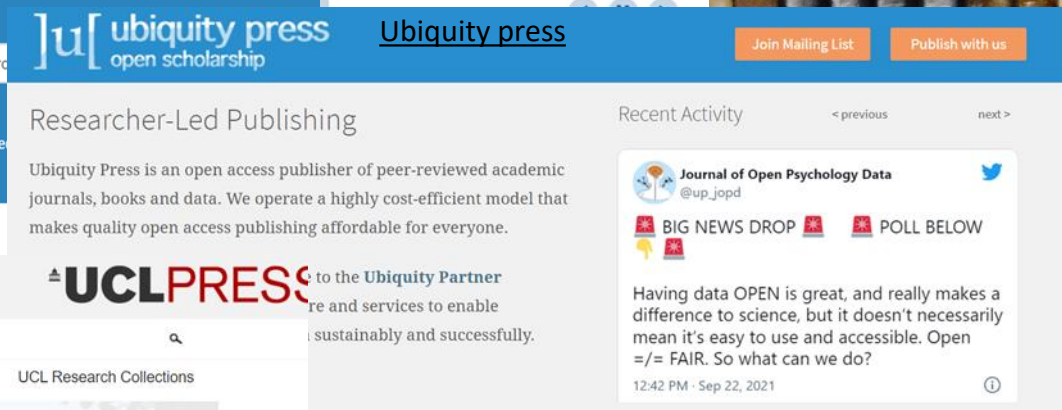
Ubiquity press

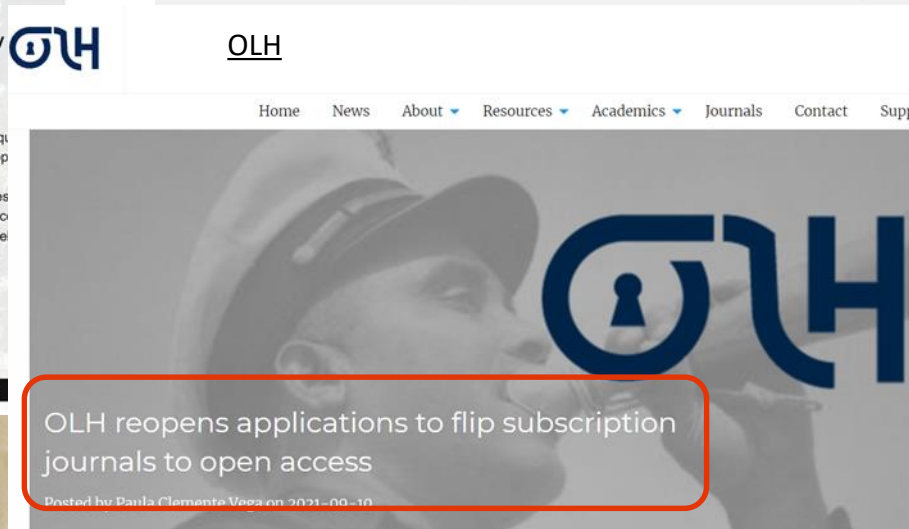
UCL press

OLH

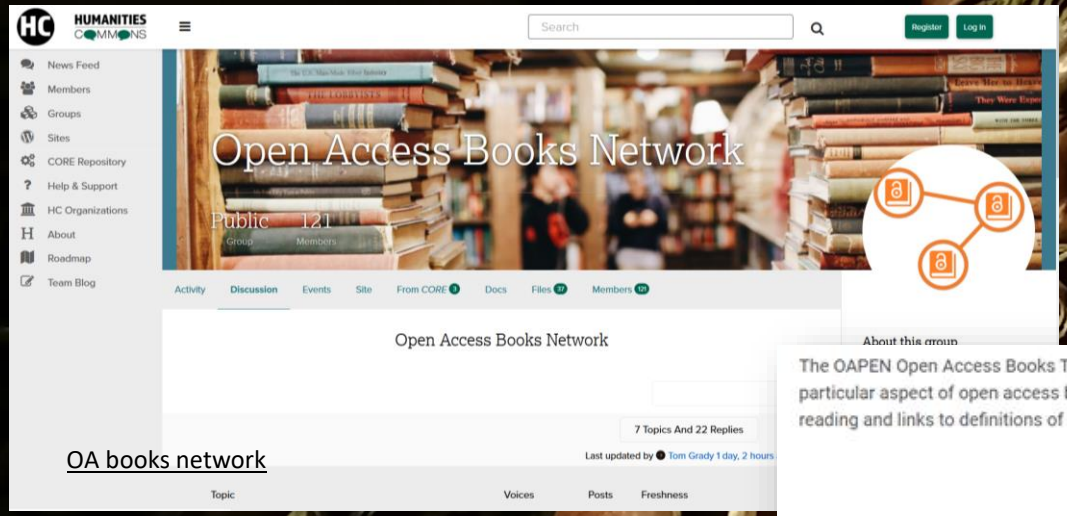








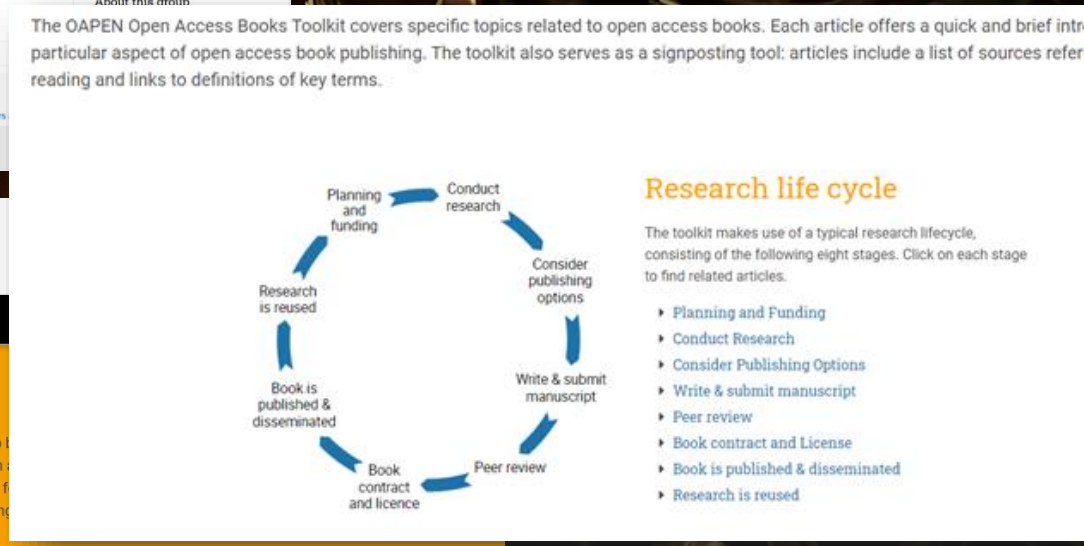
… a long way to go



OA books network

OABooks toolkit

The OAPEN Open Access Books Toolkit covers specific topics related to open access books. Each article offers a quick and brief introduction to a particular aspect of open access book publishing. The toolkit also serves as a signposting tool: articles include a list of sources referenced, further reading and links to definitions of key terms.



… what about rights? / 1

KEY CONCEPT: NOT EVERYTHING YOU FIND ON THE WEB IS FREE TO USE

- RIGHTS IN (MAY I USE OTHER PEOPLE'S MATERIAL?)
- RIGHTS OUT(WHAT CAN PEOPLE DO WITH MY WORK?)

CAN I USE THAT PICTURE?

REVISED! [and simplified]

[a "picture" is any photograph, drawing, cartoon, logo, icon, infographic, chart, graph, work of art, or doodle you want to use for some purpose]

do you own the COPYRIGHT?

copyright
[kop-ee-rahyt]

the exclusive, legal right to use, duplicate, sell, edit, or exploit an image.

DID YOU CREATE THE PICTURE YOURSELF?
Did you shoot, draw, design, or otherwise produce the image?

YES NO

DID YOU GET PERMISSION FROM THE OWNER?
Did you get written permission to use the image from the person or company who owns the copyright?

YES NO

DID YOU PURCHASE THE RIGHT TO USE IT?
Did you pay the owner of the copyright for the right to use the image, under their guidelines?

YES NO

is the image licensed with CREATIVE COMMONS?

creative commons
[kree-ey-tiv kom-uhnz]

a set of licenses that allows people to use, share, edit, or sell an image without permission, but with copyrighted restrictions.

DID YOU FIND THE IMAGE ON A SITE THAT USES CREATIVE COMMONS LICENSES?
Are you using the image according to the copyright owner's specified restrictions?

Do you see licenses that look like these on the website from where you found the image?

Visit https://creativecommons.org/licenses/ to see if you're using the image according to the license agreement.

YES NO

is the image in the PUBLIC DOMAIN?

public domain
[puhb-lik doh-meyn]

an image whose copyright has expired, is no longer protected by copyright, and is available to use for any purpose by any person at any time.

WAS THE IMAGE CREATED BY THE GOVERNMENT?
Was it created for the U.S. government by government employees?

YES NO

HAS THE COPYRIGHT EXPIRED?
Was the image published in the U.S. before 1923, OR has the author/creator of the image been dead for more than 70 years?

YES NO

DID THE CREATOR PUT IT IN THE PUBLIC DOMAIN?
Did you find the image on a site where authors/creators have relinquished the copyright?

YES NO

are you using it under FAIR USE?

fair use
[fair yoos]

using copyrighted material without permission by assuming reasonable, non-commercial use that typically benefits the greater good.

ARE YOU USING THE IMAGE TO COMMENT, CRITIQUE, OR PARODY?
Are you discussing, analyzing, or parodying the image for commentary and critique?

YES NO

IS THE IMAGE BEING USED FOR EDUCATIONAL PURPOSES?
Are you in a designated educational space, such as a school or university, using the image solely to educate?

YES NO

YES!

If you created the picture yourself, obtained permission, purchased the rights, appropriately followed creative commons parameters, OR found the photo in the public domain, you should be good to use the picture!

PROBABLY!

Fair use laws aren't always cut-and-dry, but if you're not using the image commercially AND you can answer "Yes" to one of the above questions, you are probably okay to use the picture.

NO!

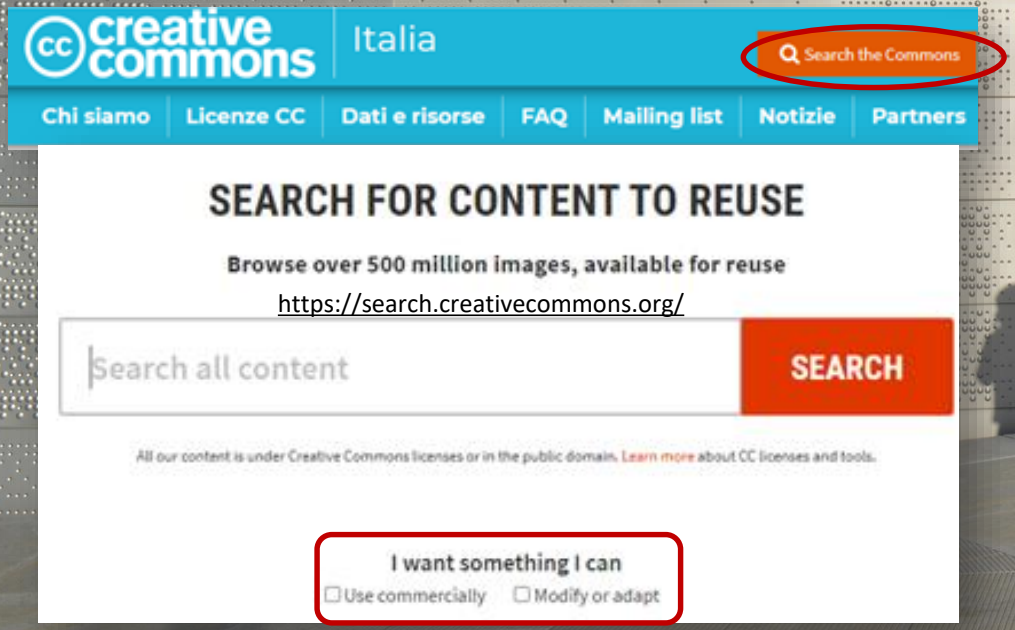
If you answered "no" to all of the above questions, you should either obtain permission from the copyright owner or not use the picture!

Designed by Curtis Newbold | TheVisualCommunicationGuy.com

2019

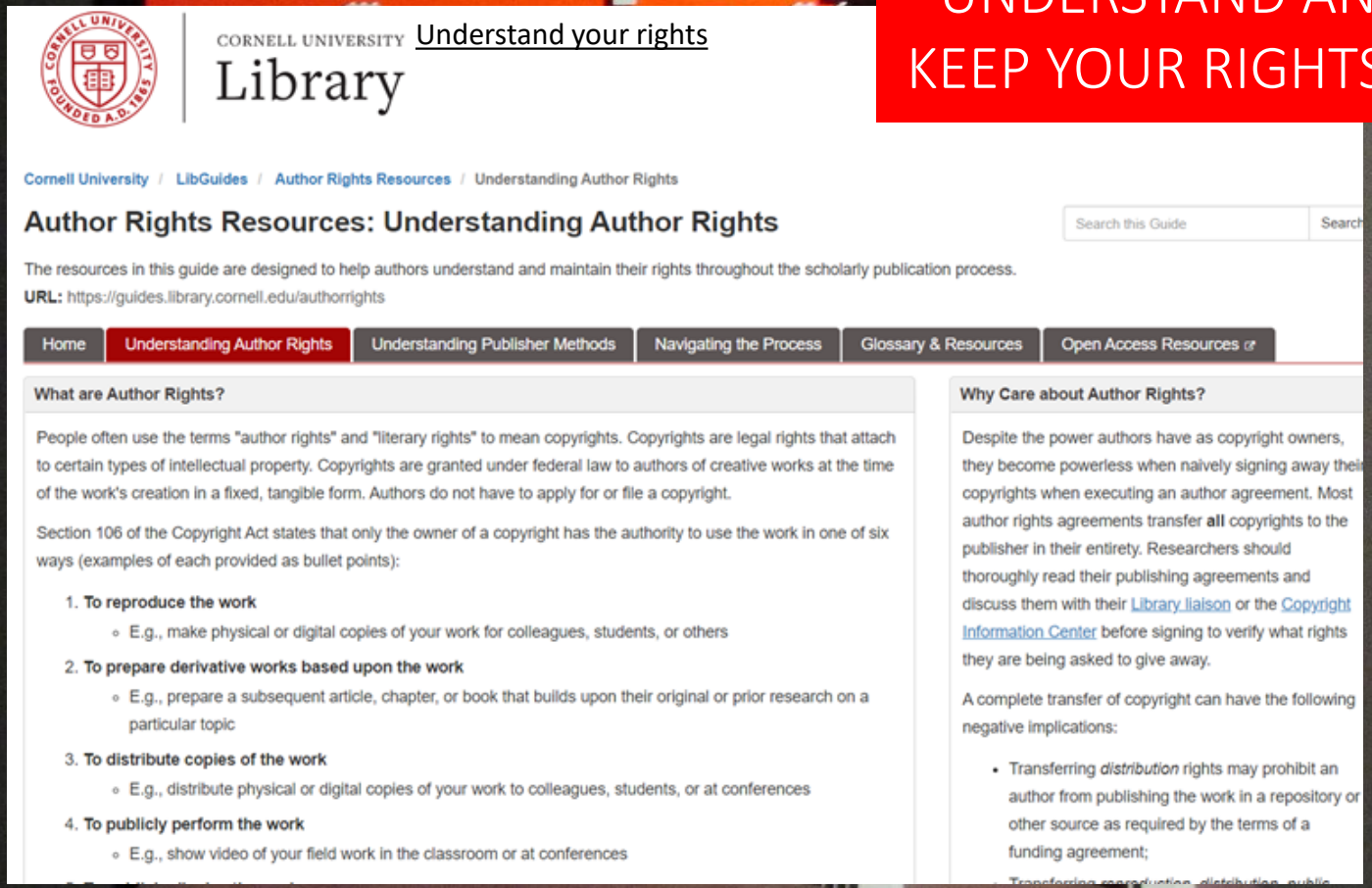
[to find a reusable photo]

GOOGLE ADVANCED SEARCH: SET «RIGHTS» ON FULL REUSE



… what about rights? / 2

UNDERSTAND AND KEEP YOUR RIGHTS!!!



CORNELL UNIVERSITY Library

Understand your rights

Cornell University / LibGuides / Author Rights Resources / Understanding Author Rights

Author Rights Resources: Understanding Author Rights

Search this Guide Search

The resources in this guide are designed to help authors understand and maintain their rights throughout the scholarly publication process.

URL: https://guides.library.cornell.edu/authorrights

Home | Understanding Author Rights | Understanding Publisher Methods | Navigating the Process | Glossary & Resources | Open Access Resources

What are Author Rights?

People often use the terms "author rights" and "literary rights" to mean copyrights. Copyrights are legal rights that attach to certain types of intellectual property. Copyrights are granted under federal law to authors of creative works at the time of the work's creation in a fixed, tangible form. Authors do not have to apply for or file a copyright.

Section 106 of the Copyright Act states that only the owner of a copyright has the authority to use the work in one of six ways (examples of each provided as bullet points):

1. **To reproduce the work**
   - E.g., make physical or digital copies of your work for colleagues, students, or others
2. **To prepare derivative works based upon the work**
   - E.g., prepare a subsequent article, chapter, or book that builds upon their original or prior research on a particular topic
3. **To distribute copies of the work**
   - E.g., distribute physical or digital copies of your work to colleagues, students, or at conferences
4. **To publicly perform the work**
   - E.g., show video of your field work in the classroom or at conferences

Why Care about Author Rights?

Despite the power authors have as copyright owners, they become powerless when naively signing away their copyrights when executing an author agreement. Most author rights agreements transfer **all** copyrights to the publisher in their entirety. Researchers should thoroughly read their publishing agreements and discuss them with their Library liaison or the Copyright Information Center before signing to verify what rights they are being asked to give away.

A complete transfer of copyright can have the following negative implications:

- Transferring *distribution* rights may prohibit an author from publishing the work in a repository or other source as required by the terms of a funding agreement;

Licenses – 4 rights

Four rights [edit]

Wikipedia

The CC licenses all grant "baseline rights", such as the right to distribute the copyrighted work worldwide for non-commercial purposes and without modification.[27] In addition, different versions of license prescribe different rights, as shown in this table:[28]

Icon	Right	Description
	Attribution (BY)	Licensees may copy, distribute, display, perform and make derivative works and remixes based on it only if they give the author or licensor the credits (attribution) in the manner specified by these. Since version 2.0, all Creative Commons licenses require attribution to the creator and include the BY element.
	Share-alike (SA)	Licensees may distribute derivative works only under a license identical to ("not more restrictive than") the license that governs the original work. (See also copyleft.) Without share-alike, derivative works might be sublicensed with compatible but more restrictive license clauses, e.g. CC BY to CC BY-NC.)
	Non-commercial (NC)	Licensees may copy, distribute, display, perform the work and make derivative works and remixes based on it only for non-commercial purposes.
	No derivative works (ND)	Licensees may copy, distribute, display and perform only verbatim copies of the work, not derivative works and remixes based on it. Since version 4.0, derivative works are allowed but must not be shared.

Licenses – 6 types

- **CC BY:** This license allows reusers to distribute, remix, adapt, and build upon the material in any medium or format, so long as attribution is given to the creator. The license allows for commercial use.

CC BY includes the following elements:
BY – Credit must be given to the creator

- **CC BY-SA:** This license allows reusers to distribute, remix, adapt, and build upon the material in any medium or format, so long as attribution is given to the creator. The license allows for commercial use. If you remix, adapt, or build upon the material, you must license the modified material under identical terms.

CC BY-SA includes the following elements:
BY – Credit must be given to the creator
SA – Adaptations must be shared under the same terms

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It includes the following elements:
BY – Credit must be given to the creator
NC – Only noncommercial uses of the work are permitted

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CC BY-ND includes the following elements:
BY – Credit must be given to the creator
ND – No derivatives or adaptations of the work are permitted

- **CC BY-NC-ND:** This license allows reusers to copy and distribute the material in any medium or format in unadapted form only, for noncommercial purposes only, and only so long as attribution is given to the creator.

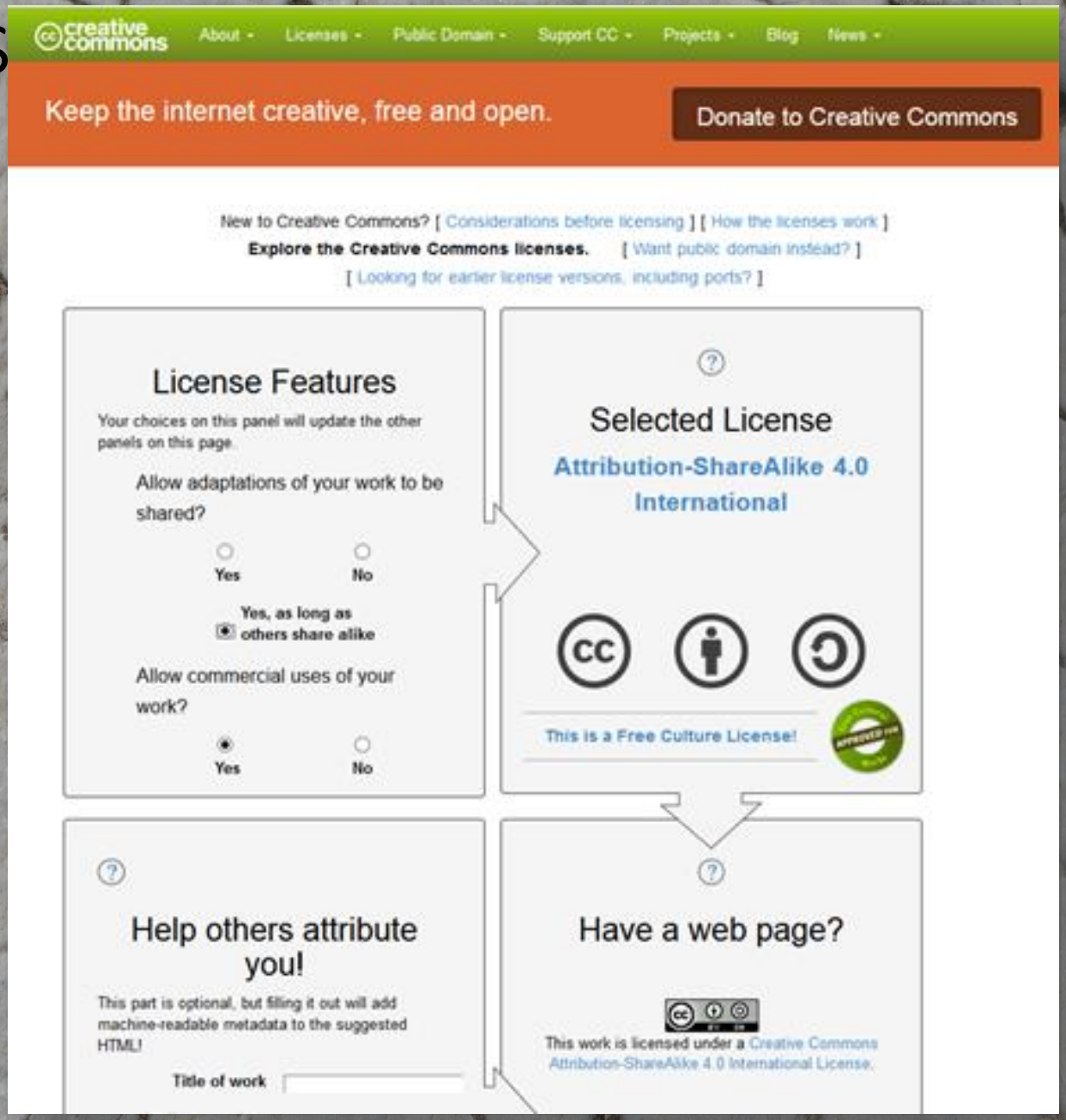
CC BY-NC-ND includes the following elements:
BY – Credit must be given to the creator
NC – Only noncommercial uses of the work are permitted
ND – No derivatives or adaptations of the work are permitted

The Creative Commons Public Domain Dedication

CC0 (aka CC Zero) is a public dedication tool, which allows creators to give up their copyright and put their works into the worldwide public domain. CC0 allows reusers to distribute, remix, adapt, and build upon the material in any medium or format, with no conditions.

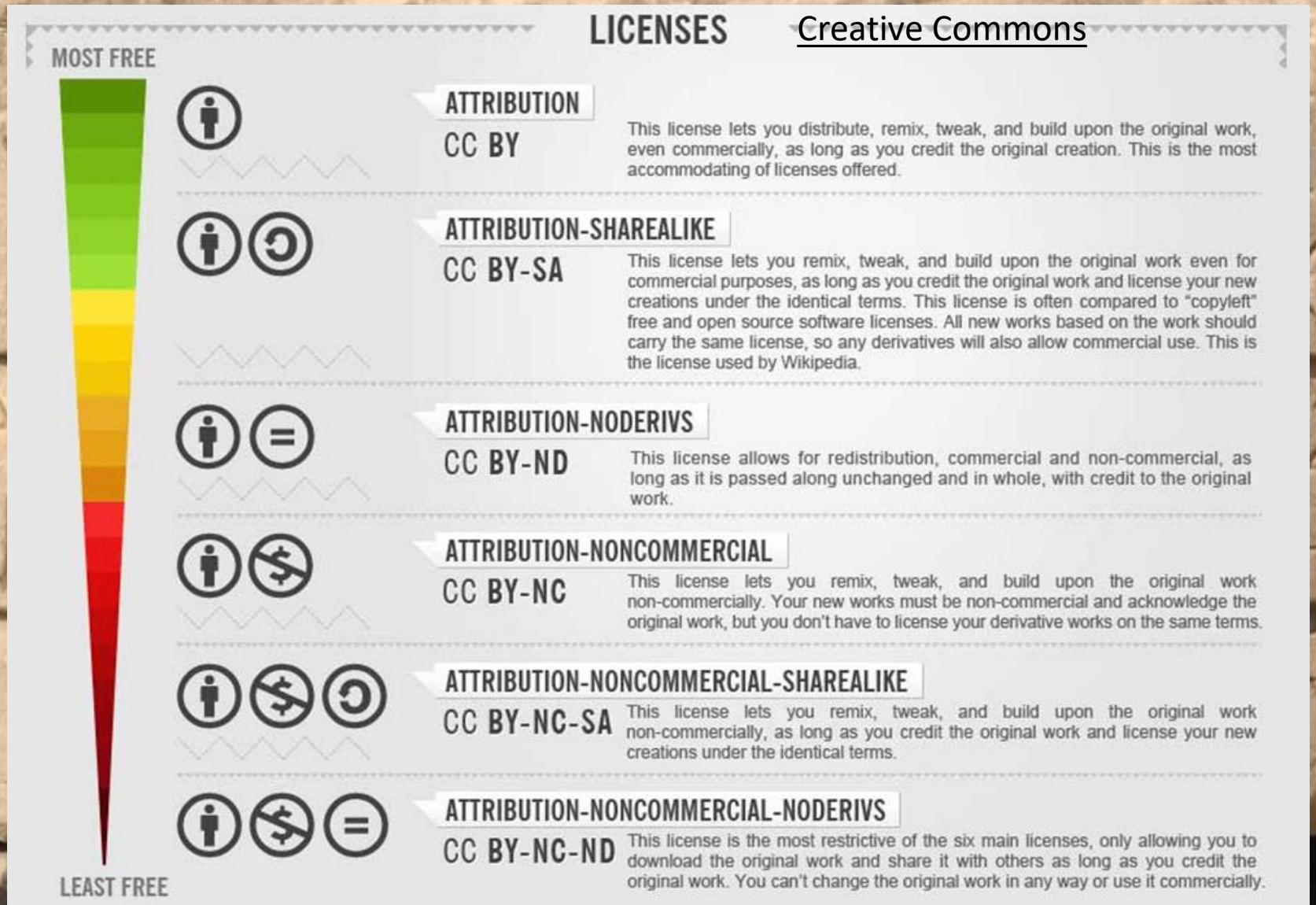
CC Licenses

Licenses



http://creativecommons.org/choose/?lang=en

Creative Commons



THANK YOU!