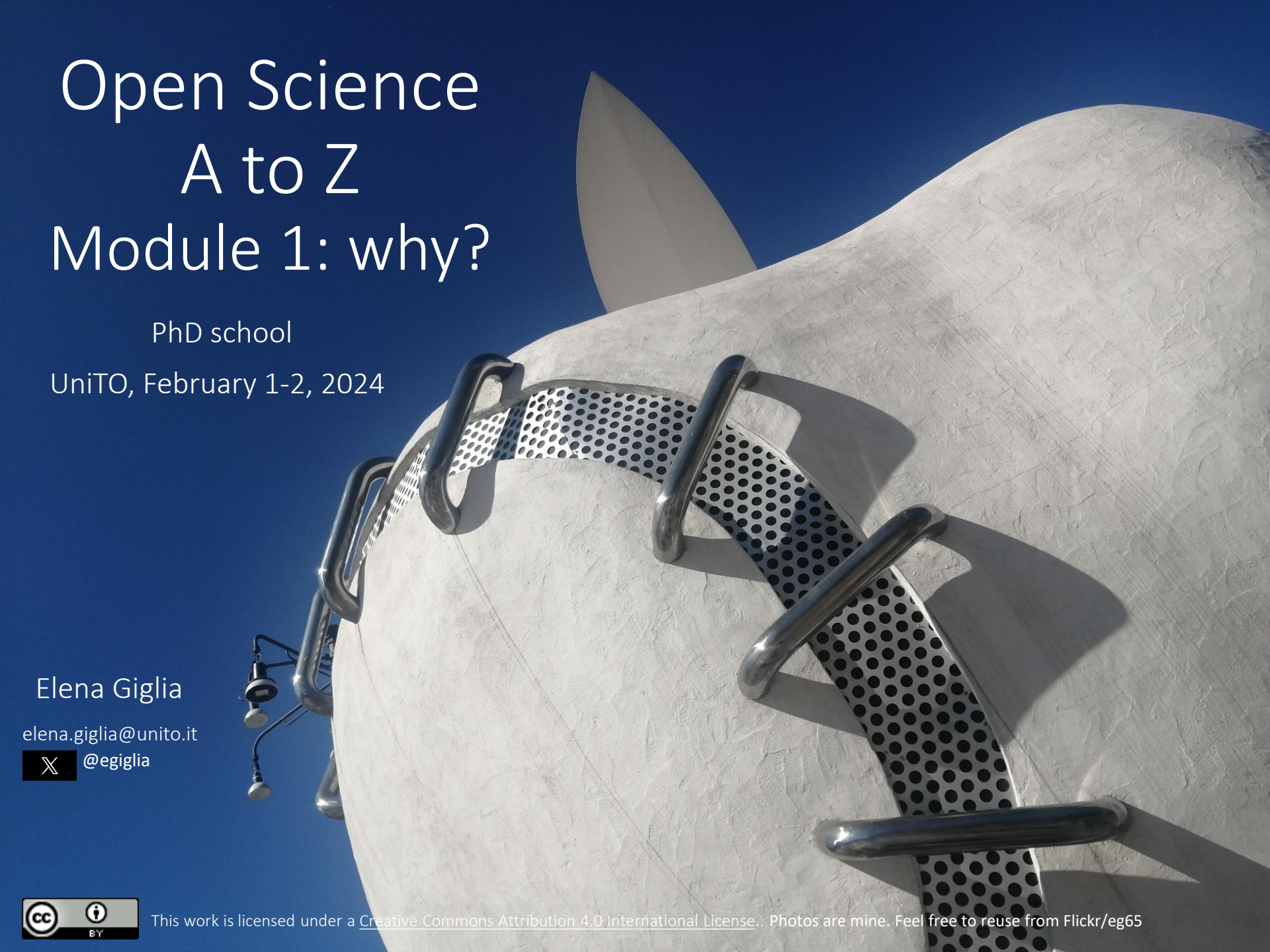
Open Science A to Z Module 1: why?

PhD school

UniTO, February 1-2, 2024



Elena Giglia

elena.giglia@unito.it

@egiglia

Housekeeping

THERE WILL BE A BREAK AFTER THE FIRST PART

QUESTIONS WILL BE TAKEN AT THE END OF THE FIRST PART, BUT YOU CAN NOTE THEM DOWN WHILE I'LL BE SPEAKING


Let’s talk
www.menti.com
6522 2036

Why are we here today?

OPEN SCIENCE IS THE «NEW NORMAL»

eosc


#VisitEP
The future is in your hands
OR IS IT A WAY TO MAKE A BETTER SCIENCE AND PUT IT BACK IN THE HANDS OF RESEARCHERS?
IS IT JUST A BORING, TIMECONSUMING OBLIGATION IMPOSED BY THE EU COMMISSION?
Make your voice heard
Conference on the Future of Europe

What are we going to see

…BECAUSE IN HORIZON EUROPE YOUR PROJECT PROPOSAL IS EVALUATED ALSO ON HOW YOU ADOPT/ADAPT OPEN SCIENCE PRACTICES!

FEB. 1 — 1 — Open Science: why do we need it? + OS principles

FEB. 2 — 2 — Open Science tools + Open Access + EU policies

3 — Data management, why should we care? — FEB. 5

4 — FAIR/Open; Data Management Plans — FEB.6

FEB. 6 — + — Open Science in Horizon Europe

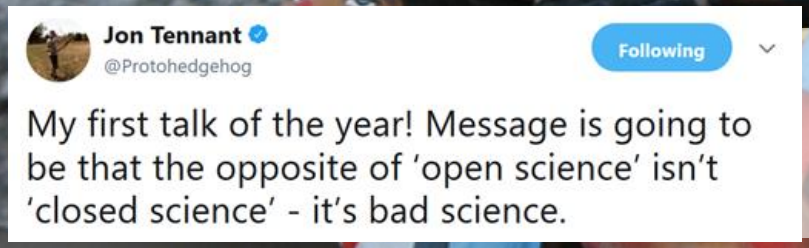
Some starting points

Not only rules: why do we actually need Open Science? [or: does current scholarly communication work?]

…COVID19 made it clear: sharing is the only way to go

…from «publishing» to «knowledge sharing» TO «CO-CREATING»…

…which does NOT mean no peer review, no «scientific method»… do it in an open, transparent way



…the opposite of Open Science is «Bad Science», not «Closed Science»

Open Science, Open Innovation, EOSC, FAIR: be ready!

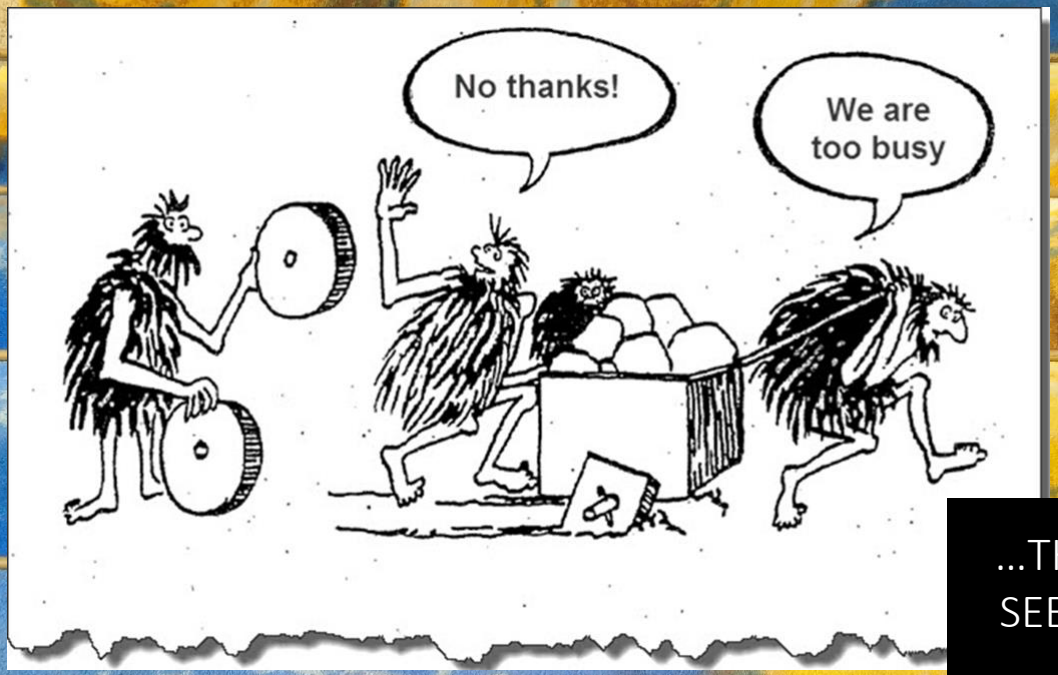
Open Science, Open Data, and Open Scholarship: European Policies to Make Science Fit for the Twenty-First Century

There is value and risk of being a first mover, but there is higher risk of being a follower.

AI? Beware of rubbish in-rubbish out: what are we feeding?

Open Science?

OPEN SCIENCE IS NOT THE FINAL GOAL. OPEN SCIENCE IS JUST FUNCTIONAL TO A BETTER AND SOUNDER SCIENCE, MORE RESPONSIVE TO SOCIETAL NEEDS



…THAT'S WHY WE'LL SEE MORE REASONS THAN RULES

…OPEN SCIENCE HOLDS A HUGE TRANSFORMATIVE POTENTIAL… IF YOU DON'T FOCUS ON ITS REAL VALUE, IT WILL BE SEEN AS THE UNPTEENTH ADMINISTRATIVE BURDEN

… calling [or: why should we care?]

Webinar Apr. 21, 2021

Excellence – aspects to be taken into account.

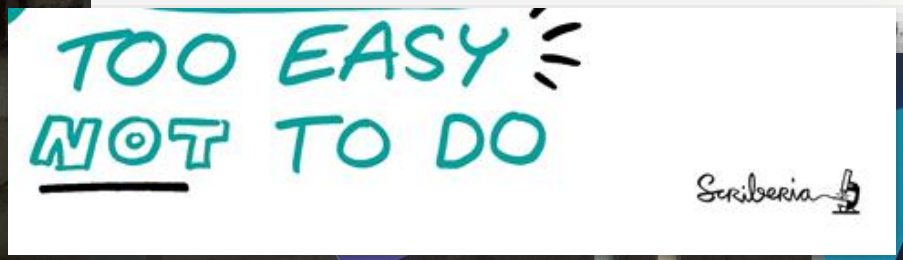
- Clarity and pertinence of the project's objectives, and the extent to which the proposed work is ambitious, and goes beyond the state of the art.
- Soundness of the proposed methodology, including the underlying concepts, models, assumptions, interdisciplinary approaches, appropriate consideration of the gender dimension in research and innovation content, and the quality of open science practices, including sharing and management of research outputs and engagement of citizens, civil society and end users where appropriate.

Application template

OPEN SCIENCE IS A METHODOLOGY.
THAT'S WHY IN HORIZON EUROPE IT HAS BEEN MOVED TO THE **«EXCELLENCE»** SECTION OF THE PROPOSAL TEMPLATE…
AND YOU WILL BE EVALUATED
ON HOW YOUR PROPOSAL ADOPTS/ADAPTS OS PRACTICES

...towar

YOU, AS RESEARCHERS, WANT TO GET FROM POINT a TO b…YOU DON'T CARE ABOUT OUR ACRONYMS
WE MUST MAKE IT SEAMLESS AND «TOO EASY NOT TO DO»

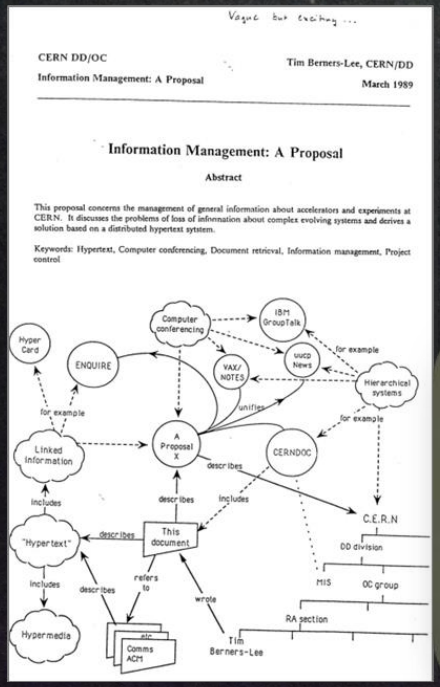


Open Science in practice?

"Vague but exciting"

CERN

www.cern.ch



Vague but exciting ...

CERN DD/OC

Tim Berners-Lee, CERN/DD

Information Management: A Proposal

March 1989

Information Management: A Proposal

Abstract

This proposal concerns the management of general information about accelerators and experiments at CERN. It discusses the problems of loss of information about complex evolving systems and derives a solution based on a distributed hypertext system.

Keywords: Hypertext, Computer conferencing, Document retrieval, Information management, Project control

…THE HTTP PROTOCOL, WHICH CHANGED OUR LIVES – IT USED TO BE AN INTERNAL TOOL, CERN DECIDED TO OPEN IT UP

Reasons NOT to go Open Science?

Valid reasons not to participate in open science practices

Casper J. Albers*

Abstract

The past years have seen a sharp increase in the attention for open science practices. Such practices include pre-registration and registered reports, sharing of materials, open access publishing and attention to reproducibility of research. Despite the overwhelming amount of evidence highlighting the benefits of open science, some researchers remain reluctant. In this paper, I will outline valid reasons for researchers not to participate in open science practices.

Discussion

There are no valid reasons.

THANK YOU FOR YOUR UNDIVIDED ATTENTION, THAT'S ALL FOR TODAY

*Heymans Institute for Psychological Research, Grote Kruisstraat 2/1, 9712 TS Groningen, The Netherlands. c.j.albers@rug.nl


...JUST KIDDING!
LET'S START

We'll learn

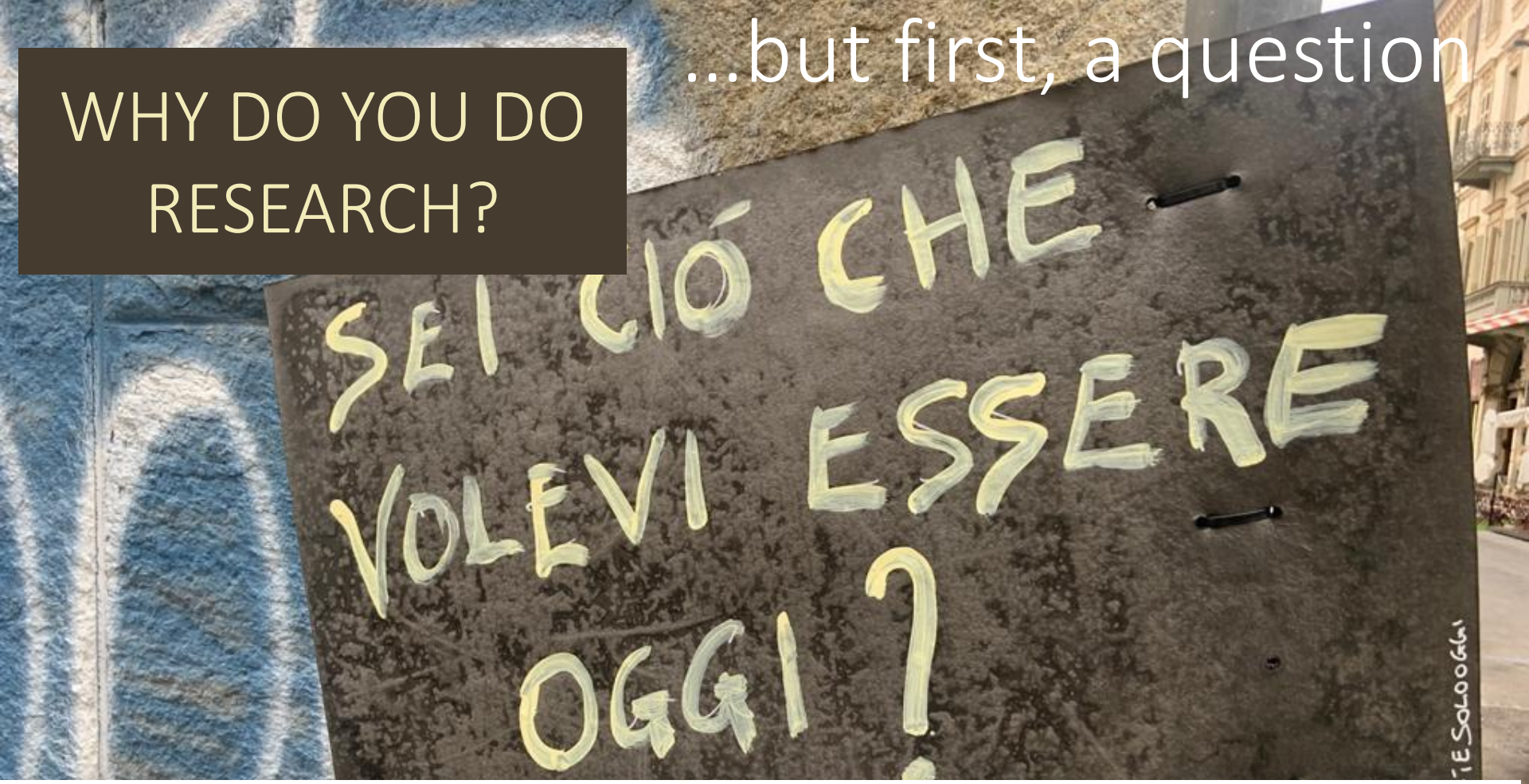
1. Why do we need Open Science?
2. A very critical approach to current scholarly communication system
3. what is changing in RESEARCH EVALUATION right now

Take home messages

- Open Science is just science, done right
- «Yes, BUT we are still evaluated on Impact Factor» is no longer true

WHY DO YOU DO RESEARCH?

…but first, a question



"I chose to study science because I wanted to publish in Nature," said no undergraduate student ever.

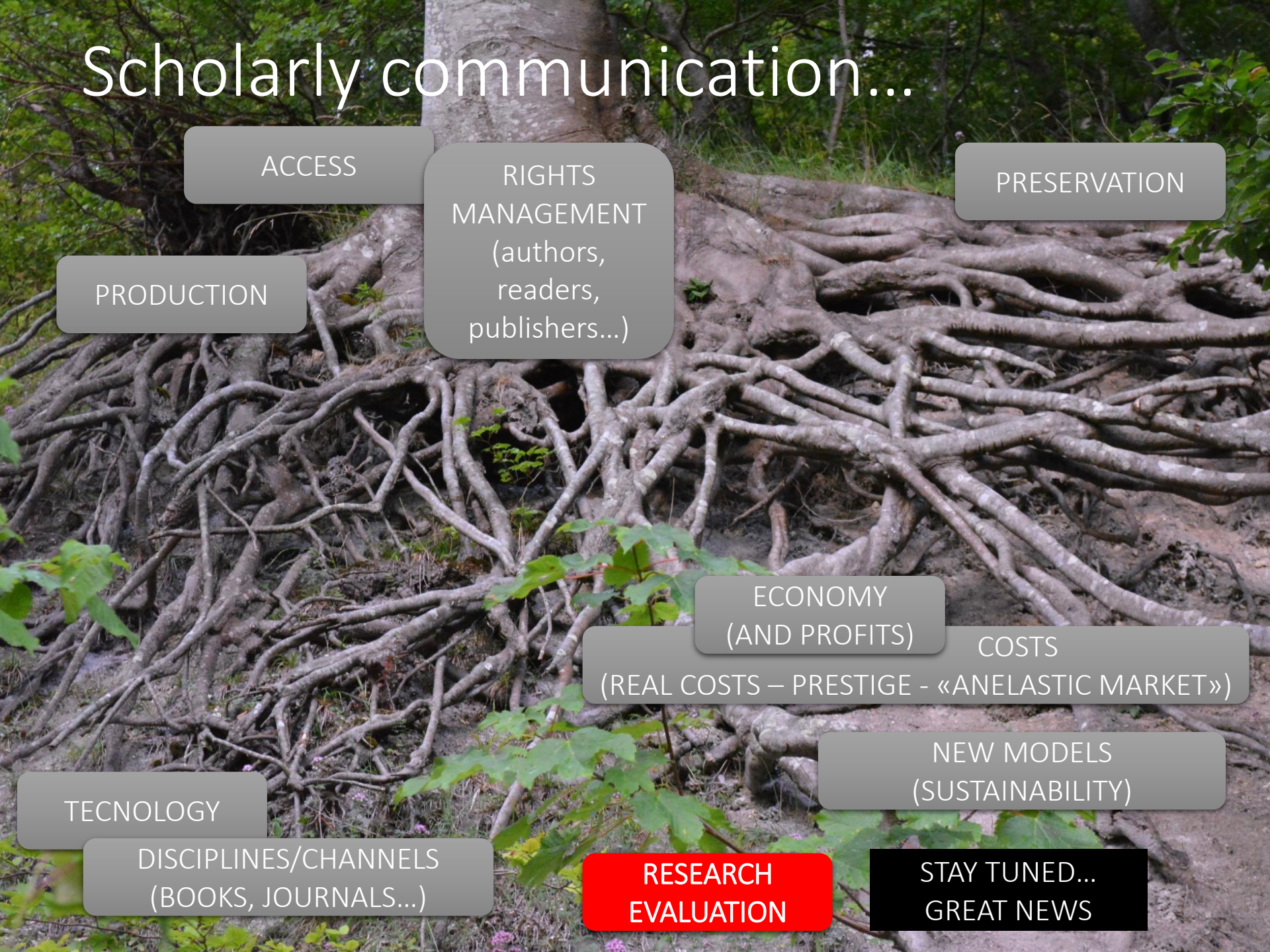
Yet it only takes a few years of working in science before most researchers will be preoccupied with scholarly journal brands—some to the point of obsession. The quest for a coveted spot in a highly selective journal, still the hardest currency of career progress, forces researchers to make compromises with their ideals of scientific practice.

OPINION 11 JAN 2022

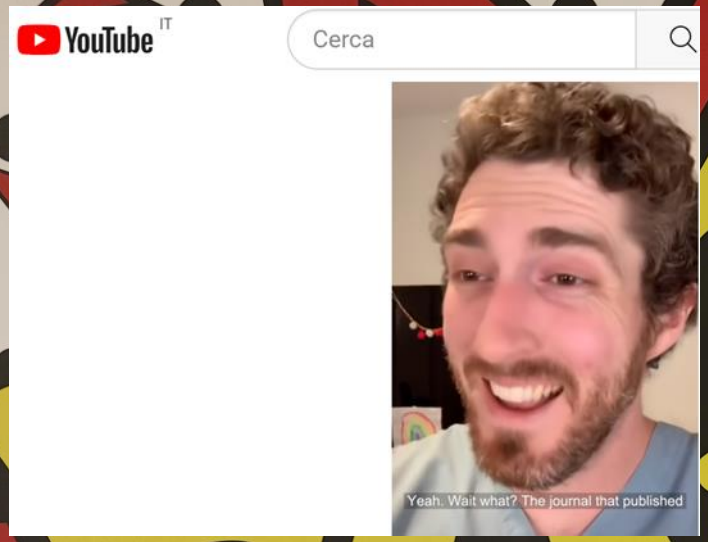
How to reclaim ownership of scholarly publishing Jan 11, 2022

By Björn Brembs, Gustav Nilsonne and Toma Susi Share


… and please…
…LET'S TAKE A MOMENT TO [CRITICALLY] REFLECT ON WHAT WE ARE DOING… [EVIDENCE-BASED]
…TODAY LET'S LOOK AT SCHOLARLY COMMUNICATION WITH FRESH EYES…
…WHICH DOES NOT MEAN NOT BELIEVING IN SCIENCE – SCIENCE IS THE REALM OF DATA AND DOUBT…


Scholarly communication…
ACCESS
RIGHTS MANAGEMENT (authors, readers, publishers…)
PRESERVATION
PRODUCTION
ECONOMY (AND PROFITS)
COSTS
(REAL COSTS – PRESTIGE - «ANELASTIC MARKET»)
NEW MODELS (SUSTAINABILITY)
TECNOLOGY
DISCIPLINES/CHANNELS (BOOKS, JOURNALS…)
RESEARCH EVALUATION
STAY TUNED… GREAT NEWS

Let’s start with 2 videos



https://www.youtube.com/watch?v=ukAkG6c_N4M

https://www.youtube.com/watch?v=dx71U3u--qU

…and the mechanism…

ISSUE: RESEARCHERS ARE EVALUATED ON THEIR PUBLICATIONS («PRESTIGE» OF THE JOURNAL, IMPACT FACTOR…)

Submission

AUTHORS/REVIEWERS ARE NOT PAID
RETURN: PRESTIGE/CITATIONS

Peer review

OFTEN BECAUSE NOT MAINSTREAM, THEN RESUBMIT-
…AS TIMES GOES BY

Acceptance/ rejection

Publication

UPON SUBSCRIPTION OR OPEN ACCESS

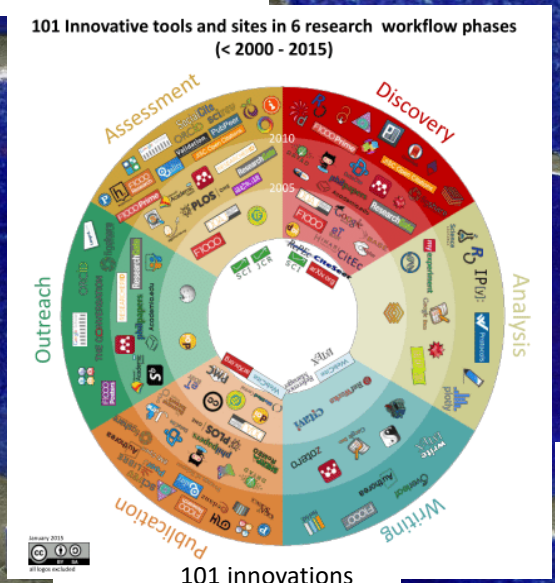
PUBLICATION IS NEEDED
- RESEARCH IS AN INCREMENTAL PROCESS
- NOT TO REINVENT THE WHEEL
- NOT TO FUND IT TWICE

Scholarly communication: functions

REGISTRATION

[Impact Factor]

REWARD



101 innovations

CERTIFICATION

PUBLICATION IS
GETTING IN THE WAY
OF COMMUNICATION

ARCHIVING

AWARENESS

Guest Post by Jean-Claude Guédon: Scholarly Communication and Scholarly Publishing

OASPA Open Access Scholarly Publishing Association

Rosendaal H. –Geurts P. Forces and functions in scientific communication:an analysis of their interplay, CRISP 1997

1 more video…

https://www.youtube.com/watch?v=8F9gzQz1Pms

It says it all…

Universal Declaration of Human Rights

Article 27

1. Everyone has the right freely to participate in the cultural life of the community, to enjoy the arts and to share in scientific advancement and its benefits.
2. Everyone has the right to the protection of the moral and material interests resulting from any scientific, literary or artistic production of which he is the author.

RIGHT. IT'S RESEARCH FUNDED BY PUBLIC MONEY SO IT SHOULD BE AVAILABLE FOR ANYONE

«FREE TO THE PUBLIC SO THAT ANYONE CAN APPRECIATE THE LATEST SCIENTIFIC ADVANCEMENTS»

It says it all / 2

«AUTHORS WILL HAVE TO PAY A PUBLISHING FEE… SAY 11.000 DOLLARS FOR AN ARTICLE IN NATURE»

WRONG. HERE YOU ARE PAYING FOR PRESTIGE, NOT FOR SERVICES

WRONG. AUTHORS ARE NOT PAID, REVIEWERS ARE NOT PAID. WHAT DO THEY GET IN RETURN? PRESTIGE, VISIBILITY, CITATIONS

«YOU KNOW, THE COSTS» «REVIEWING THE ARTICLE»

«THE COST OF FORMATTING?»

WRONG. IT'S A PDF ONLINE [IN 2024!!!]

It says it all / 3

«WHO IS GOING TO AFFORD IT?» «PEOPLE WILL PAY BECAUSE THEY HAVE TO»

EVALUATION IS THE KEY. BUT RESEARCHERS ARE EVALUATED ON THE SAME TOOL THEY USE TO DISSEMINATE SCIENCE [WITH AWFUL SIDE EFFECTS]

«PRESTIGIOUS JOURNALS» = HIGHER SUBSCRIPTION RATES.

1) TODAY READING IS NOT FOR FREE [CALCULATED 3800/5000 $ PER ARTICLE IN 2017]

2) BUT WE PAY TO CLOSE: ONCE GRADUATED, YOU WILL NO LONGER HAVE ACCESS (ALSO YOUR MD, YOUR NURSE…)

[reminder #1]

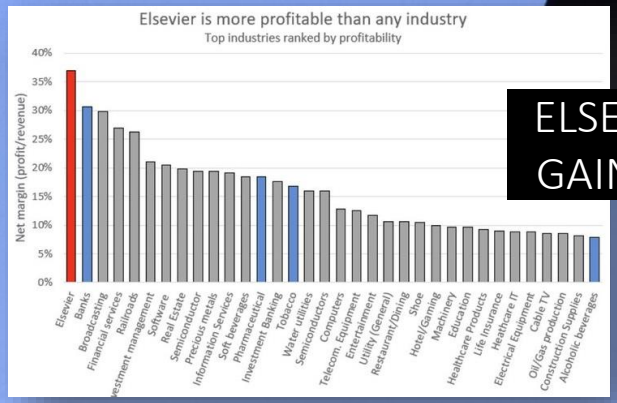
Open science needs no martyrs, but we must recognize the need for reform

Oct. 28 2021

28 October 2021

"...the result is also that good, solid science stays behind paywalls, while lots of misinformation is openly accessible."

It says it all / 4



ELSEVIER NET GAIN 36/38%

«IN ORDER TO GET PROMOTED RESEARCHERS HAVE TO PUBLISH, AND WE ARE ONE OF THE MOST PRESTIGIUOS JOURNALS. PEOPLE WILL PAY»

«SO, IT'S EXTORTION»

[reminder #2]

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

Nov. 11, 2021

It says it all / 4

«SO LET ME GET THIS STRAIGHT. YOU WANT TO CHARGE 11.000 $ TO PUBLISH OA, THEREBY ENSURING THAT ONLY RESEARCHERS WITH THE MOST MONEY GET TO PUBLISH THE ARTICLE, WHICH DEFEATS THE PURPOSE OF HAVING OA IN THE FIRST PLACE»

2022

AISA

Associazione italiana per la promozione della scienza aperta

L'open access ad ogni costo non può essere una opzione.

OPEN ACCESS AT ANY COST
IS NOT AN OPTION
…WHO CAN AFFORD IT?

It says it all / 5

«AND THIS IS GUARANTEEED TO BE PROFITABLE BECAUSE RESEARCHERS LIVELIHOODS ARE DEPENDENT ON A PREDATORY SYSTEM THAT VALUES PUBLISHING IN HIGH IMPACT JOURNALS»

«THIS, OF COURSE, IS INSANE»

2018

IT'S ACADEMICS, BABY

Lessons learned from COVID / 1

In only a matter of months, the coronavirus disease of 2019 (COVID-19) has spread around the world. The global impact of the disease has caused significant and repeated calls for quick action towards new medicines and vaccines. In response, researchers have adopted open science methods to begin to combat this disease *via* global collaborative efforts. We summarise here some of those initiatives, and have created an updateable list to which others may be added. Though open science has previously been shown as an accelerator of biomedical research, the COVID-19 crisis has made openness seem the logical choice. Will openness persist in the discovery of new medicines, after the crisis has receded?

OPENNESS=THE LOGICAL CHOICE

Version 1. F1000Res. 2020; 9: 1043. PMCID: PMC7590891
Published online 2020 Aug 25. 2020 PMID: 33145011
doi: 10.12688/f1000research.26084.1

Open science approaches to COVID-19

Edwin G. Tse, Conceptualization, Resources, Writing – Original Draft Preparation, Writing – Review & Editing,[1] Dana M. Klug, Conceptualization

tech economy 2030
Digital transformation for sustainability

2020

Home › #SDG3 › Open Science è una necessità, non una noia burocratica

#SDG3 In Evidenza Sostenibilità Culturale

Open Science è una necessità, non una noia burocratica

By Elena Giglia · 23/03/2020

OPEN SCIENCE IS A MUST

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.

Raphaël Lévy
@raphavisses

#OSEC2022 @BoukacemZeg (applauded by @stephen_curry) concludes her talk with a quote from a young research who left science saying "GAME OVER: The pandemic is a life-size experiment that reminded us that the ultimate goal is to advance knowledge, not egos, not numbers"

Traduci il Tweet

5:10 PM · 4 feb 2022 · Twitter Web App

Feb. 4 2022

THE PANDEMIC IS A LIFE-SIZE EXPERIMENT THAT REMINDED US THAT THE ULTIMATE GOAL IS TO ADVANCE KNOWLEDGE, NOT EGOS, NOT NUMBERS

Lessons learned from COVID / 2

Digital Science Report

The State of Open Data 2021

The longest-running longitudinal survey and analysis on open data

Foreword by Natasha Simons, Australian Research Data Commons (ARDC)

Nov. 29 2021

November 2021

Open data saves lives. The global pandemic has highlighted beyond anything that came before it the importance of data sharing in solving the big challenges of our time. COVID-19 data may be the

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

The Value of RDA for COVID-19

RDA

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

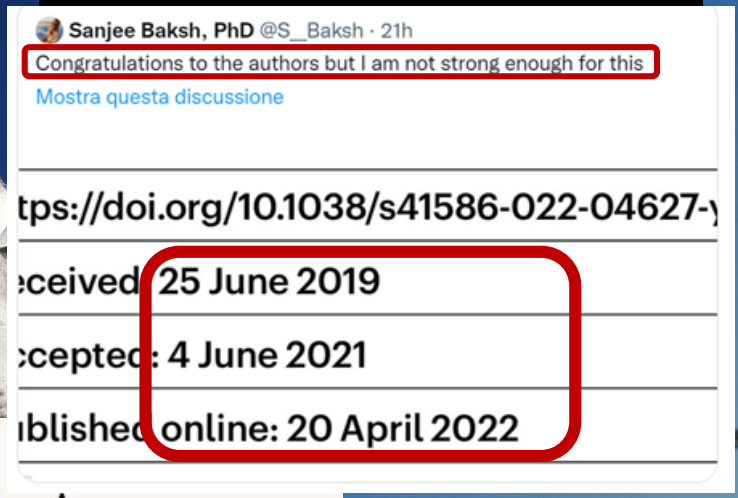
13 July 2020 | 16426 reads | Facebook | Twitter

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.

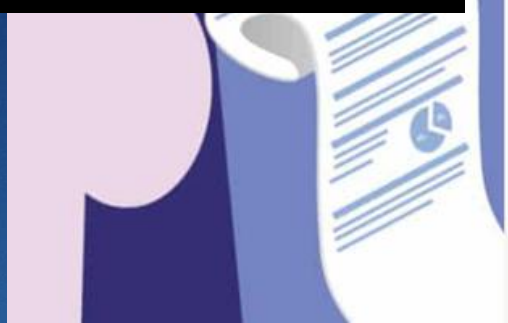
RDA
RESEARCH DATA ALLIANCE

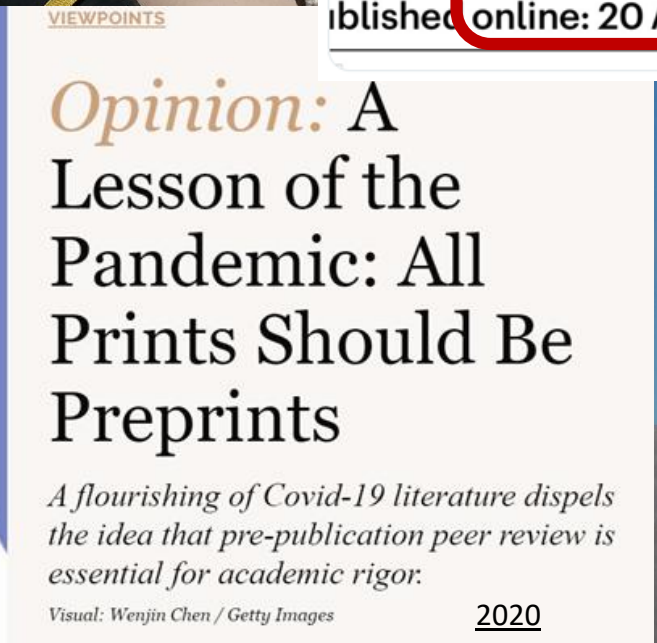
Lessons learned from COV

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





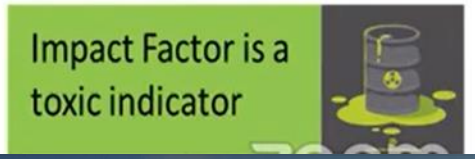
2020

Lessons lear

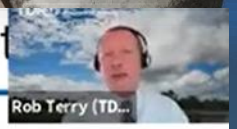
NEED TO RETHINK THE ORDER
1) PUBLISH
2) OPEN PEER REVIEW
3) EARN IMPACT
FOR REAL, NOT USING THE TOXIC IMPACT FACTOR
(AWARDING MEDALS BEFORE THE RACE HAS RUN)

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



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

Robert Terry OSfair 2021 [min. 16.48-46]

Lessons learned from COVID / 5

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.

...publishers and COV

UNREAL. THEY KNOW THEY SAVE LIVES BUT THEY OPEN
- ONLY FOR 1 DISEASE
- ONLY FOR LIMITED TIME

Heather Joseph @hjoseph

Unreal. Acknowledging that making these papers #openaccess will help speed speed progress and save lives but at the same time only doing it for limited time - and for a single disease.

Roorick, June 2020

ONLY CORONAVIRUS? ALZHEIMER, CANCER, CLIMATE CHANGE, VIOLENCE AGAINST WOMEN ARE LESS IMPORTANT?...

WE DON'T KNOW WHICH RESEARCH PAPERS THAT TODAY REMAIN LARGELY INACCESSIBLE COULD INSPIRE SOLUTIONS AND BRIGHT IDEAS FOR TOMORROW'S CHALLENGES

THEY KNOW THEY SAVE LIVES BUT OPEN ARTICLE ONLY FOR THE DURATION OF THE OUTBREAK...

March 13, 2020 **NEWS RELEASE**

or Immediate Release

STM
The global voice of scholarly publishing

the significant threat that COVID-19 represents to public health. In order to aid the efforts to slow the spread of the virus and, fundamentally, to save lives, STM publishers are committed to

- Provide immediate free access to all relevant peer-reviewed publications to ensure that for the duration of the outbreak, research and data quickly reaches the widest possible

Still true

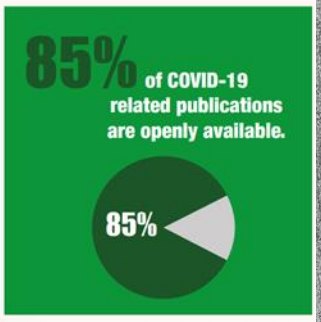
85% OF COVID PUBLICATIONS ARE OPEN (UNTIL WHEN?) AND THE OTHERS?

Box 2.4 The COVID-19 pandemic changed the global scientific publishing landscape

The COVID-19 pandemic has shown that the scientific community is able to come together and beat paywalls in order to share science to urgently overcome a global crisis. Some 85% of COVID-19 related articles were available in open access by mid-2021, in sharp contrast to under 40% of scientific articles overall, based on the Dimensions database.

Several institutions created openly accessible databases to allow users to find relevant articles, such as the global research database created by the World Health Organization[2] or LitCOVID created by the National Library of Medicine of the US National Institutes of Health. Major publishers also released related content. Examples include Elsevier and Springer Nature, each of which enabled free access to more than 60,000 research publications.

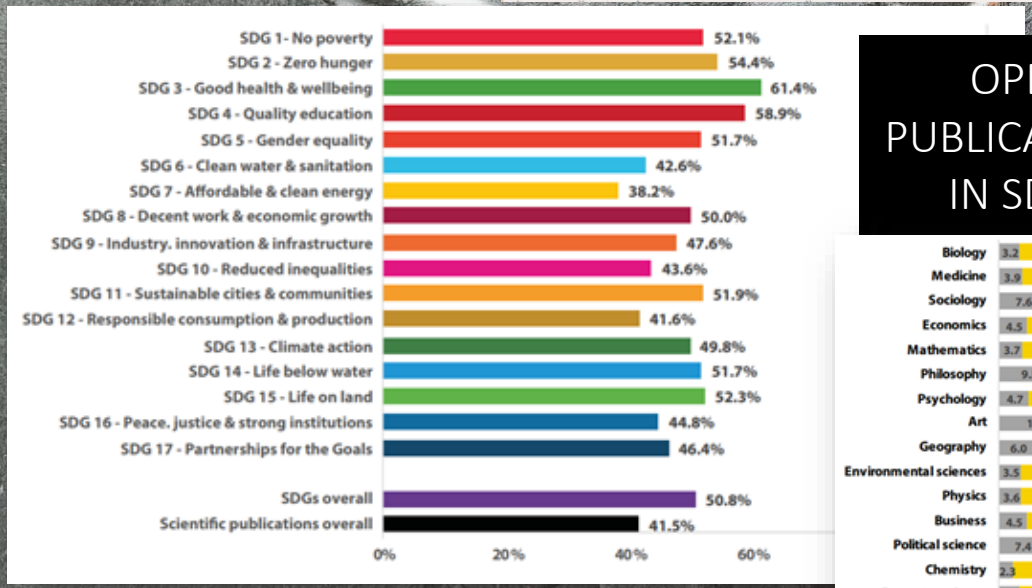
The longevity of these initiatives is unknown. In many cases, publishers provided selected articles for free reading without applying an open



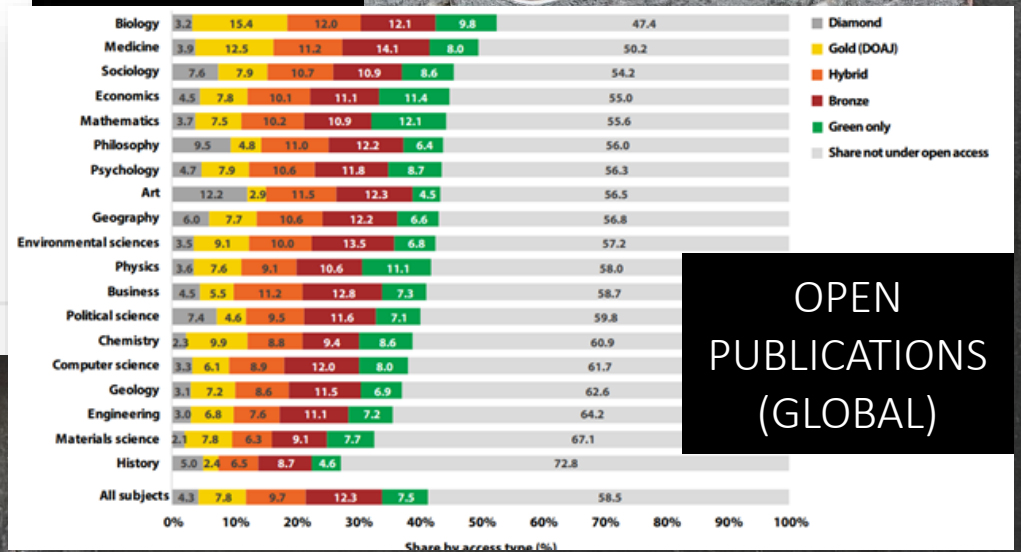
unesco 2023

Open Science Outlook 1

Status and trends around the world



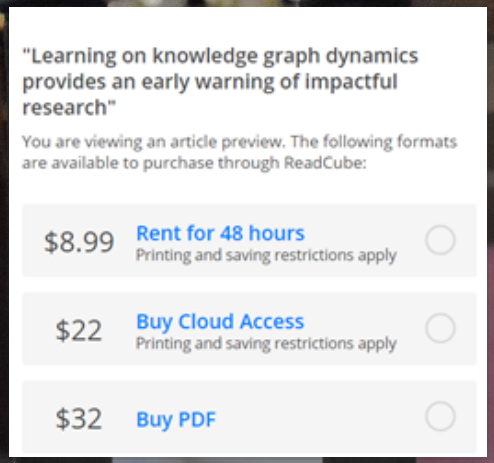
OPEN PUBLICATIONS IN SDGs



OPEN PUBLICATIONS (GLOBAL)

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: some numbers

Scholarly communica
talk money


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

1 billion $

4

TIMES ANY INSTITUTION PAYS FOR RESEARCH

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.

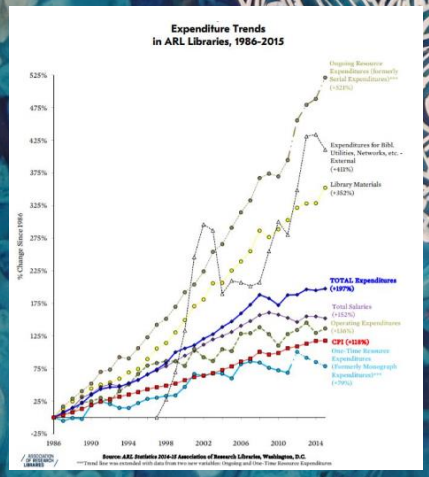
You are the provider, the product, and the consumer.
J. Tennant, 2018

WAGES

RES. FUNDING

RES. OUTPUTS PUBLISHED

SUBSCRITPIONS



4,5 million €

REUSE RIGHTS

521%

INCREASE IN SERIALS EXPENDITURES 1986-2015

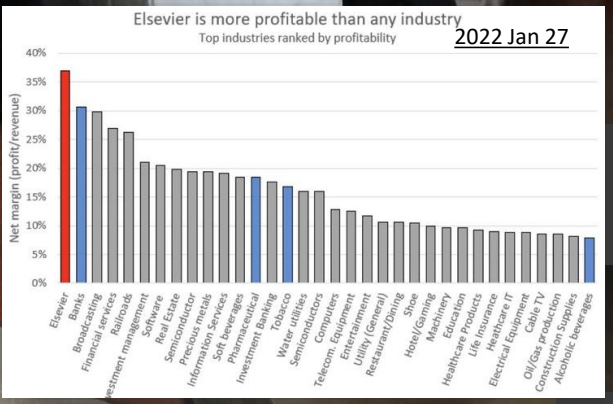
GUESS: LIBRARY BUDGET INCREASED BY 521%?

CUTS, CUTS, CUTS

… scholar … on today…

2016

READING IS NOT FOR FREE



2022 Jan 27

7.6 billion $

[UNDERESTIMATED] AMOUNT OF MONEY SPENT IN SUBSCRIPTIONS IN 2016

TODAY, WE PAY 3800/5000 $ PER ARTICLE IN THE SUBSCRIPTION SYSTEM [NOT OA]

38%

WE PAY TO CLOSE

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

2018

ELSEVIER NET GAIN

Science

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

By Jeffrey Brainard | Jan. 1, 2021 , 12:01 AM

Jan 1, 2021

…PUBLISHER WOULD WANT MORE…

Eloy Rodrigues
20 h ·

This is the publishers perspective (from the concluding paragraphs):
"The journal publishing industry's annual revenues of about $10 billion represent less than 1% of total global spending on R&D—and, in this view, it's reasonable to divert more of the total to scholarly communications that are essential to making the entire enterprise run."

So it doesn't matter if there is growing evidence that we could have a much better scholarly communication system (more efficient, more innovative, more inclusive, more transparent and self-correcting) for a fraction of this $10 billion. Let's focus on maintaining the current system, and especially the current big comercial companies that benefit from it, even if we (research institutions, governments and their taxpayers) need to use more resources to feed it. Right?
Wrong!

Scholarly communication: let's talk money

TAKE THE QUIZ!

UNIVERSITY of VIRGINIA | LIBRARY

What costs more Univ. of Virginia

What costs more?

Which is more expensive? (required)

- ○ Estimated cost of access to Wiley Online Library in 2025, if the Library stayed with the traditional model
- ○ Two months at sea off the south of France, with 12 of your closest friends and a crew of 12 on a 211' yacht.

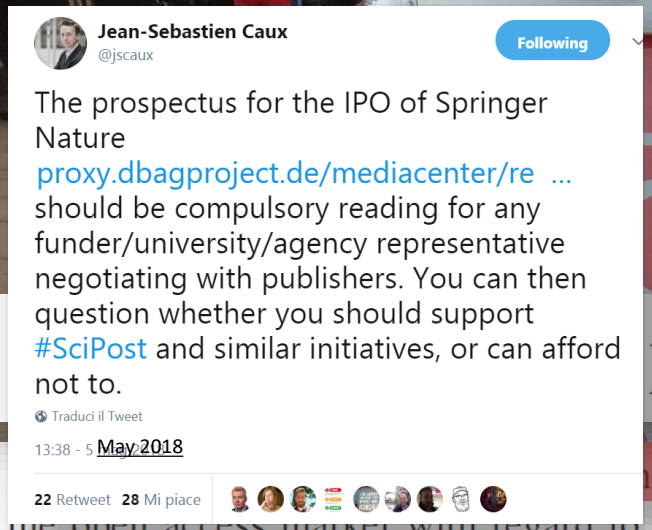
Next Slide

Nope!

A summer-long trip on a private yacht in the French Riviera doesn't run cheap, but you can get it for less than 7 figures. Access to Wiley Online Library under traditional models is estimated to cost more than a million dollars in 2025.

In the course of 9 years, the collections budget consumed by the four Big Deal vendors went from 21% (2009) to 43% (2018), a clearly unsustainable pace of increase.

Next Slide



Prospectus dated April 25, 2018

SPRINGER NATURE

Prospectus

for the public offering

Focus on Research, with a High-Quality Brand Portfolio, Global Scale Benefit from Strong Growth in the Open Access Publishing Market.

ncreasingly important, as market participants increasingly differentiate in the open access market with regard to APCs according to a journal's impact factor. Our open access portfolio includes a large number of leading brands, such as such as Nature Communications, Scientific Reports and Springer Open, and high impact factor publications, positioning us well to command premium APCs from authors.

Springer Prospectus Apr. 25

[it's your

accept this

THE WORLD UNIVERSITY RANKINGS

PROFESSIONAL JOBS SUMMITS RANKINGS

Linking impact factor to 'open access' charges creates more inequality in academic publishing

needed to fulfil our obligations. This has seen us stop using journal impact factors in isolation in our marketing (note: a prospectus is a legal document aimed at potential investors, not a marketing tool for authors or librarians). In fact, for more than 10 years, long before DORA, *Nature* editorials have expressed concerns about the overuse

«PRESTIGE» IS A RECIPE FOR DISASTER

10.2.5 Increasing Share in Revenues from Open Access

Springer Nature was one of the first academic publishers to actively embrace the opportunities offered by open access, which provides us additional opportunities to generate revenues, as open access publications are funded by authors and/or their funders or the relevant research institutions, not libraries. Accordingly, revenues stemming from APCs are in the short- to medium-term supplementary to the subscription business, not cannibalistic. Some of our journals are among the open access journals with the highest impact factor, providing us with the ability to charge higher APCs for these journals than for journals with average impact factors.

.. and there is more…

...shameless...

«OUT OF TOUCH AND OUTDATED» POSITION TO PREVENT RIGHT RETENTION

Plan S
Making full & immediate Open Access a reality

Oct. 21, 2023

Plan S Princip... Blog

Go back

American Chemical Society (ACS) and authors' rights retention

17/10/2023

In this post I shall describe how the American Chemical Society's (ACS) new zero embargo policy perpetuates an increasingly out-of-touch and outdated position taken by some publishers, who aim to prevent researchers from retaining their rights to use their own work as they choose.

ACS Publications | Information for: | Open Access | Read and F...

Home / Open Access / Zero-Embargo Green Open Access

ACS ADS

Zero-Embargo Green Open Access

An alternative option for authors required to publish their peer-reviewed manuscript in a repository immediately after acceptance

Supporting zero-embargo green OA

An article development charge (ADC) will be applied if the zero-embargo green OA route is requested by authors, and the manuscript is recommended to be sent out for peer review. The ADC covers the cost of ACS' publishing services through the final editorial decisio...

COAR Confederation of Open Access Repositories

Oct. 24, 2023

Home Nev...

COAR's response to the American... new fee for repository...

Oct. 27 2023

Eloy Rodrigues
2 g

COAR's response to the American Chemical Society's new fee for repository deposit.

This move by ACS is simply outrageous, and should be strongly repudiated, by the research community and its institutions. Shame on ACS!

OUTRAGEOUS! BOYCOTT!

The article development charge (ADC) is a flat fee of $2,500 USD and is payable once the manuscript is sent for peer review. The ADC covers the cost of ACS' pre-acceptance publishing services, from initi...

2.500 $ TO MAINTAIN THE RIGHT TO DEPOSIT WITH ZERO EMBARGO!!!
«SUPPORTING»? «OPTION»?
OUTRAGEOUS!!!

COAR strongly objects to this charge for the following reasons:

- **Authors own their manuscripts and should retain their rights.** Authors typically hold the copyright to their research, but too often transfer those rights to publishers when publishing their manuscript. When authors retain the copyright to their manuscript, they have the right to disseminate and use their own manuscript as they choose. If authors' rights are retained, publishers do not own an article accepted manuscript (AAM) and researchers should not be duped into paying a fee to exercise a right they already have.
- **This fee is in direct contravention with the ethos of open science, scholarship and equity.** Science is about sharing and advancing knowledge and open access policies are being designed very carefully to ensure that all researchers are able to do so, even if they do not have funding to pay to publish their articles.
- **ACS is charging $2,500 while providing no added value.** There is not a fee for an extra service offered. It requires no extra work on the side of the publisher, but rather is an attempt to develop a new revenue stream, while at the same time they will be receiving funds from subscriptions and pay-to-access for this same article.

  ACS is creating a false impression about compliance with funder policies. There is no charge for complying with funder OA policies. Nor is there any charge for depositing manuscripts in OA repositories. A fee is only required if you want to publish in an ACS journal and sign over your rights.

.. and there is more…

Elsevier world

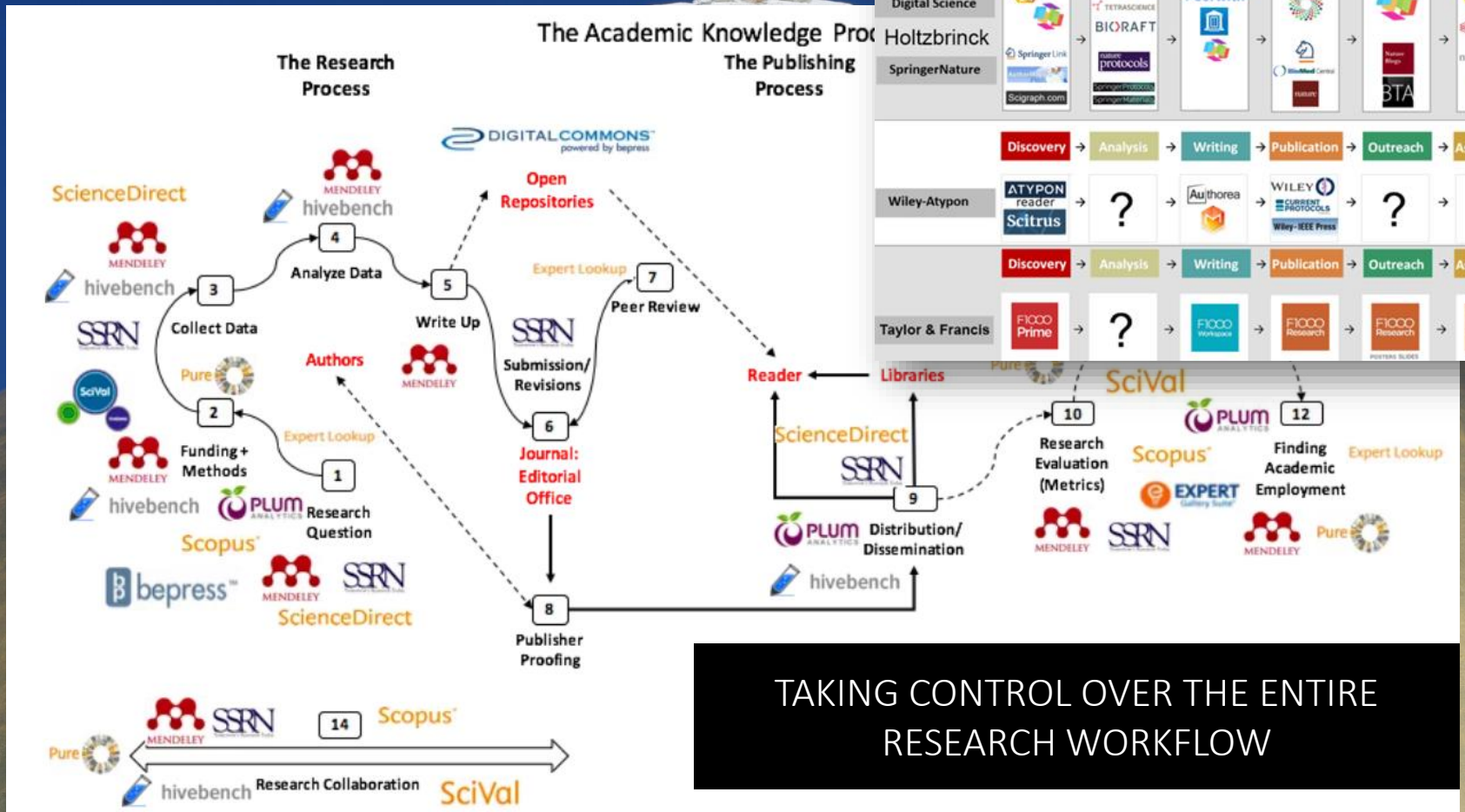
Publishers are increasingly in control of scholarly infrastructure and why we should care

A Case Study of Elsevier

Written by: Alejandro Posada and George Chen, University of Toronto Scarborough

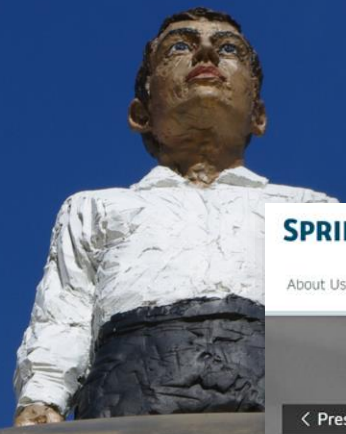
Published on September 20th 2017

2017



TAKING CONTROL OVER THE ENTIRE RESEARCH WORKFLOW

…# and counting



THE PROCESS IS STILL ONGOING. JUST ACQUIRED A RESEARCHER-CREATED WRITING TOOL

REPORT
JUN 22, 2020

2020 Update: SPARC Landscape Analysis & Roadmap for Action

This report takes a look at the events of the past year—particularly the global COVID health crisis and its resulting economic impact—and provides updates on the academic publishing market landscape and the status of the key companies involved.

1. A significant deepening in the shift of major companies away from research publishing and towards research assessment;

2. A shift away from individual research distribution to more communal, consolidated models; and

3. The emergence of a "Bigger Deal," where institutional content licensing is directly linked to the purchase of data analytics services.

2020

ELSEVIER

About

Elsevier is a leader in information and analytics for customers across the global research and health ecosystems

NO LONGER «PUBLISHERS» EVEN ON THEIR HOMEPAGE

FROM PUBLICATIONS TO DATA ANALYTICS

OAI13 Day 1 P3 Claudio Aspesi 2023

SURVEILLANCE PUBLISHING: WE ARE THE PRODUCT (AND WE ALSO PAY!)

Surveillance Publishing

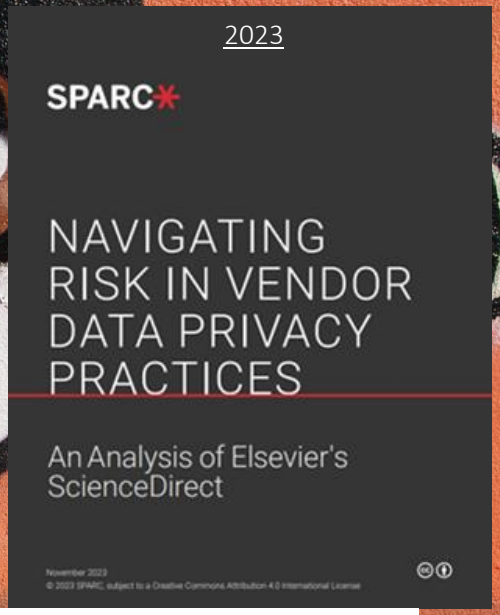
Nov. 2021

Jefferson D. Pooley
Muhlenberg College
pooley@muhlenberg.edu
jeffpooley.com

It's a good business fo ytedance have to give away their consumer-facing services to attract data-producing users. If you're not paying for it, the Silicon Valley adage has it, then you're the product. For Elsevier and its peers, we're the product *and* we're paying (a lot) for it. Indeed, it's likely that windfall subscription-and-APC profits in Elsevier's "legacy" publishing business have financed its decade-long acquisition binge in analytics.[3] This is insult piled on injury: Fleece us once only to fleece us all over again, first in the library and then in the assessment office.

Beware: privacy issues

UNTHINKABLE TRACKING PRACTICES IN PHYSICAL LIBRARIES NOW ROUTINEARY IN ONLINE PLATFORMS – TO BE THEN SOLD TO 3RD PARTIES



Navigating Risk in Vendor Data Privacy Practices: An Analysis of Elsevier's ScienceDirect documents a variety of data privacy practices that directly conflict with library privacy standards, and raises important questions regarding the potential for personal data collected from academic products to be used in the data brokering and surveillance products of RELX's LexisNexis subsidiary.

By analyzing the privacy practices of the world's largest publisher, the report describes how user tracking that would be unthinkable in a physical library setting now happens routinely through publisher platforms. The analysis underlines the concerns this tracking should raise, particularly when the same company is involved in surveillance and data brokering activities. Elsevier is a subsidiary of RELX, a leading data broker and provider of "risk" products that offer expansive databases of personal information to corporations, governments, and law enforcement agencies.

As much of the research lifecycle shifts to online platforms owned by a small number of companies, the report highlights why users and institutions should actively evaluate and address the potential privacy risks *as this transition occurs* rather than after it is complete.

[reminder #3]

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 KNOWLEDGE

…BUT:
is scholarly communication a market?

Principles of the Self-Journal of Science: bringing ethics and freedom to scientific publishing

VERSION 1 Released on 24 January 2015 under Creative Commons Attribution 4.0 International License

2017

Michaël Bon[1]
Authors' affiliations
1. SJS - The Self Journal of Science

Inappropriateness

The dissemination of Science is organized as a free market, where publishers compete for reputation and scientists compete for limited number of slots in journals. The rationale of the free market economy is to have efficient exchanges of rare and substitutable goods (apples, mobile phones, money...) between those who own them and those who want them. Yet scientific knowledge, unlike money, is something its owners want to share. It is not a substituable good. Scientists do want to be paid, but in a different currency – one that involves recognition and credit – whose amount on Earth is not limited. Therefore, the current system is deeply inappropriate to disseminate Science: it creates an artificial rarity that overrides the exchanges naturally underlying Science.

KNOWLEDGE IS SOMETHING YOU WANT TO SHARE – UNLIKE MONEY

Access is still an issue

SMEs, START-UPs,
PRACTITIONERS,
STUDENTS ONCE GRADUATED…
NOBODY CAN READ THE OUPUTS OF RESEARCH (WHICH IS FUNDED BY PUBLIC MONEY)

95% HIT A PAYWALL

Joanne Kamens ✓
@JKamens
Segui

In risposta a @jasonpriem e @unpaywall

and btw the "everyone who needs it has access" is completely wrong. I have worked in small biotechs for the last 10 years and hit frustrating paywalls EVERY DAY trying to do good science.

Traduci dalla lingua originale: inglese

15:14 - 4 gen 2018

permesso di accesso Posta in arrivo ×

Niccolò [redacted]gmail.com>
a me

Buongiorno,
sono uno studenti UNIMI e sto preparando la tesi, spesso nelle mie ricerche per il materiale, mi imbatto nel vostro sito IRIS ma non posso accedere all'articolo a cui sono interessato. Come posso ottenere il permesso?

The Results Are In of our Open Access Survey — Oct.2021

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:

- **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

… if not, Sci-Hub would not exist

Science Home News

Who's downloading pirated papers?

EVERYONE

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

2016

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

[alternative ways to g

UNPAYWALL – IT WORKS ONLY IF AUTHORS SELFARCHIVE

unpaywall

An open database of 17.025.907 free scholarly articles.

We harvest Open Access content from over 50,000 publishers and repositories, and make it easy to find, track, and use.

LEARN MORE GET THE EXTENSION

2021

← **Aleksandra Lazic**

A place [Mesto] where [gde] I write [pišem] about [o] scienc

Ten ways to find open access articles

November 05, 2021

2020

open access.nl News and events What

Alternative ways to access journal articles

1. Unpaywall

Install the free Chrome or Firefox extension and then click on it from a paywalled article's page to download its open access version.

2. Open Access Helper

Install the free Chrome or Firefox extension a access version. You can also get the iOS or m

3. Open Access Button

Install the free Chrome or Firefox extension a access version. You can also enter an article'

When free access is not found, the OA Button

4. Google Scholar

Search for articles through Google Scholar. To locate the full text of an article, try clicking (a) a right of the search result or (b) "All versions" under the search result to explore the alternative s are available here.

You can also install the free Chrome or Firefo you're reading and then click the button to find

5. Open repositories & portals

Here are examples of repositories and portals

- OSF Preprints (an aggregator of various as SocArXiv, PsyArXiv, ArXiv, engrXiv, bi
- Zenodo
- ScienceOpen
- Research Square (for preprints)
- Qeios (for preprints)
- Social Science Research Network (SSRI

6. A simple Web search

Why not try a simple Web search using your fav

Using some advanced search strategies can co filetype:pdf. Google Advanced Search is autom

7. Sources of dubious legality

Please be aware that the following sources are rely on them or not. Their content may be piracy or break copyright law.

- Sci-Hub is a shadow library website that provides free access to millions of articles by bypassing publishers' paywalls. It was founded by Alexandra Elbakyan in 2011. Find out more on the Wikipedia page.
- Library Genesis (Libgen) is a shadow library website. Find out more on the Wikipedia page.
- ResearchGate is a for-profit social networking site for scientists to share their papers. You don't have to register – scroll down to the website footer and click on "Publications".
- Academia.edu is a for-profit social networking site for scientists to share their papers. You don't have to register – scroll down to the website footer and click on "Papers".

8. Author's website

Authors often post PDFs of their published articles on their institutional or persona

This image was created by Scriberia for The Turing Way community and is used under a CC-BY lice

9. Ask the author

...not only for humans / 1

CNN BUSINESS Markets Tech Media Calculators Videos

DOW	38,467.31	0.35% ▲
S&P 500	4,924.97	0.06% ▼
NASDAQ	15,509.90	0.76% ▼

Extreme Greed is driving the US market

75

Samsung is optimisti

Baltimore Orioles agr

MrBeast tested Elon

2023

AI tools make things up a lot, and that's a huge problem

By Catherine Thorbecke, CNN

6 minute read · Published 2:35 PM EDT, Tue August 29, 2023

What is an AI hallucination?

Simply put, a hallucination refers to when an AI model "starts to make up stuff — stuff that is not in-line with reality," according to Jevin West, a professor at the University of Washington and co-founder of its Center for an Informed Public.

"But it does it with pure confidence," West added, "and it does it with the same confidence that it would if you asked a very simple question like, 'What's the capital of the United States?'"

This means that it can be hard for users to discern what's true or not if they're asking a chatbot something they don't already know the answer to, West said.

Large language models are trained on gargantuan datasets, and there are multiple stages that go into how an AI model is trained to generate a response to a user prompt — some of that process being automatic, and some of the process influenced by human intervention.

"These models are so complex, and so intricate," Venkatasubramanian said, but because of this, "they're also very fragile." This means that very small changes in inputs can have "changes in the output that are quite dramatic."

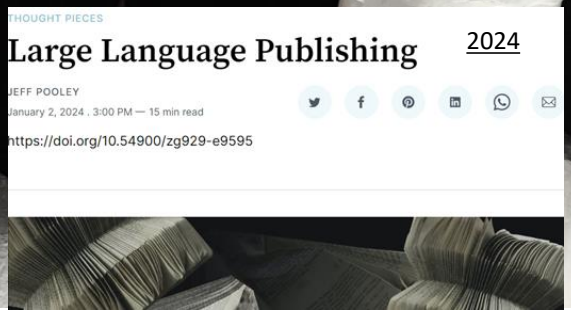
"And that's just the nature of the beast, if something is that sensitive and that complicated, that comes along with it," he added. "Which means trying to identify ways in which things can go awry is very hard, because there's so many small things that can go wrong."

West, of the University of Washington, echoed his sentiments, saying, "The problem is, we can't reverse-engineer hallucinations coming from these chatbots."

HALLUCINTATIONS SEEMS TO BE INHERENT TO THE NATURE OF GENERATIVE AI...BUT...

...not only for humans / 2

- WHAT ARE WE FEEDING TO AI?
- NO PAYWALLED, NO CC BY NC...
- ACCESS IS AN ISSUE ALSO FOR MACHINES



Enter Elsevier and its oligopolistic peers. They guard (with paywalled vigilance) a large share of published scholarship, much of which is unscrapable. A growing proportion of their total output is, it's true, open access, but a large share of that material carries a non-commercial license. Standard OA agreements tend to grant publishers blanket rights, so they have a claim—albeit one contested on fair-use grounds by OpenAI and the like—to exclusive exploitation. Even the balance of OA works that permit commercial re-use are corralled with the rest, on propriety platforms like Elsevier's ScienceDirect. Those platforms also track researcher behavior, like downloads and citations, that can be used to tune their models' outputs. Such models could, in theory, be fed by proprietary bibliographic platforms, such as Clarivate's Web of Science, Elsevier's Scopus, and Digital Science's Dimensions (owned by Springer Nature's parent company).

...not on ns / 3

THOUGHT PIECES

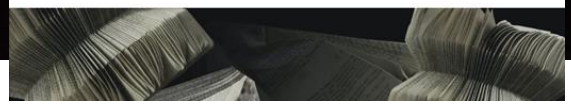
Large Language Publishing

2024

JEFF POOLEY

January 2, 2024 . 3:00 PM — 15 min read

https://doi.org/10.54900/zg929-e9595



...AND IT'S HAPPENING NOW!!!

Scopus

Introducing Scopus AI!

Dear Elena,

We are thrilled to announce the full commercial release of Scopus AI - that combines generative artificial intelligence with Scopus' trusted c

Scopus AI enhances your understanding and enriches your insights with ur clarity. Empower researchers in your institution to:

- Get **relevant results** based on recent,

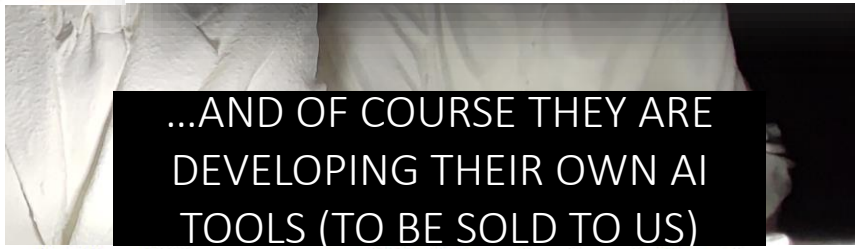
Personal mail Jan 25, 20

Fair Use?

As the *Times* lawsuit suggests, there's a big legal question mark hovering over the big publishers' AI prospects. The key issue, winding its way through the courts, is fair use: Can the likes of OpenAI scrape up copyrighted content into their models, without permission or compensation? The Silicon Valley tech companies think so; they're fresh

The publishers haven't filed their own suits yet, but they're certainly watching the cases carefully. Wiley, for one, told *Nature* that it was "closely monitoring industry reports and litigation claiming that generative AI models are harvesting protected material for training purposes while disregarding any existing restrictions on that information." The firm has called for audits and regulatory oversight of AI models, to address the "potential for unauthorised use of restricted content as an input for model training." Elsevier, for its part, has banned the use of "our content and data" for training; its sister company LexisNexis, likewise, recently emailed customers to "remind" them that feeding content to "large language models and generative AI" is forbidden. CCC (née Copyright Clearance Center), in its own comments to the US Copyright Office, took a predictably muscular stance on the question:

...PUBLISHERS HOLD COPYRIGHT. THEY FORBID REUSE



...AND OF COURSE THEY ARE DEVELOPING THEIR OWN AI TOOLS (TO BE SOLD TO US)

The big publishers may very well find themselves in a similar pole position. The firms' stores of proprietary full-text papers and other privately held data are a built-in advantage. Their astronomical margins on legacy subscription-and-APC publishing businesses means that they have the capital at hand to invest and acquire. Elsevier's decade-long acquisition binge was, in that same way, financed by its lucrative earnings. There's every reason to expect that the company will fund its costly LLM investments from the same surplus; Elsevier's peers are likely to follow suit. Thus universities and taxpayers are serving, in effect, as a capital fund for AI products that, in turn, will be sold back to us. The independent startups may well be acquired along the way. The giant publishers *themselves* may be acquisition targets to the even-larger Silicon Valley firms hungry for training data—as Avi Staiman recently observed in *The Scholarly Kitchen*.

[to follow up]

2023

Congressional Research Service
Informing the legislative debate since 1914

Legal Sidebar

Generative Artificial Intelligence and Copyright Law

Updated September 29, 2023

Innovations in artificial intelligence (AI) are raising new questions about how copyright law principles such as authorship, infringement, and fair use will apply to content created or used by AI. So-called "generative AI" computer programs—such as Open AI's DALL-E and ChatGPT programs, Stability AI's Stable Diffusion program, and Midjourney's self-titled program—are able to generate new images, texts, and other content (or "outputs") in response to a user's textual prompts (or "inputs"). These generative AI programs are trained to generate such outputs partly by exposing them to large quantities of existing

Harvard Business Review 2023

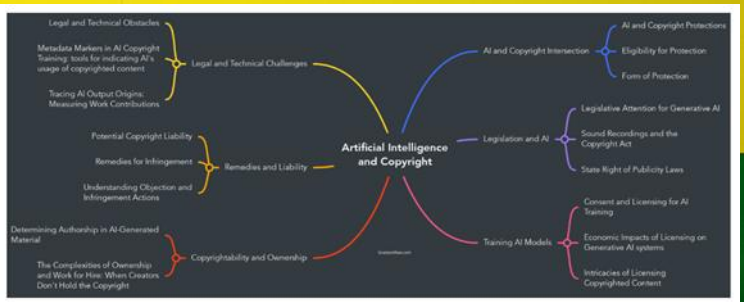
Intellectual Property | Generative AI Has an Intellectual Prope

Intellectual Property

Generative AI Has an Intellectual Property Problem

by Gil Appel, Juliana Neelbauer, and David A. Schweidel

April 07, 2023



The Future of Creativity: The Intersection of AI and Copyright 2023

REUTERS 2024

World | Business | Markets | Sustainability | Legal | More

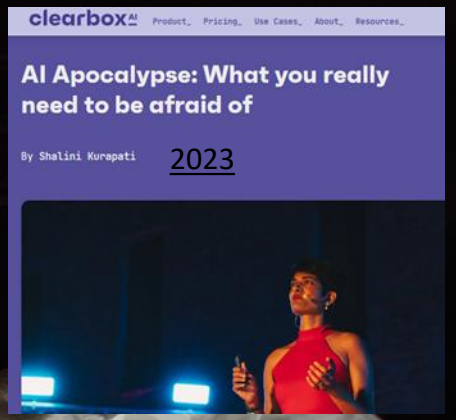
Litigation | Copyright | Technology | Appellate | Intellectual Property

How copyright law could threaten the AI industry in 2024

By Blake Brittain

January 2, 2024 5:57 PM GMT+1 · Updated a month ago

...not only for humans / 4



At the end of the day, Artificial Intelligence is a powerful combination of *data* and *algorithms*. These AI algorithms are data-hungry. They require massive amounts of data to train themselves to do their intended job. And if they get bad data, the results are poor, too. *Garbage in, garbage out.*

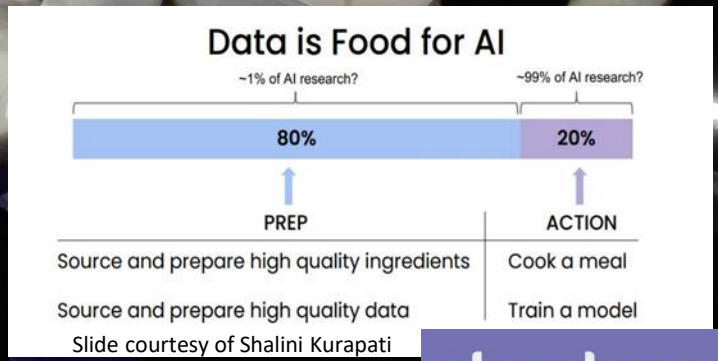
GARBAGE IN, GARBAGE OUT: THAT'S WHY WE NEED MACHINE-ACTIONABLE FAIR DATA!

Common sources of bad data

Bad data can come from different sources and throw off your analytics. User-generated data often has errors and inconsistencies. They might input data incorrectly or inconsistently. System glitches may add to the confusion, producing customer data with wrong labels, bad training sets, or even biased information.

Examples of poor-quality data in AI include:

- Mislabeled data or data from unknown sources
- Incorrect input leading to bad outcomes
- Incomplete data sets
- Typos and mislabelings causing structural errors
- Inadequate data collection methods
- Biased methods for collecting and analyzing data



Slide courtesy of Shalini Kurapati

...not only for humans / 5

clearbox AI Product_ Pricing_ Use Cases_ About_ Resources_

AI Apocalypse: What you really need to be afraid of

By Shalini Kurapati 2023

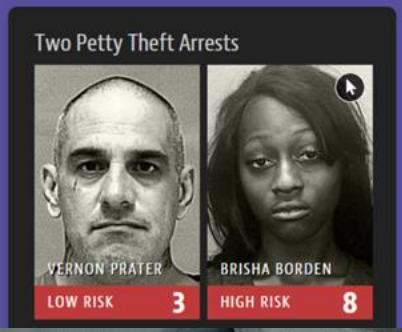
BIAS AND STEREOTYPES CAN CAUSE HARM

Bias and stereotypes

The other big risk comes from *bias* and *stereotypes*. Take my story, for example. I was bo
and raised in India but spent almost all my adult life mainly in Europe, and when people
approach me, they already have a preconceived notion about me. They think I speak
"Indian" and that I might be an IT professional- in fact, when I started a rol
was referred to as "that Indian girl that doesn't work for IT" and that I must
Most of the time, these are harmless assumptions where I go on to say "Ind
language,

When I tried to ask ChatGPT some questions involving a doctor and nurse, it always assumed that the nurse was a "she," even with the same sentence construction. These biases and stereotypes in AI can cause real harm.

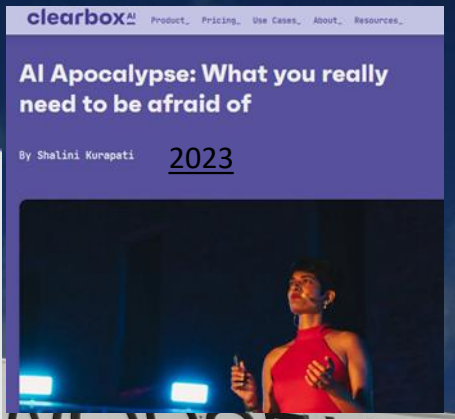
A predictive policing algorithm once used in the US categorized a black woman with a high risk of re-offence compared to a white man, even though he had more serious criminal charges.



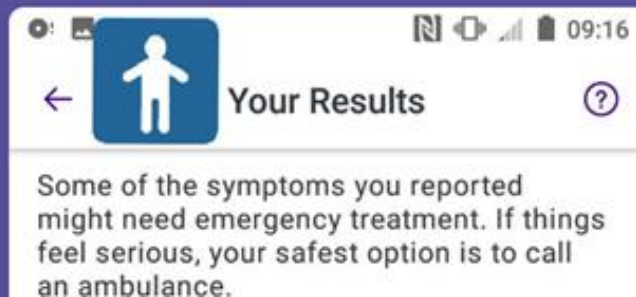
sssWhat if all our stereotypes are systematically programmed into the AI we are developing and using, and somehow, we attribute rationality to them? You guessed right. DALL-E also thinks a CEO can only be a man and a nurse only a woman. And not just in images but even in textual outputs.

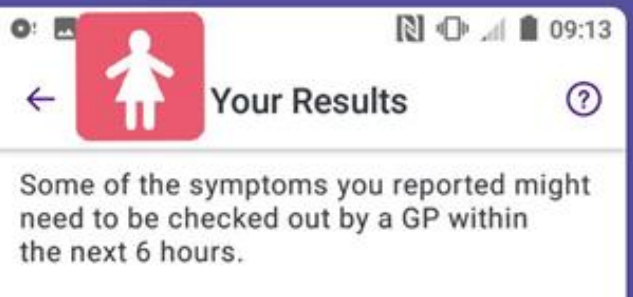
...getting worse

THE DATA GAP CAN COST LIVES. TRAINED ON MEN, AI UNDERESTIMATES WOMEN SYMPTOMS



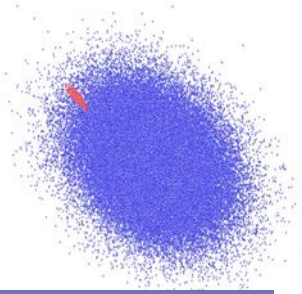
Historically, most of the medical research was done on men, so there is more data, and more complete data on men's ailments than women's. So, when a company builds an AI-powered app to recognize symptoms of a heart attack, this app correctly recognizes a man's symptoms as a heart attack and directs them to rush to the hospital, while for a woman, it says, "Calm down, it is a panic attack". The data gap can literally cost lives.





...not only for humans / 6

Data Problems



SCARCITY Data can be poor or strongly **unbalanced**

COSTS **Data collection** can be expensive

ACCESSIBILITY of data used to train AI models (Data protection **regulations** such as GDPR/HIPAA/AI-Act)

Slide courtesy of Shalini Kurapati

clearbox AI

I dati tra presente e futuro nell'AI

Shalini Kurapati

clearbox AI Product_ Pricing_ Use Cases_ About_ Resources_

AI Apocalypse: What you really need to be afraid of

By Shalini Kurapati 2023

Non-inclusive and non-equitable outcomes

Who actually benefits from all this progress? ChatGPT doesn't work so well in many non-English languages because there's not enough data available, so it will negatively impact not only economies but also cultures. Not to mention the high costs of training these large AI models, ranging from hundreds of thousands to millions of dollars, and the enormous environmental impact of their computational resources usage.

IS IT EQUITABLE?

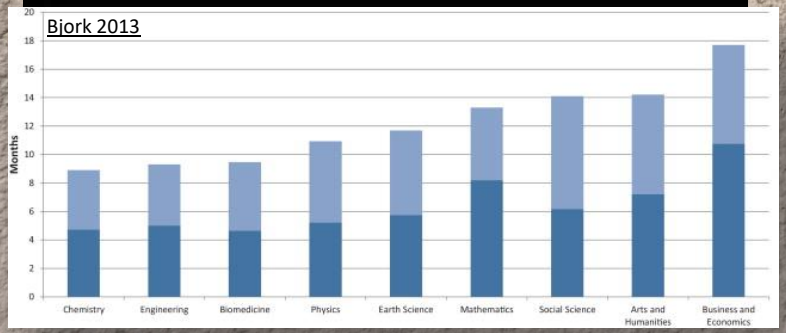
- COSTS OF TRAINING
- NON-ENGLISH EXCLUSION
- ENVIRONMENTAL IMPACT

Scholarly communication: numbers (again)
OR: what do we get in change?

Scholarly communication: does it work? /1

9-18 MONTHS

AVERAGE PUBLICATION TIME



CAN YOU IMAGINE IT DURING A PANDEMIC?

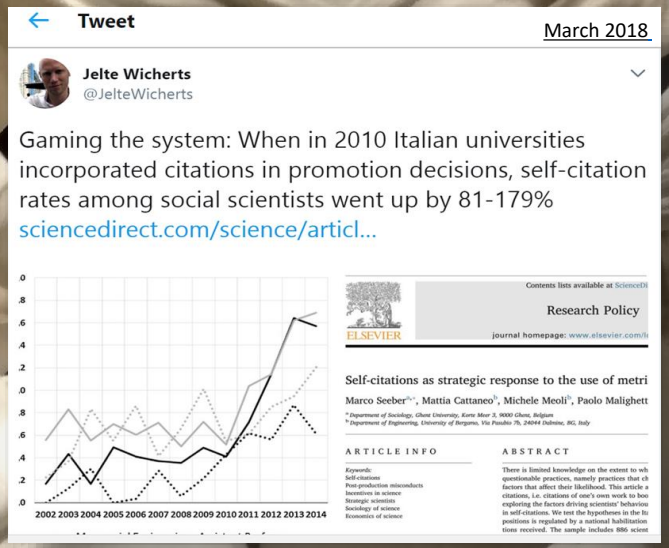
Paola Masuzzo
@pcmasuzzo

Today I witnessed the celebration of a research article published in a (famous & glam) journal after 2 and a half years of revisions. I do feel happy for the authors, of course, but I cannot help wondering what's there to celebrate in such a slow scientific dissemination process.

Traduci il Tweet
6:58 PM · 9 mag 2019 · Twitter for Android

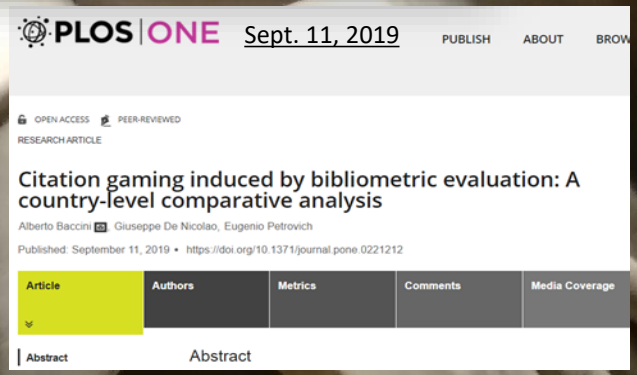
P.Masuzzo, Sept. 2019

Scholarly communication: does it work? / 2



SELF-CITATION INCREASE IN ITALY

179%



Scholarly communication needs its work? / 3

"I suspect that questionable research practices and fraud may underlie some of the most extreme behaviours," says study co-author John Ioannidis, a physician specializing in metascience at Stanford University in California. "Our data provide a starting point for discussing these issues across all science."

Crackdown on questionable practices

But Thailand is beginning to investigate researchers who have a suspiciously high number of published papers. In January, the Ministry of Higher Education, Science, Research and Innovation investigated whether misconduct was taking place at Thailand's universities by examining researchers with unusually prolific publication records or several papers outside their expertise. The probe found that 33 researchers at 8 universities had paid for authorship, with dozens of other people suspected of listing their names on papers they had bought.

Underlying factors

The uptick could be driven at least in part by the country's research-funding system, which has switched to favouring large interdisciplinary teams instead of small groups, making it easier for researchers to get their names on more papers, says David Harding, a chemist at Suranaree University of Technology in Nakhon Ratchasima, Thailand. "Thailand has undergone a radical overhaul of its research ecosystem in an attempt to improve productivity," says Harding.

Another contributing factor might be Thailand's focus on university rankings, which are underpinned by publication numbers and metrics, says Vilaivan. He adds that many universities in the country use cash incentives to encourage researchers to publish in prominent journals. If researchers play their cards right, they can earn up to 1 million Baht (US$28,000) a year through publications alone, he says.

HYPERPRODUCTIVITY (60 PAPERS/YEAR)
- QUESTIONABLE PRACTICES, FRAUDS
- AT LEAST 33 RESEARCHERS HAD «BOUGHT» ARTICLES

nature > news > article

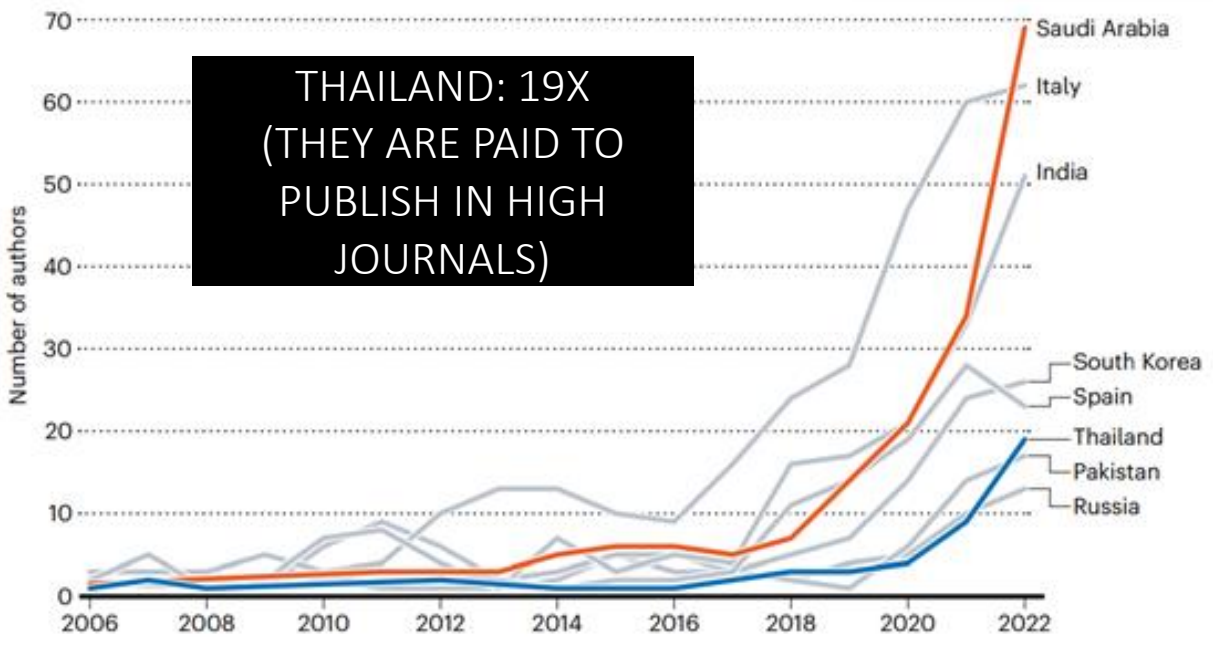
NEWS | 11 December 2023

Surge in number of 'extremely productive' authors concerns scientists

Some researchers publish a new paper every five days, on average. Data trackers suspect not all their manuscripts were produced through honest labour.

EXTREME GROWTH

Saudi Arabia had the highest number of extremely productive authors among the countries that have seen the fastest growth in the phenomenon. However, Thailand had the sharpest increase between 2016 and 2022.

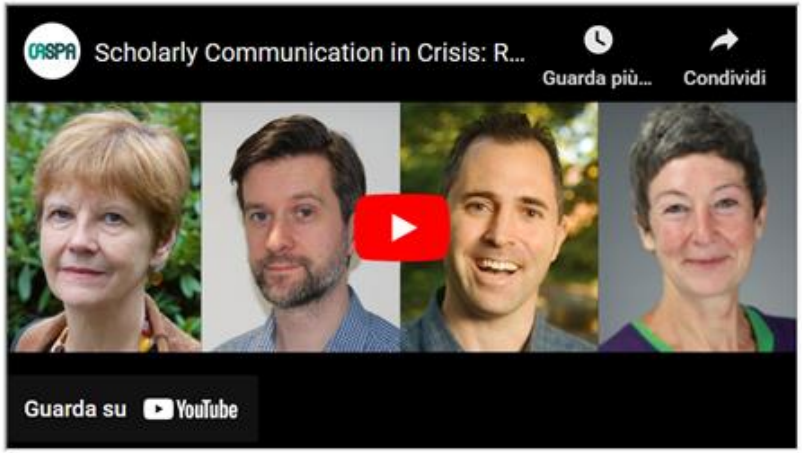


THAILAND: 19X (THEY ARE PAID TO PUBLISH IN HIGH JOURNALS)

Webinar – Scholarly Communication in Crisis: Research Integrity and Open Scholarship

April 25, 2023 by Bernie Folan

2023



How papermills work – Authorship and citations for sale

https://retractionwatch.com/2022/10/25/meet-a-sleuth-whose-work-has-resulted-in-more-than-850-retractions/

Nick Wise

"There's this entire economy, ecosystem of Facebook groups, Whatsapp groups, Telegram channels selling authorship for papers, selling citations, selling book chapters, selling authorship of patents."

Dorothy Bishop

See also: talk by Bernhard Sabel at https://osf.io/47utb/

https://forbetterscience.com/2022/10/19/the-incredible-collaborations-of-renaissance-men-and-women/

Test and Trace

Tracking down papermills – importance of open data/code sharing

"Science should be 'show me', not 'trust me'; …….
If I publish an advertisement for my work (that is, a paper long on results but short on methods) and it's wrong, that makes me untrustworthy.
If I say: "here's my work" and it's wrong, I might have erred, but at least I am honest."

If open data/scripts routinely required, then would make a great deal of work for paper mills

Philip Stark

A moment for recalibration

NEWS FEATURE | 23 March 2021

The fight against fake-paper factories that churn out sham science

Some publishers say they are battling industrialized cheating. A *Nati* analysis examines the 'paper mill' problem – and how editors are tryi to cope.

Holly Else & Richard Van Noorden

July 2022: Hearing at US House Committee on Science, Space and Technology. Paper mills and research misconduct

Exclusive: Hindawi and Wiley to retract over 500 papers linked to peer review rings

After months of investigation that identified networks of reviewers and editors manipulating the peer review process, Hindawi plans to retract 511 papers across 16 journals, Retraction Watch has learned.

WILEY Hindawi

Physics publisher retracting nearly 500 likely paper mill papers

https://retractionwatch.com/2022/09/09/physics-publisher-retr

https://retractionwatch.com/2022/09/28/exclusive-hindawi-and-wiley-to-retract-over-500-papers-linked-to-peer-review-rings/

SELLING AUTHORSHIP? HERE IS WHERE THE CURRENT ASSESSMENT CRITERIA BROUGHT US + SCIENCE SHOULD BE «SHOW ME»: OPEN UP THE PROCESS!

...dark arts

WORLD VIEW · 06 FEBRUARY 2019

2019

We need to talk about systematic fraud

Software that uncovers suspicious papers will do little for a community that does not confront organized research fraud, says Jennifer Byrne.

let alone talk about it. It is even more uncomfortable to think about organized fraud that is so frequently associated with one country. This becomes a vicious cycle: because fraud is not discussed, people don't learn about it, so they don't consider it, or they think it's so rare that it's unlikely to affect them, and so papers are less likely to come under scrutiny. Thinking and talking about systematic fraud is essential to solving this problem. Raising awareness and the risk of detection may well prompt new ways to identify papers produced by systematic fraud.

BishopBlog

Ramblings on academic-related ma
https://www.psy.ox.ac.uk/research
blog: http://dbtemp.blogspot.com/
For tweets, follow @deevybee.

Sunday 19 November 2023

11 nov 2023

Defence against the dark arts: a proposal for a new MSc course

nce I retired, an increasing amount of my time has been taken up th investigating scientific fraud. In recent months, I've become convinced of two things: first, fraud is a far more serious problem than most scientists recognise, and second, we cannot continue to leave the task of tackling it to volunteer sleuths.

The task of unmasking fraud is largely left to hobbyists and volunteers, a self-styled army of "data sleuths", who are mostly motivated by anger at seeing science corrupted and the bad guys getting away with it. They have developed expertise in spotting certain kinds of fraud, such as image manipulation and improbable patterns in data, and they have also uncovered webs of bad actors who have infiltrated many corners of science. One might imagine that the scientific establishment would be grateful that someone is doing this work, but the usual response to a sleuth who finds evidence of malpractice is to ignore them, brush the evidence under the carpet, or accuse them of vexatious behaviour. Publishers and academic institutions are both at fault in this regard.

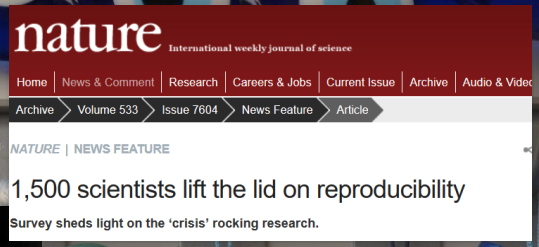
If I'm right, this relaxed attitude to the fraud epidemic is a disaster-in-waiting. There are a number of things that need to be done urgently. One is to change research culture so that rewards go to those whose work is characterised by openness and integrity, rather than those who get large grants and flashy publications. Another is for publishers to act far more promptly to investigate complaints of malpractice and issue retractions where appropriate. Both of these things are beginning to happen, slowly. But there is a third measure that I think should be taken as soon as possible, and that is to train a generation of researchers in fraud busting. We owe a huge debt of gratitude to the data sleuths, but the scale of the problem is such that we need the equivalent of a police force rather than a volunteer band. Here are

- FRAUDS ARE FAR MORE SERIOUS
- THE SYSTEM TEND TO MINIMISE OR BRUSH EVIDENCE UNDER THE CARPET
- CHANGING RESEARCH CULTURE TO REWARDS OPENNESS AND INTEGRITY MIGHT HELP

Scholarly communication: does it work? / 4

70%

REPRODUCIBILTY FAILURE

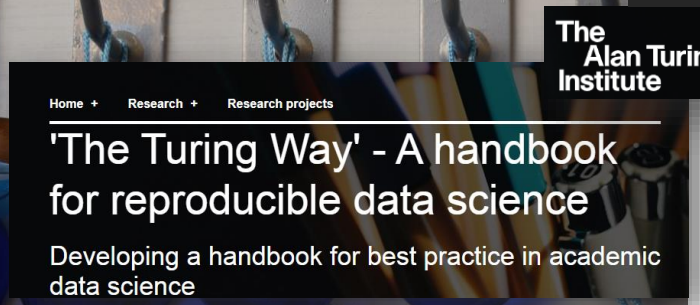


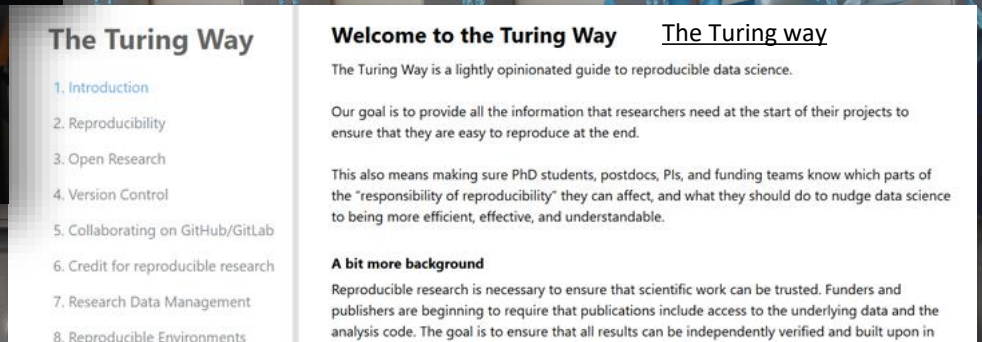
More than half of high-impact cancer lab studies could not be replicated in controversial analysis

Cancer reproducibility project couldn't assess many papers because of uncooperative authors and other challenges

7 DEC 2021 · 8:00 AM · BY JOCELYN KAISER

Dec. 7, 2021





The Turing way

Scholarly does it w

https://retractionwatch.com/

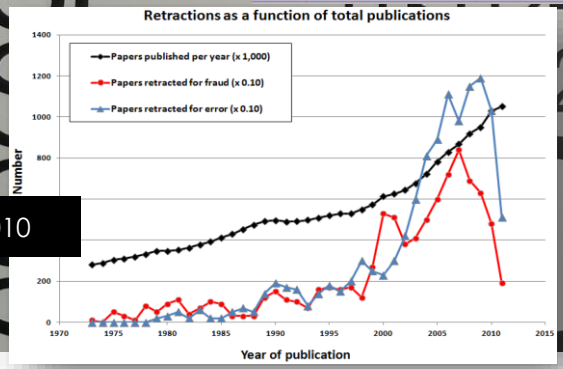
Retraction Watch

Tracking retractions as a window into the scientific process

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:

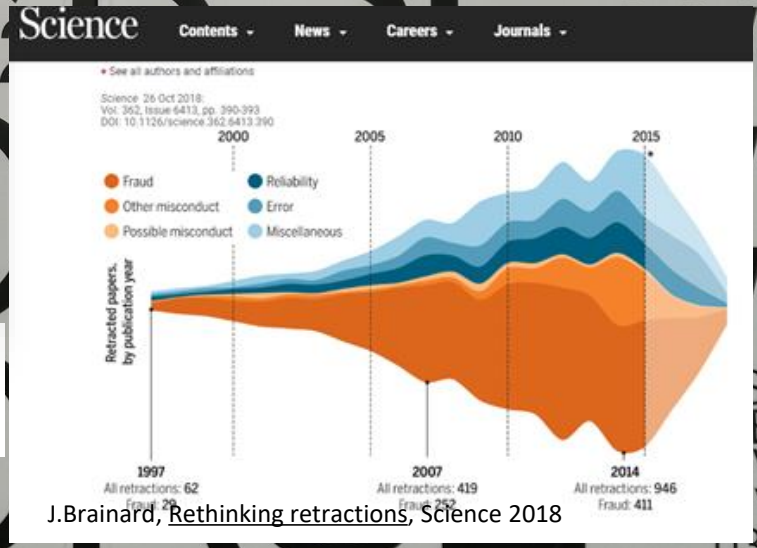
1. Yoshitaka Fujii (total retractions: 183) See also: Final report of investigating committee, our reporting, additional coverage
2. Joachim Boldt (136) See also: Editors-in-chief statement, our coverage
3. Yoshihiro Sato (102) See also: our coverage
4. Jun Iwamoto (78) See also: our coverage
5. Ali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



1975-2010

RETRACTIONS FOR FRAUD

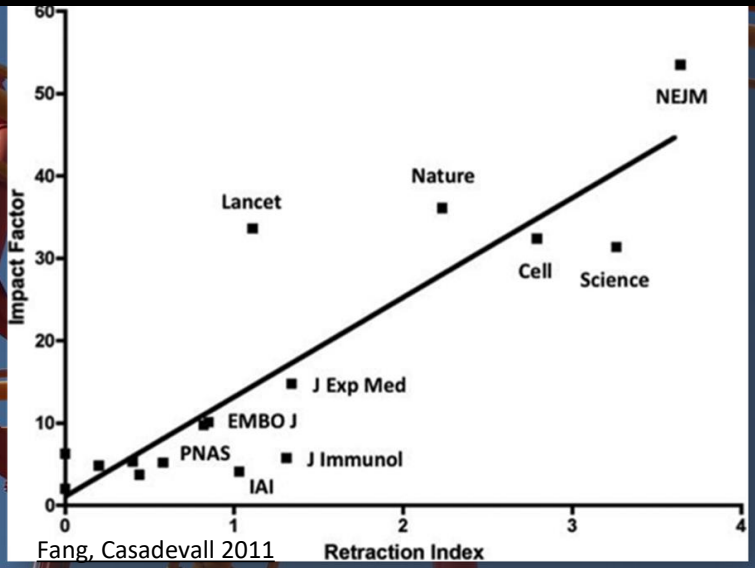
43%



J.Brainard, Rethinking retractions, Science 2018

[Houston, we have a problem]

DIRECT CORRELATION
#RETRACTIONS/IMPACT FACTOR



Fang, Casadevall 2011

REVIEW ARTICLE

Front. Hum. Neurosci., 20 February 2018 | https://doi.org/10.3389/fnhum.2018.00037

Prestigious Science Journals Struggle to Reach Even Average Reliability

Björn Brembs*

Institute of Zoology—Neurogenetics, Universität Regensburg, Regensburg, Germany

Feb. 20 2018

ROYAL SOCIETY OPEN SCIENCE

rsos.royalsocietypublishing.org

The natural selection of bad science

P.Smaldino, 2016

THE LANCET

ew: does it wor

Retraction—Hydroxychloroquine or chloroquine with or withou
macrolide for treatment of COVID-19: a multinational registry a

Mandeep R Mehra • Frank Ruschitzka • Amit N Patel

Published: June 05, 2020 • DOI: https://doi.org/10.1016/S0140-6736(20)31324-6 • Check for upda

After publication of our *Lancet* Article,[1] several concerns were raised with respect to the veracity of the data and analyses conducted by Surgisphere Corporation and its founder and our co-author, Sapan
publication. We launched an independent third-party
of Surgisphere with the consent of Sapan Desai to

Retracted coronavirus (COVID-19) papers

Retraction watch

137 RETRACTIONS
22 PREPRINT
115 PEER REVIEWED PAPERS

The NEW ENGLAND JOURNAL of MEDICINE

Retraction: Cardiovascular Disease, Drug Therapy, and Mortality in Covid-19. N Engl J Med. DOI: 10.1056/NEJMoa2007621.

June 25, 2020

RETRACTED AFTER READERS EXPRESSED CONCERN
THESE ARTICLES HAVE UNDERGONE PEER REVIEW AND WERE ACCPETED

186 Citi

TO THE

Because all the authors were not granted access to the raw data and the raw data could not be made available to a third-party auditor, we are unable to validate the primary data sources underlying our article, "Cardiovascular Disease, Drug Therapy, and Mortality in Covid-19."[1] We therefore request that the article be retracted. We apologize to the editors and to readers of the *Journal* for the difficulties that this has caused.

Metrics

Related Articles

ORIGINAL ARTICLE JUN 18, 2020

Cardiovascular Disease, Drug Therapy, and

Dec. 2020

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

it work?

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

Grech is a pediatric cardiologist, and, evidently a huge Star Trek fan. He's also a prolific author, and seems to have turned *EHD* into something of a personal fanzine. As Gaddy notes in his letter, Grech has written at least 113 papers in *EHD*, an Elsevier title, 57 as sole author:

> *19 of these 113 ar*
> *Star Trek. T*
> *hat are rel*
> *of this stop*
> *l practices,*
> *Many of t*
> *ategory of*

EARLY HUMAN DEVELOPMENT PUBLISHED BY ELSEVIER «AUTHORITATIVE, HIGHLY CITED»

Early Human Development

An international journal concerned with the continuity of fetal and postnatal life

Editor-in-Chief: E. F. Maalouf

> View Editorial Board

> CiteScore: 3.1 ⓘ Impact Factor: 1.969 ⓘ

Established as an authoritative, highly cited voice on **early human development**, *Early Human Development* provides a unique opportunity for researchers and clinicians to bridge the communication gap between disciplines. Creating a forum for the productive exchange of ideas concerning early **human growth**...

The ruins of science

Feb. 2, 2021

Researcher to overtake Diederik Stapel on the Retraction Watch Leaderboard, with 61

> *Nazari's publications include falsification of results, plagiarism (including self-plagiarism), and manipulation of authorship. A series of 13 recent retractions by Springer also noted "evidence of peer review manipulation." To date, these issues have resulted in 48 retractions. I have recently compiled a report, summarized by Retraction Watch, which documents how Nazari's works appear to be part of ud ring.*

Does scientific misconduct cause patient harm? The case of Joachim Boldt 2013

An internal investigation found no evidence of harm to the patients Boldt treated, and the the Cochrane review found "no change in the findings related to the inclusion or exclusion of the studies by Boldt et al.," according to the editorial. But the new meta-analysis found something different:

> *After exclusion of the studies by Boldt et al, Zarychanski et al found that hydroxyethyl starch was associated with a significantly increased risk of mortality (risk ratio [RR], 1.09; 95% CI, 1.02-1.17) and renal failure (RR, 1.27; 95% CI 1.09-1.47).*

No academic post for fraudster Diederik Stapel, after all 2016 .

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.

Diederik Stapel

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

Here's o
De Teleg

2018

Stem cell researchers investigated for misconduct recommended for roles at Italy's NIH

Two stem cell scientists who left Harvard University in the aftermath of a messy misconduct investigation may have found new roles in Italy's National Institute of Health.

Piero Anversa

According to a document on the institute's website, which we had translated, Piero Anversa and Annarosa Leri have been approved to start work at the Istituto Superiore di Sanità (ISS) by the institute's board of directors. However, the president of the organization told us that the

Springer Nature slaps more than 400 papers with expressions of concern all at once Sept. 29, 2021

2018

Swedish review board finds misconduct by Macchiarini, calls for six retractions

An ethical review board in Sweden is asking journals to retract six papers co-authored by former star surgeon Paolo Macchiarini, after concluding that he and his co-authors committed misconduct.

Paolo Macchiarini

One of the papers is the seminal 2011 article in *The Lancet*, which described the first case of a transplant using an artificial trachea seeded with the patient's own stem cells, and now bears an expression of concern from *The Lancet* editors. Over time, multiple authors have asked to be removed from the paper.

The Expert Group on Scientific Misconduct at the Central Ethical Review Board has determined that concerns over that paper — and five others co-authored by Macchiarini, once based at the Karolinska Institutet (KI) — were justified. In a press release, it says:

Snow

Retraction watch Article	Year of retraction	Citing Articles before retraction	Citing Articles after retraction	Total cites (journals indexed by Web of Science)
1. **Primary Prevention of Cardiovascular Disease with a Mediterranean Diet** N ENGL J MED; APR 2013.	2018	1910	627	2537
2. **Ileal-lymphoid-nodular hyperplasia, non-specific colitis, and pervasive developmental disorder in children** LANCET; FEB 28 1998.	2010	642	780	1422
3. **Visfatin: A protein secreted by visceral fat that mimics the effects of insulin** SCIENCE; JAN 2005	2007	232	1146	1378
4. **An enhanced transient expression system in plants based on suppression of gene silencing by the p19 protein of tomato bushy stunt virus** PLANT J; MAR 2003.	2015	895	331	1226
5. **Lysyl oxidase is essential for hypoxia-induced metastasis**. NATURE; APR 2006.	2020	970	36	1006
6. **TREEFINDER: a powerful graphical analysis environment for molecular phylogenetics** BMC EVOL BIOL; JUN 2004.	2015	836	154	990
7. **Cardiac stem cells in patients with ischaemic cardiomyopathy (SCIPIO): initial results of a randomised phase 1 trial** LANCET, NOV 2011.	2019	907	55	962
8. **Purification and ex vivo expansion of postnatal human marrow mesodermal progenitor cells** BLOOD; NOV 2001.	2009	596	303	899
9. **Viral pathogenicity determinants are suppressors of transgene silencing in Nicotiana benthamiana** EMBO J; NOV 1998.	2015	784	65	849
10. **Spontaneous human adult stem cell**				

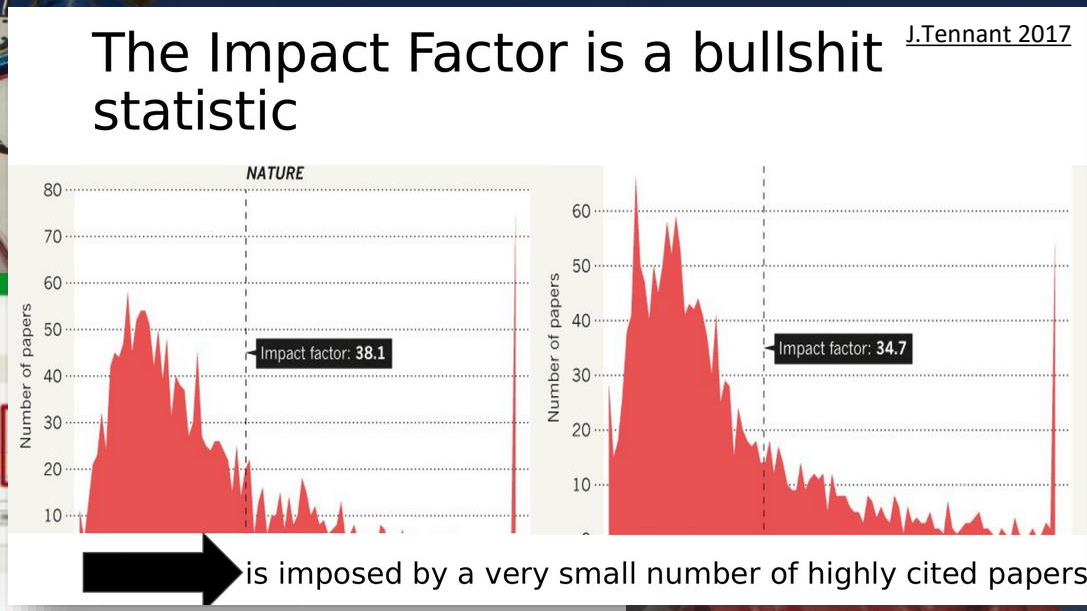
Science?

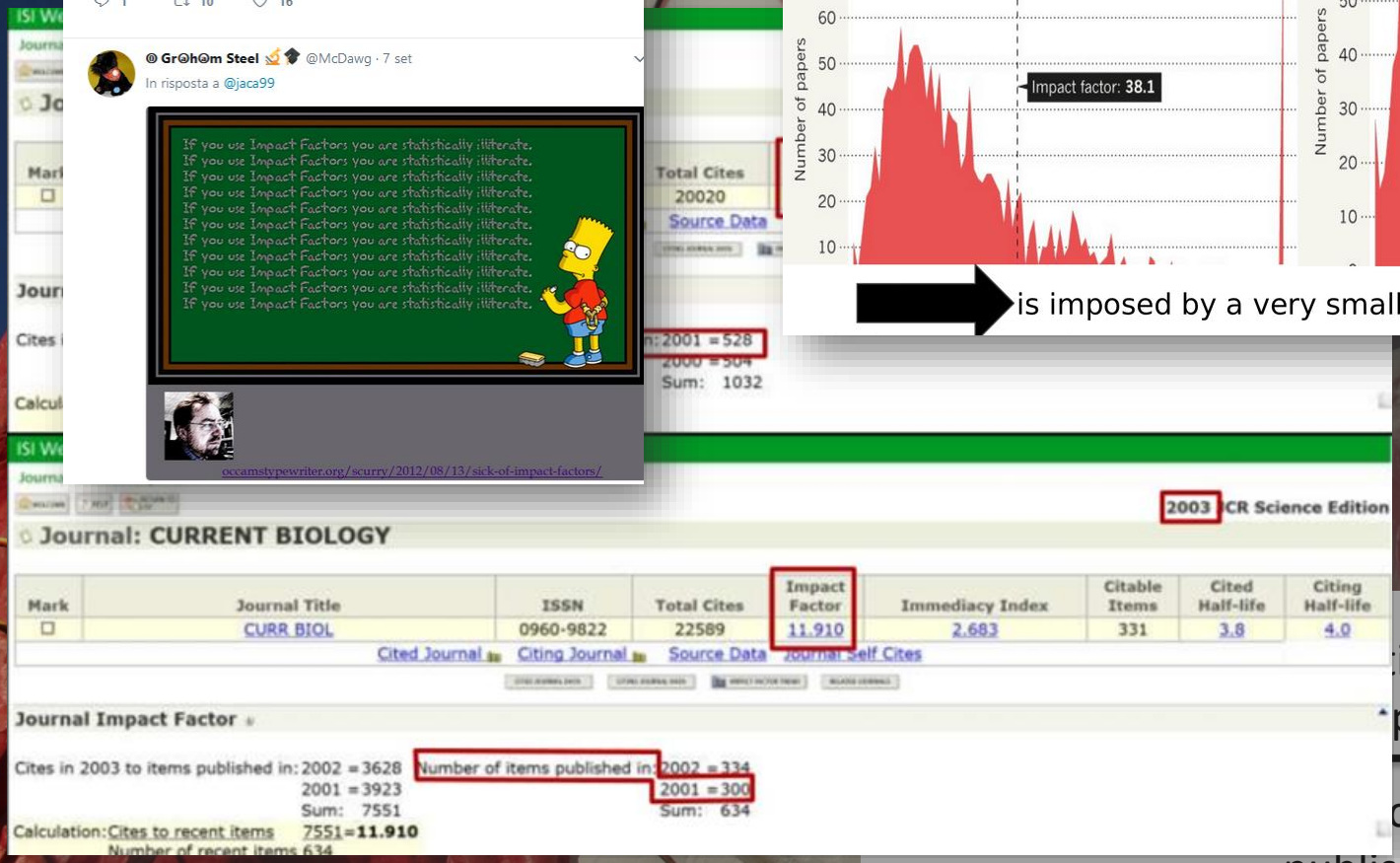
Indeed, after 10 years as a journal editor, seeing how things work behind the scenes, I'm convinced that journals and the people who run them (editors, publishers, societies) are a bigger culprit for the spread of bad science than are individual researchers. Journals compete to be the most prestigious, but the race for prestige is not determined by who provides the best quality control. Instead, journals compete to publish the most attention-grabbing papers – the papers that are going to get the most clicks, media attention, and citations. In other words, journals are rewarding scientists for being flashy, for prod big, bold findings, and they are looking the other way when it comes to questions about whether those findings are reliable and whether the m were rigorous. This reality is in stark contrast to the common myth about peer review – that journal-based peer review is a quality filter, and that the most prestigious journals have the most stringent filter. But the myth persists.

PRESTIGE IS DAMAGING SCIENCE

This misplaced faith in prestigious journals' peer review system is doing serious damage to science. Scientists continue to chase the reward of getting published in prestigious journals (because their livelihoods often depend on it,

[what about Impact Factor?]





ions in year X
published in X-1 X-2

citable» articles
published in X-1 X-2

Brembs, Digital Scholarship and Open Science need a digital infrastructur

…what about citations?

LSE The London School of Economics and Political Science — LSE Imp

Home About Latest Our books Series Resources LSE comment Popula

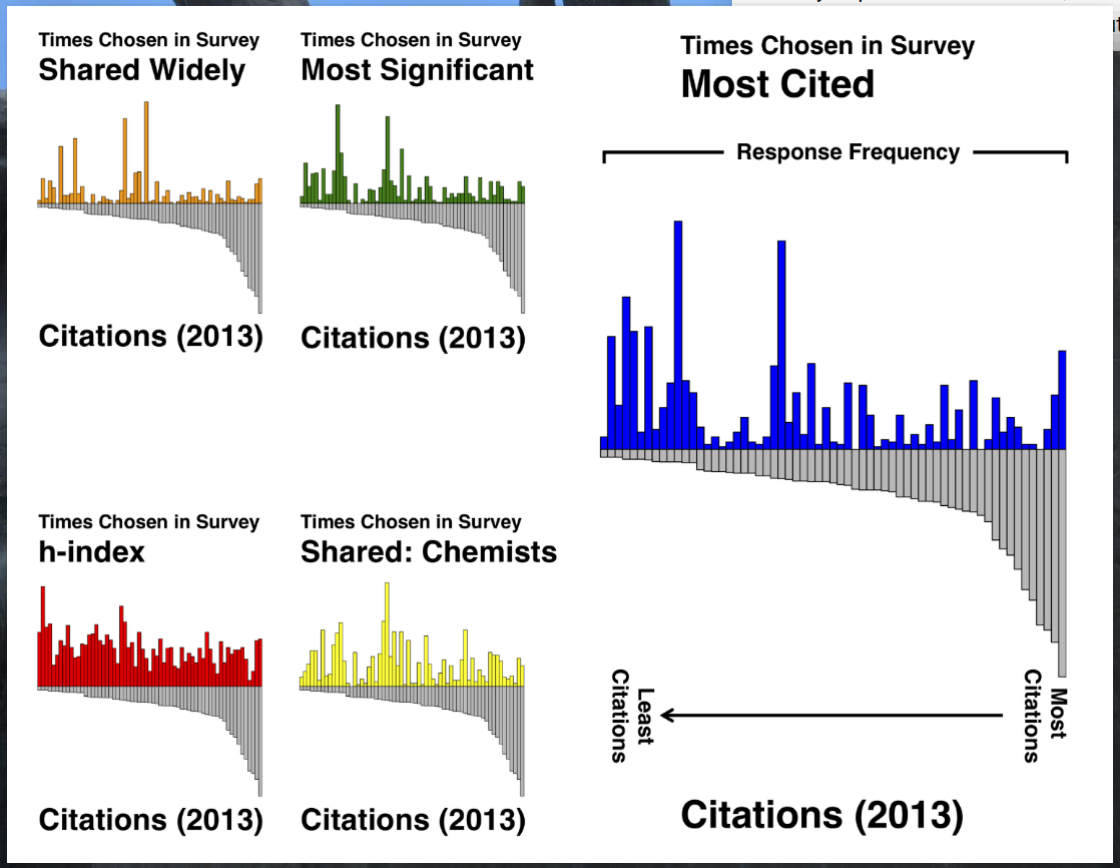
2018

The academic papers researchers regard as significant are not those that are highly cited

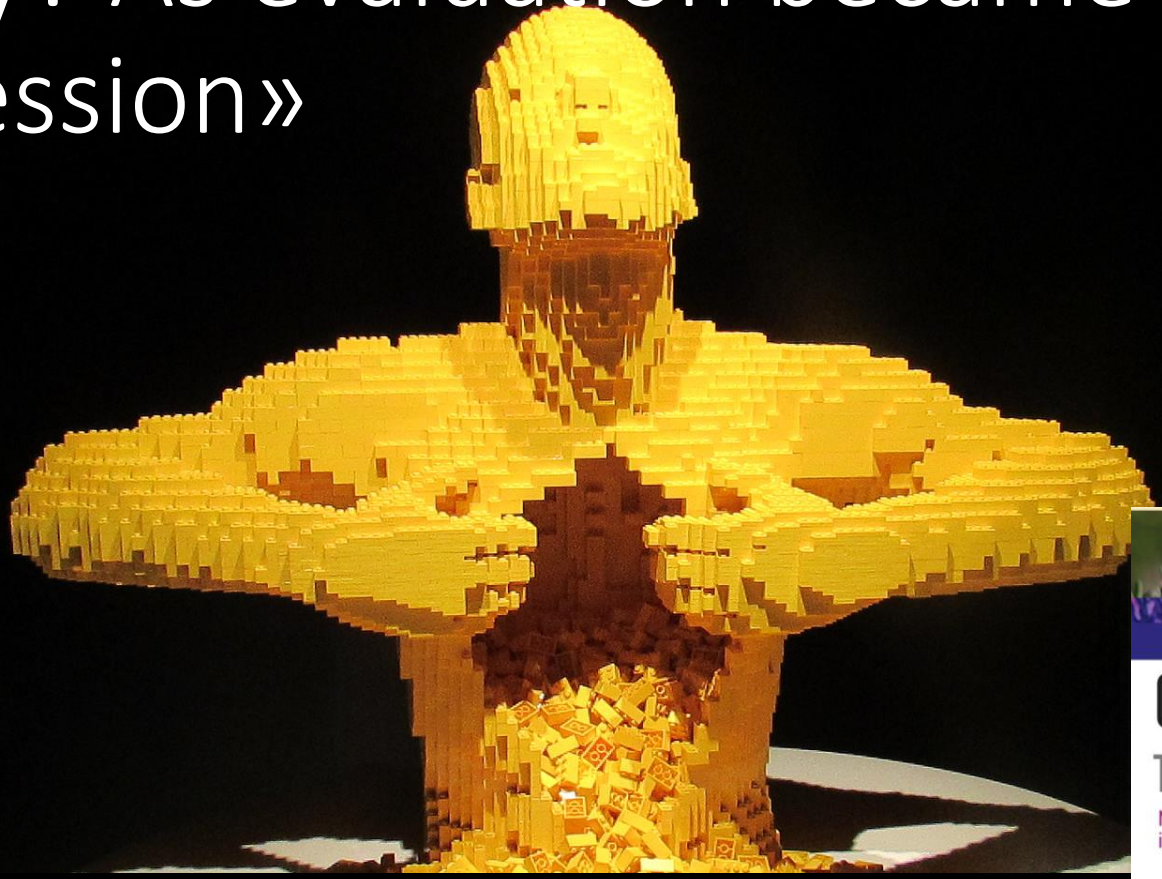
So what now? We think this work clearly highlights a major issue with metrics – they aren't measuring what everyone commonly assumes we are measuring, or at least, are not accurately representing the more abstract perceptions of impact and importance that we measured in our survey.

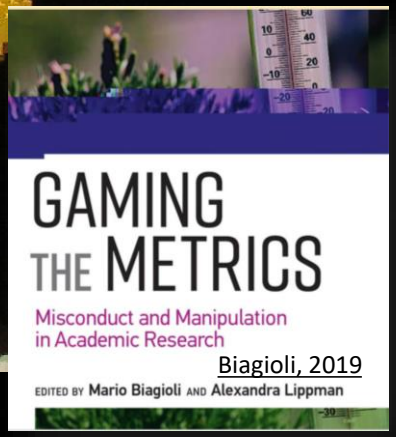
As hinted earlier, we think our research shows that impact goes beyond citation count, and beyond scholarly impact. Recent articles, such as that in *PLoS Biology* and *Nature*, also call out current

t what can we done to change current practice?



… 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**»

Obsession

IMPACT FACTOR MANIA

Causes for the Persistence of Impact Factor Mania 2013

Arturo Casadevall[a] and Ferric C. Fang[b]

This article has been corrected. See mBio. 2014 June 3; 5(3): e01342-14.

ABSTRACT

Go to:

Numerous essays have addressed the misuse of the journal impact factor for judging the value of science, but the practice continues, primarily as a result of the actions of scientists themselves. This seemingly irrational behavior is referred to as "impact factor mania." Although the literature on the impact factor is extensive, little has been written on the underlying causes of impact factor mania. In this perspective, we consider the reasons for the persistence of impact factor mania and its pernicious effects on science. We conclude that impact factor mania persists because it confers significant benefits to individual scientists and journals. Impact factor mania is a variation of the economic theory known as the "tragedy of the commons," in which scientists act rationally in their own self-interests despite the detrimental consequences of their actions on the overall scientific enterprise. Various measures to reduce the influence of the impact factor are considered.

I was told impact metrics could make or break careers. Instead, they broke my faith in scientific research 2018

Performance-driven culture is ruining scientific research

The Guardian Opinions

COBRA EFFECT: WHEN INDIANS WERE PAID FOR EVERY DEAD COBRA THEY HANDED, THEY STARTED BREEDING COBRAS

nature index 2018

Home News Current Index Annual tables Supplements Client services About

Home > News > What's wrong with the journal impact factor in 5 graphs

EXPLAINER · 3 APRIL 2018

What's wrong with the journal impact factor in 5 graphs

Scholars love to hate the journal impact factor, but how flawed is it?

… evaluation is the key

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

International Science Council

STAY TUNED…GOOD NEWS FROM THE EU!!!

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

It does not work, the way it is

...a deadly embrace

Bernard Rentier
@bernardrentier
Following

The accomplices are you and me, the researchers who pay to publish, the researchers who evaluate them, the researchers who review their articles graciously for the benefit of the publishers, the researchers who pay to read. All being afflicted with prestige-dependency syndrome.

Traduci dalla lingua originale: inglese

10:13 - 18 feb 2018

2016

But let's not ignore the facts: the science system is in landslide transition from data-sparse to data-saturated. Meanwhile, scholarly communication, data management methodologies, reward systems and training curricula do not adapt quickly enough if at all to this revolution. Researchers, funders and publishers (I always thought that meant making things public) keep each other hostage in a deadly embrace by continuing to conduct, publish, fund and judge science in the same way as in the past century.

So far, no-one seems to be able to break this deadlock. Open Access articles are indispensable but solve only a fraction of the problem. Neither 'open research data' alone will do. We still try to press

The purpose of scholarly communication

The virus is reminding us that the purpose of scholarly communication is not to allocate credit for career advancement, and neither is it to keep publishers afloat. Scholarly communication is about, well, scholars communicating with each other, to share insights for the benefit of humanity. And whilst we've heard all this before, in a time of crisis we realise afresh that this isn't just rhetoric, this is reality.

WONKHE

Apr. 22, 2020

The purpose of publications in a pandemic and beyond

the coffin will be closed?!" If we've created a generation of scholars who are just in it for the glory of papers in glamorous journals, and not to do good research that changes the world a little bit, then we really are in trouble.

Sept.8, 2021

Tiberius Ignat @TiberiusIgnat · 1min

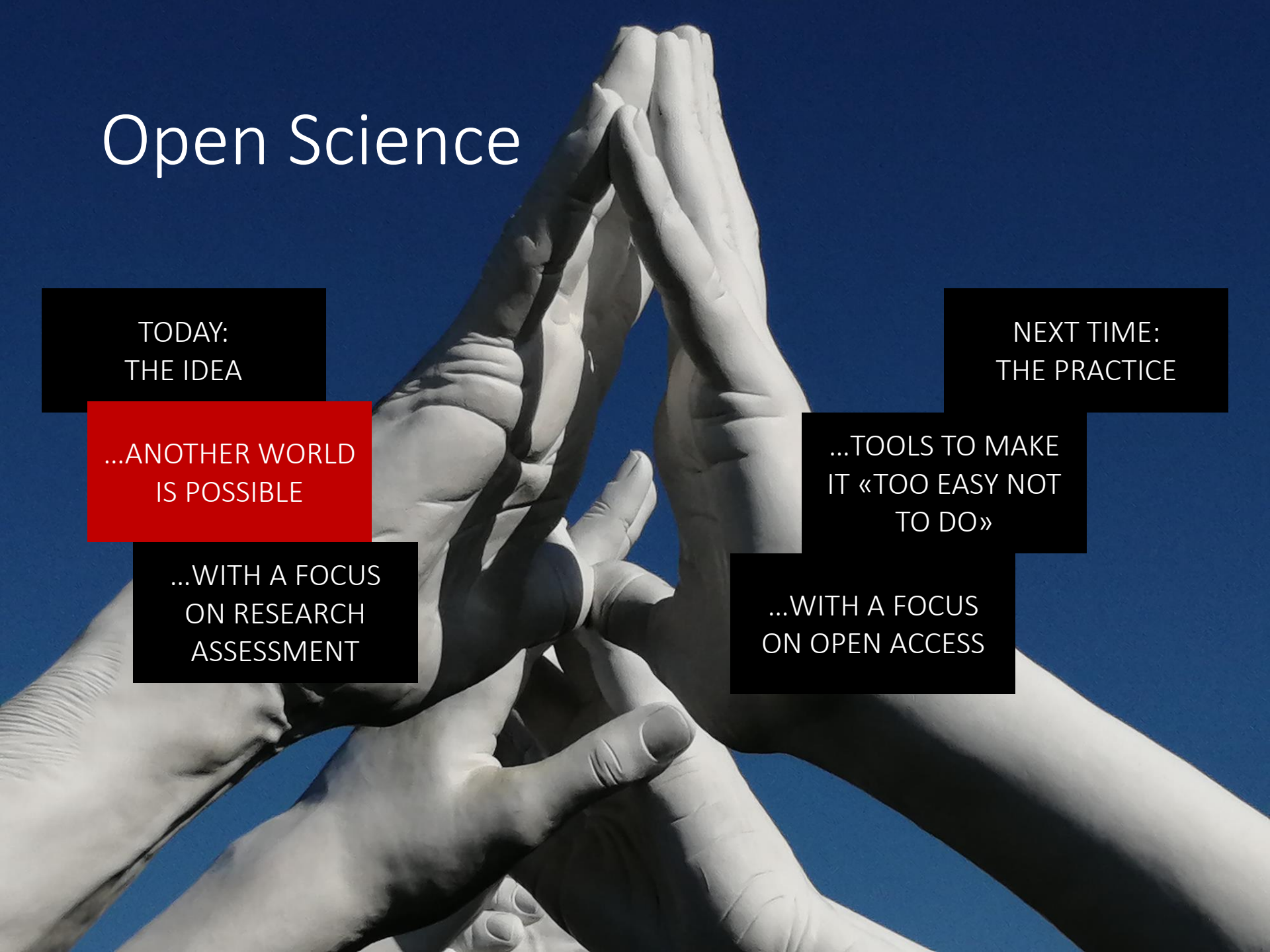
#OAI12 Alexandra Freeman (Octopus and Uni. Cambridge) at OAI12 answering to this question:
"Writing to impress" is what we now have. How to move back to "write to express"?
Come and join the conference: oai.events/oai12/live/

FROM «WRITING TO IMPRESS» TO «WRITING TO EXPRESS»

Open Science might help?


BREAK ...
QUESTIONS?

Open Science



TODAY:
THE IDEA

…ANOTHER WORLD IS POSSIBLE

…WITH A FOCUS ON RESEARCH ASSESSMENT

NEXT TIME:
THE PRACTICE

…TOOLS TO MAKE IT «TOO EASY NOT TO DO»

…WITH A FOCUS ON OPEN ACCESS

…a bit of inspiration…

The best thing about **Internet** is that it's **open.** In every field **it let us share and innovate.**

In science, **OPENNESS IS ESSENTIAL.**

Open science doesn't mean ignoring economic reality.

Of course **we need business models to be sustainable**. But that **doesn't mean we have to carry on doing things the way they have always been done.**

So, wherever you sit in the value chain, whether you're a researcher or an investor or a policy maker, my message is clear:
let's invest in collaborative tools that let us progress…

Let's tear down the walls that keep learning sealed off.

And let's make science open.

N. Kroes, Let's make science open, giugno 2012

Open Science – definition

Open Access | Lic. Info | Cite
Qeios
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/

NEW WAY OF
- CONDUCTING
- PUBLISHING
- EVALUATING

RESEARCH

SHARING
- DATA/TEXTS
- TOOLS
- RESULTS…

AS EARLY AND OPEN AS POSSIBLE

THIS IS THE REAL PURPOSE

OS LEADS TO MORE ROBUST SCIENTIFIC RESULTS, MORE EFFICIENT RESEARCH AND FASTER ACCESS
+ GREATER SOCIETAL AND ECONOMIC IMPACT

Open Science – definition

FACT SHEET: Biden-Harris Administration Announces New Actions to Advance Open and Equitable Research

Jan 11, 2023

- **OSTP** and **the National Science and Technology Council (NSTC)** today released an official definition of open science for use across the U.S. government: *"The principle and practice of making research products and processes available to all, while respecting diverse cultures, maintaining security and privacy, and fostering collaborations, reproducibility, and equity."* A unified, official definition will galvanize federal efforts, promote interagency collaboration, and drive progress.

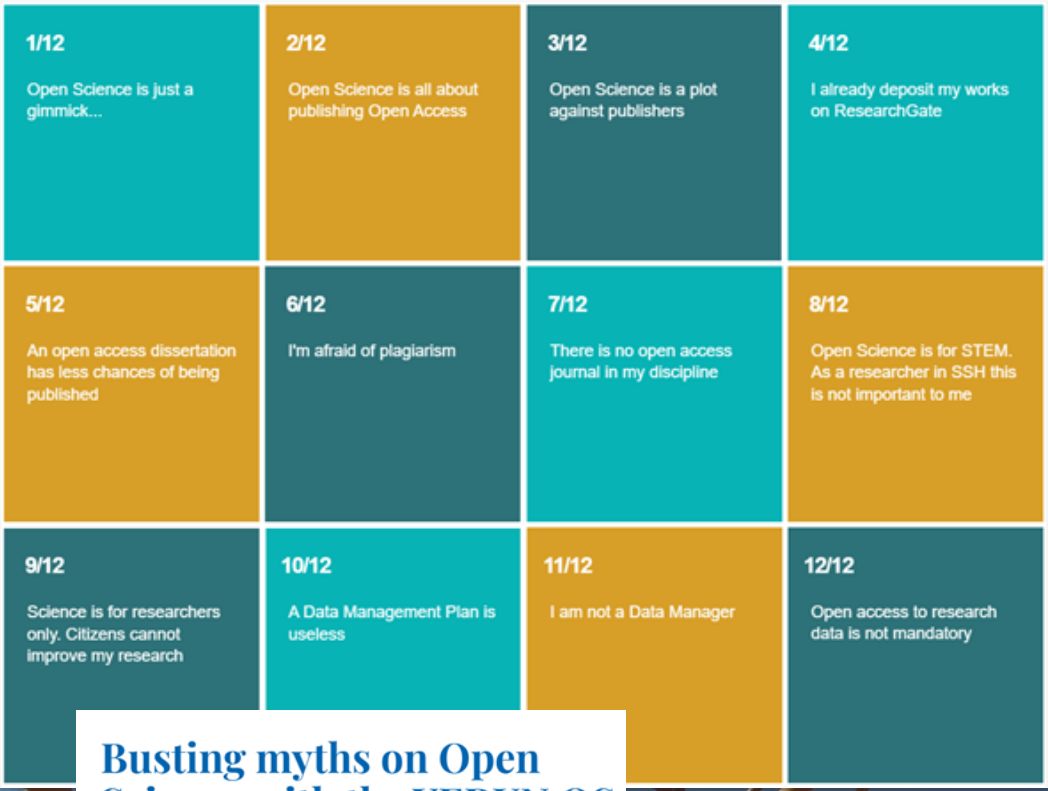
- RESEARCH PRODUCTS AND PROCESSES AVAILABLE TO ALL
- RESPECTING DIVERSE CULTURES
- MAINTAINING SECURITY AND PRIVACY
- FOSTERING COLLABORATION, REPRODUCIBILITY, AND EQUITY
- TO DRIVE PROGRESS

[Houston, we have a problem -


NOT PEER-REVIEWED

Ten myths around open scholarly publishing

Literature review | Science and Medical Education | Science Policy


1/12
Open Science is just a gimmick...

2/12
Open Science is all about publishing Open Access

3/12
Open Science is a plot against publishers

4/12
I already deposit my works on ResearchGate

5/12
An open access dissertation has less chances of being published

6/12
I'm afraid of plagiarism

7/12
There is no open access journal in my discipline

8/12
Open Science is for STEM. As a researcher in SSH this is not important to me

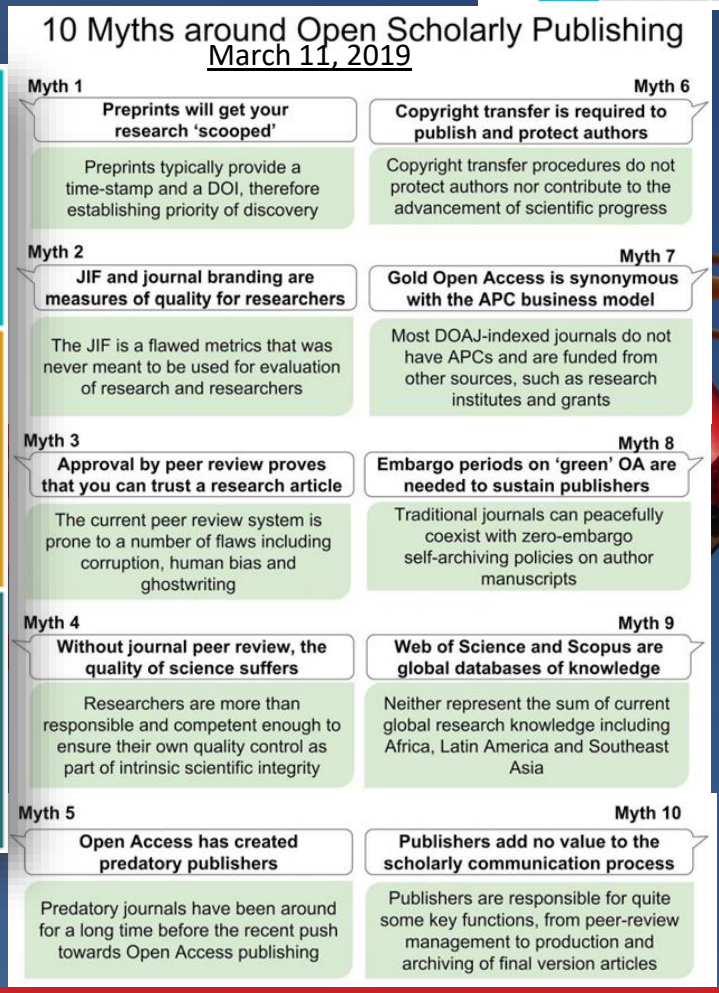
9/12
Science is for researchers only. Citizens cannot improve my research

10/12
A Data Management Plan is useless

11/12
I am not a Data Manager

12/12
Open access to research data is not mandatory

Busting myths on Open Science with the YERUN OS Calendar 2021! Dec. 2021


10 Myths around Open Scholarly Publishing

March 11, 2019

Myth 1
Preprints will get your research 'scooped'
Preprints typically provide a time-stamp and a DOI, therefore establishing priority of discovery

Myth 6
Copyright transfer is required to publish and protect authors
Copyright transfer procedures do not protect authors nor contribute to the advancement of scientific progress

Myth 2
JIF and journal branding are measures of quality for researchers
The JIF is a flawed metrics that was never meant to be used for evaluation of research and researchers

Myth 7
Gold Open Access is synonymous with the APC business model
Most DOAJ-indexed journals do not have APCs and are funded from other sources, such as research institutes and grants

Myth 3
Approval by peer review proves that you can trust a research article
The current peer review system is prone to a number of flaws including corruption, human bias and ghostwriting

Myth 8
Embargo periods on 'green' OA are needed to sustain publishers
Traditional journals can peacefully coexist with zero-embargo self-archiving policies on author manuscripts

Myth 4
Without journal peer review, the quality of science suffers
Researchers are more than responsible and competent enough to ensure their own quality control as part of intrinsic scientific integrity

Myth 9
Web of Science and Scopus are global databases of knowledge
Neither represent the sum of current global research knowledge including Africa, Latin America and Southeast Asia

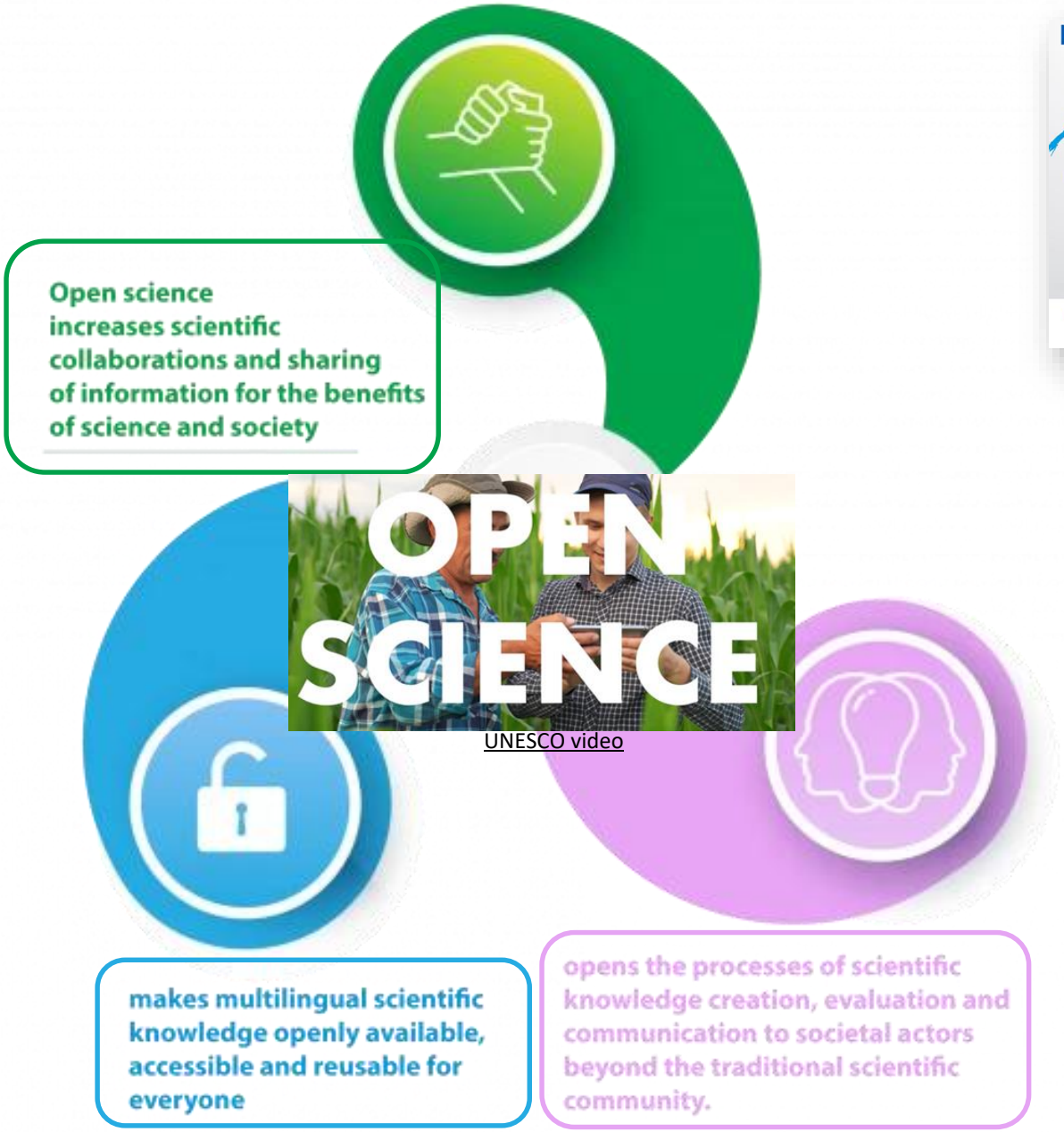
Myth 5
Open Access has created predatory publishers
Predatory journals have been around for a long time before the recent push towards Open Access publishing

Myth 10
Publishers add no value to the scholarly communication process
Publishers are responsible for quite some key functions, from peer-review management to production and archiving of final version articles

DIFFUSED MISCONCEPTIONS:

OPEN SCIENCE=OPEN ACCESS, YOU ALWAYS PAY TO PUBLISH, OA= PREDATORY, I CAN'T OPEN «MY» DATA…

Open Science – definition



UNESCO video

Open Science

Why is open science so crucial?

In the face of challenges such as climate disruption, pandemics, and biodiversity loss, recent years have shown that we *need* science more than ever. But to address these global risks in a truly effective way, we require not just any science but an open, collaborative, and inclusive form of it.

- OPEN SCIENCE MUST BE THE STANDARD
- OPEN SCIENCE REVOLUTIONIZES AND DEMOCRATIZES

Open science revolutionizes the scientific endeavor by breaking down barriers and ensuring that scientific results, tools, processes, and methods are accessible to all. By also bringing scientists together, regardless of their cultural, political, and religious backgrounds, open science democratizes the scientific realm, turning science into a shared heritage rather than a privileged commodity.

Open science can serve as a powerful tool to bridge existing gaps in science, technology, and innovation, contributing to both the greater good for science and society and the achievement of the Sustainable Development Goals (SDGs). The COVID-19 pandemic serves as an example, with 85% of COVID-19 articles being open access by mid-2021, leading to unprecedented scientific breakthroughs in record time.

Open Science

Video

Jeff Rouder
@JeffRouder

Segui

What is Open Science? It is endeavoring to preserve the rights of others to reach independent conclusions about your data and work.

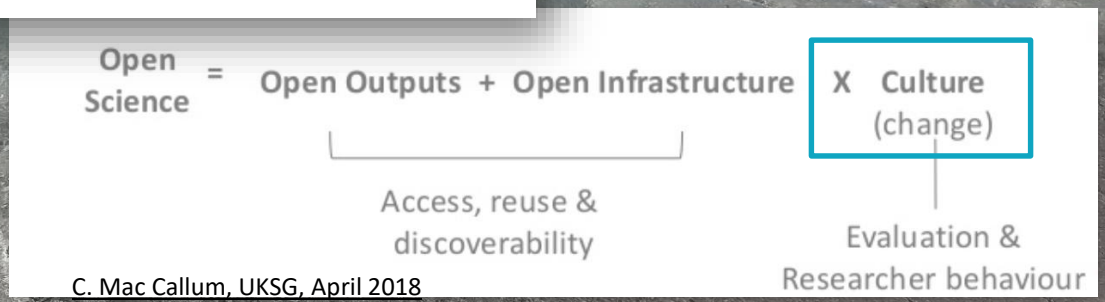
Traduci il Tweet

21:47 -

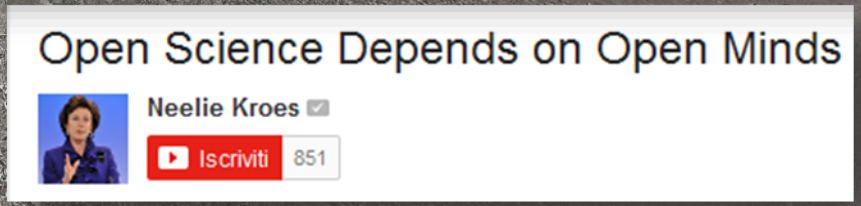
Open Science @openscience · 5 h

"Being open and transparent is an ongoing practice and not a check box at the end." - @biocrusoe #openscience

13 8



C. Mac Callum, UKSG, April 2018



[...cultural change or excuse?]

DON'T WAIT FOR RULES TO CHANGE.
YOU CAN CREATE THE CHANGE WITH YOUR BEHAVIOUR

'Devastating career event': scientists caught out by change to Australian Research Council fine print

Aug. 20, 2021

Researchers say a ban on preprint material citations in funding applications is a 'remarkably stupid own-goal for Australian science'

Preprint rule out of line with 'modern publication culture'

In their 41-page document of instructions to DECRA applicants, the ARC asks researchers to "include information about national and international progress" relevant to their application and field of research.

One scientist said
without referring
said.

Another said: "I m
These are two fair
cite them I would

One astrophysicis
comments from A
citing a piece of so
a preprint.

"I was really anno
ruled out on a tech

A Future Fellowship applicant, who described feeling "angry, destroyed,

Aug. 20

Yvonne Nobis @yvonnenobis · 1h

This is bonkers. One of my partner's most highly cited papers (Planck collaboration) is a pre-print. It does not differ in any material way from the final published article, which followed several years later (a special journal ed).

(nb. citations from the preprint don't count)

The Hidden Professor @thehiddenprof · 1h

rdian.com/education/2021...

14 September 2021

Sept. 14, 2021

Australian Government

Australian Research Council

Adjustments to the ARC's position on preprints

For future scheme rounds, the Australian Research Council (ARC) will allow the referencing and inclusion of preprints in a grant application. This includes within the Research Outputs list as well as the body of an application.

This adjustment to ARC's policy position reflects contemporary trends and the emerging significance of preprint acceptance and use across multiple research disciplines as a mechanism to expedite research and facilitate open research, as well as to provide greater equity across disciplines and career stages.

PREPRINT WERE BANNED FROM GRANT PROPOSALS.
PROTESTS AS THE MOST RECENT RESEARCH IS ON PREPRINT. NOW THEY ARE INCLUDED RECOGNIZING THEIR «WIDE ACCEPTANCE»

Why Open Science?

Innovation & networking

Efficiency, cost-effectiveness & reproducibility

Transparency & impact

Collaboration, visibility, credit & purpose

Global

Regional

National

Institutional

Individual

Quality & integrity

Human rights & equity

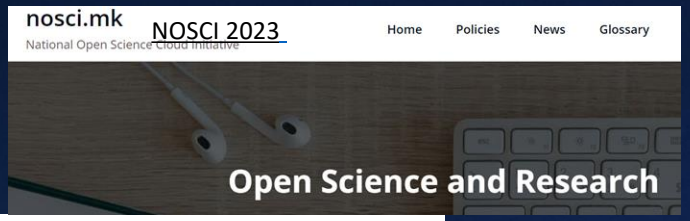
Economic benefits & access to resources

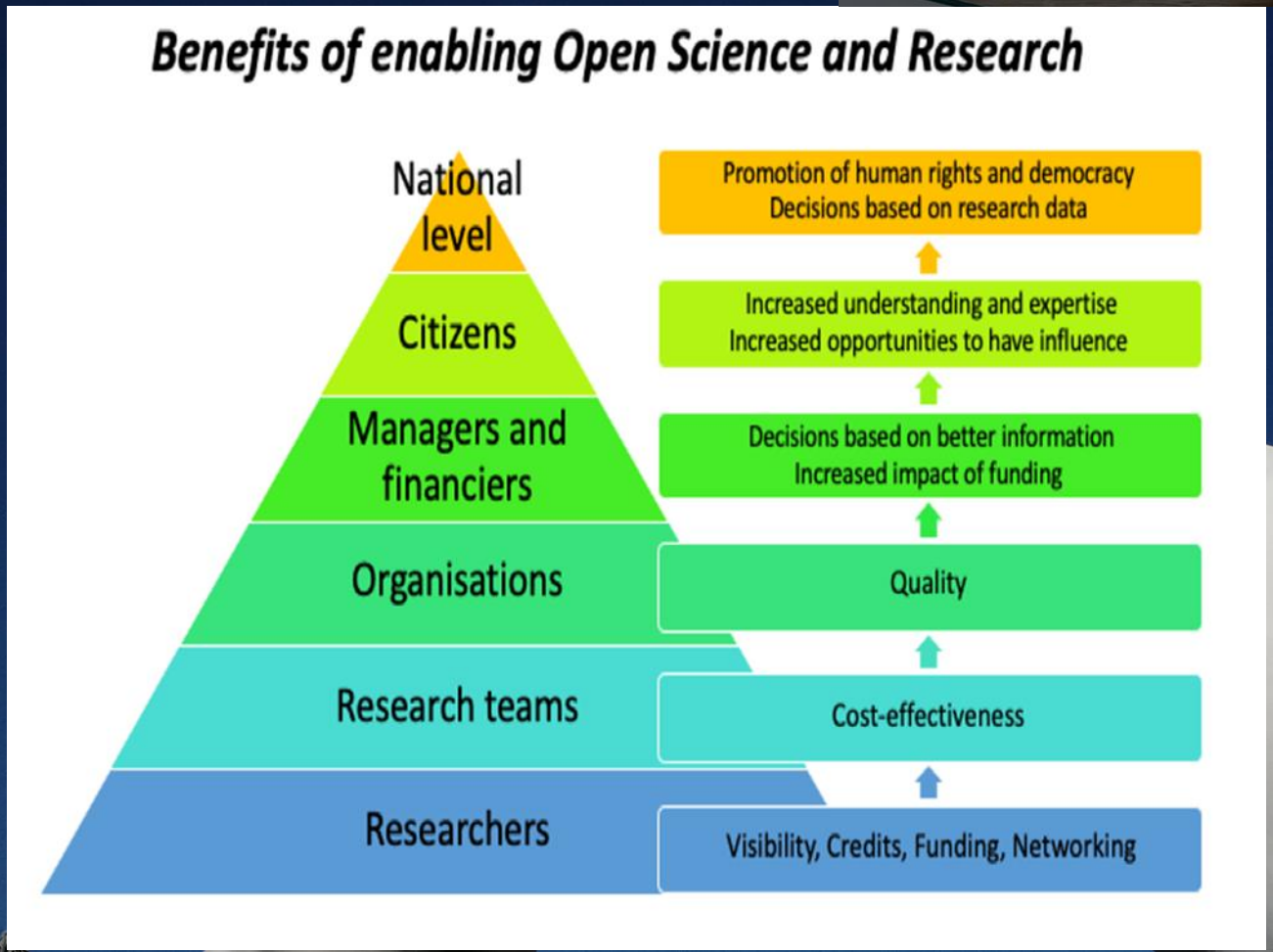
Better-informed decision making

Public engagement & trust

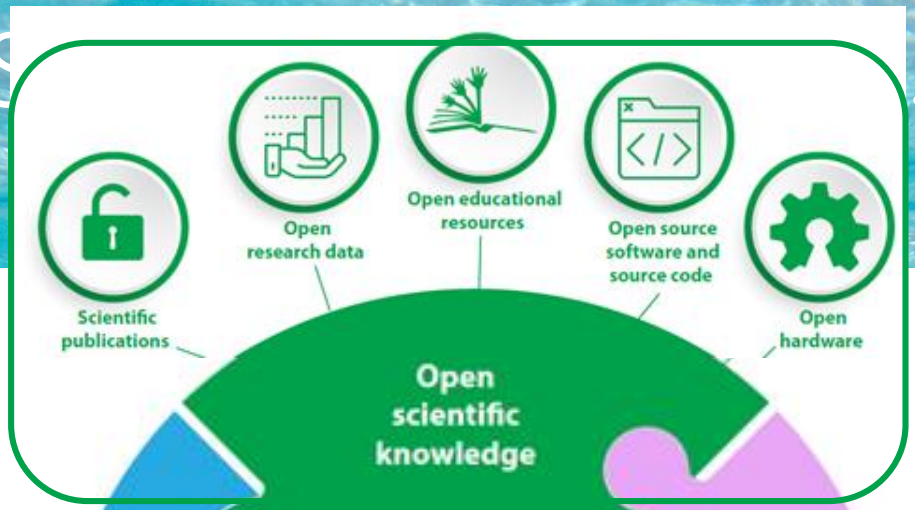
Global goals & benefits

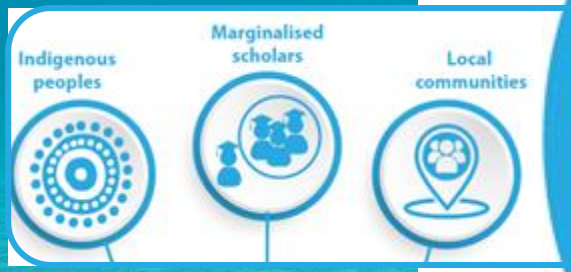
Why Open Science? / 2

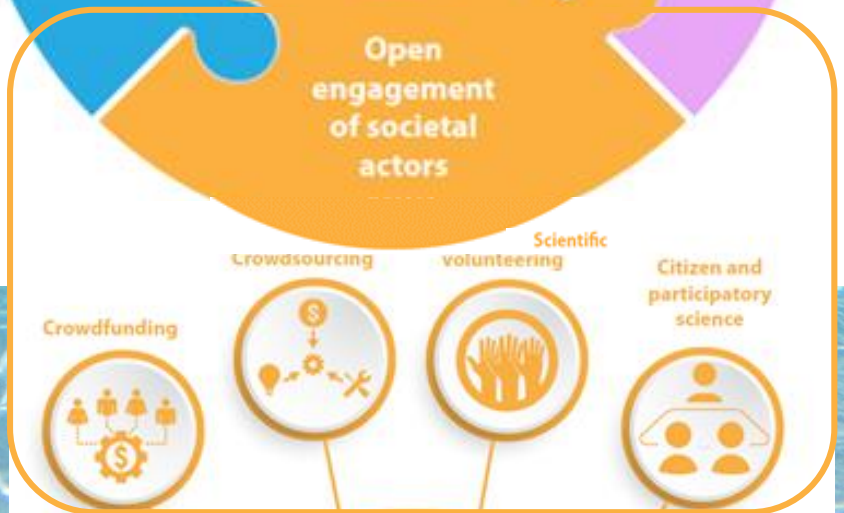




…Open S…s







Nov. 23, 2021

NOT ONLY SCIENTIFIC KNOWLEDGE. OPEN DIALOGUE, OPEN ENGAGEMENT OF SOCIETAL ACTORS

Beyond the building blocks: ecology of knowledge

- SCIENTIFIC KNOWLEDGE IS JUST «ONE» OF THE KNOWLEDGE PRODUCED BY HUMANS
- OPEN DIALOGUE WITH OTHER KNOWLEDGE SYSTEMS MEANS A TWO-WAY COMMUNICATION [NOT ONLY «ACCESS», «SHARING» FROM ACADEMIA]

Munin Conference on Scholarly Publishing

Connecting the building blocks of Open Science: an ecological approach Nov. 2022

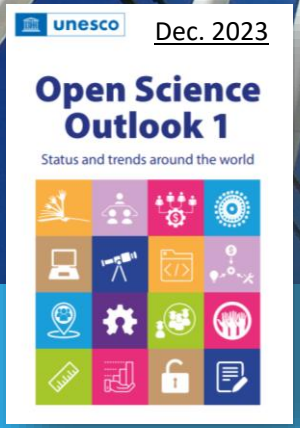
Pierre Mounier (EHESS)

Beyond the building blocks: towards an ecology of knowledge

In many texts about open science, starting with the definitions, there is often a versatile usage of "science" and "knowledge" that can be mentioned as if they were perfect synonyms. The UNESCO definition of open science is on the contrary very precise on this, considering science (or "scientific knowledge" as they put it) as one of the many types of knowledge that are produced in human societies. Hence, this challenging objective to "open dialogue with other knowledge systems", which touches upon several dimensions of scientific communication: citizen science, DEI (Diversity, Equity and Inclusivity), education, societal engagement. If everyone agrees that open science is ultimately for the benefit of society, it is often conceived as a basic right for non-academic actors to access the results of academic research, or as an active action to disseminate the outputs of research to the society through various channels. But, by no means this is what we could consider as "an open dialogue" that would require, at least, bidirectional communication. It thus implies to consider science on an equal footing with other types of knowledge (produced by practitioners, journalists, educators, amateurs, communities for example) to contribute to a common good that extends beyond the borders of academia (Okune et al., 2019). In my

Open Science Key messages / 1

INNOVATION
PARTICIPATION IN THE CREATION
INCLUSION
TRUST
REPRODUCIBILITY



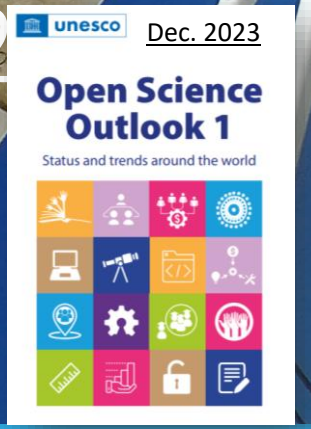
KEY MESSAGES

The Key Messages presented below summarize the findings of this first edition of the UNESCO Open Science Outlook, which was developed with inputs from open science experts and actors representing different scientific disciplines across all the regions of the world.

Open science, as defined in the 2021 UNESCO Recommendation on Open Science, should serve to widen access to scientific knowledge for the benefit of science and society. It should strive to promote opportunities for innovation and participation in the creation of scientific knowledge and the sharing of its benefits.

- Open science has multiple potential benefits. These benefits range from improvements in the scientific process and its outputs to cultural advancements, such as enhanced inclusion and trust in science, and practical gains, such as streamlined creation and reproducibility of scientific findings.
- Adopting open science practices can positively influence the investments in and outputs from science as well as the process and the impacts of science.

Open Science Key messages / 2

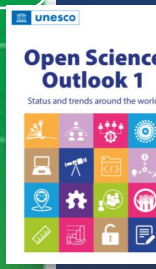


TRANSITION TO OPEN SCIENCE NEEDS A SHIFT IN THE CULTURE OF SCIENCE AND HAS TO BE MONITORED AGAINST UNINTENDED CONSEQUENCES

The transition to open science requires a shift in the culture of science.

- Transformation to an open scientific system that better engages with society requires both practical actions and systemic, cultural shifts grounded in mutual respect. Equitable collaboration and expanded access to technologies that facilitate this transformation are essential.
- Enacting such cultural change towards open science requires accessible infrastructures, strengthened capacities, aligned funding and incentives as well as operational and aligned policies and policy instruments.
- At present, there is a need for systematic and coherent approaches to open science that align with and operationalize values and principles of open science, taking into account the specific conditions, governing structures and constitutional provisions and science, technology and innovation capacities in different countries.
- The cultural shift to open science will only be possible with adequate monitoring of its impacts, including its possible unintended consequences for science and/or society (e.g. shift of costs from readers to authors; lack of clarity over ownership and intellectual property management in an open science context and others). If not addressed proactively, such unintended consequences may increase inequities in science and in the sharing of its benefits.

Open and equitable global science system	Open access to scientific knowledge	Open science infrastructures	Open engagement of societal actors	Open dialogue with other knowledge systems
An open science culture in an enabling policy environment with sustained resource commitments increases collaboration for the benefit of science and global society.	All scholarly outputs are published in a fully open access outlet or posted in an open repository, with free, immediate readership/ usership rights.	Sustainable community-led open infrastructures, both physical and digital, are available to all, regardless of location, language or ability.	Multiple entry points permit engagement. External actors contribute/initiate design, creation and application of scientific knowledge.	Diverse knowledge bases spark innovation and equitable decision-making.
A culture of open science is fostered with effort to align incentives for open science. Investments are made in human resources, training, education, digital literacy and capacity building for open science.	Data, software and other outputs are FAIR* and openly shared, linked with publication outputs.	Platforms permit usership for all. Digital architectures begin to facilitate use in different languages and accessibility needs.	Capacity for societal engagement is integrated into project design and institutional plans.	Capacity for ethical, open dialogue is integrated into planning and implementation at project and institutional levels.
Innovative approaches for open science are promoted at different stages of the scientific process.	All scholarly outputs are made freely available to read, in a journal or an open repository, after an embargo of no more than six months.	Open infrastructures are available to those who have existing access or commit to specified partnerships.	Societal actors have a few, defined, points of contact with scientific processes.	Dialogue is built into policies, creating time, opportunities and incentives for dialogue.
International and multi-stakeholder cooperation is initiated without a view to reducing digital, technological and knowledge gaps.	Scholarly outputs are shared without clear licensing or copyright	Infrastructure sharing is opportunistic.	Stakeholder engagement is opportunistic.	Dialogue is facilitated in one-off events, with uneven expertise.
There is no common understanding of open science and its benefits.	Scholarly outputs are not published or are published under restrictive copyright.	Digital gaps and subscription costs hinder the use of scientific infrastructures.	Science is separate from "outreach". Science communication is one-way, outwards.	Science is separate from "outreach". Other topics or communities are research subjects.



CULTURAL SHIFTS FROM CLOSED TO OPEN

'Closed' Conventional Science

…but / 1

Jan. 2022

IT'S NOT JUST PUTTING «OPEN» BEFORE THAT WE ARE DONE…

frontiers

Mission statement Conversations Commentaries Evidence snapshots

Commentaries

Members of the Open Science community react to the UNESCO Recommendation

We asked 11 leading experts and advocates of the Open Science and Open Access movement to share their views on the significance of the UNESCO Recommendation on Open Science adopted in late 2021. Here are their responses and their own recommendations for how to achieve the objectives set by UNESCO.

recommendations. But, so far, most continue to put this still-fermenting new wine into the old wineskins of their current reward systems and publishing requirements. Ultimately, the escape from the 17th-century scholarly communication prison is *not* about blaming the publishers, but about facing our own, dried-out, elitist, and anachronistic ivory-tower scholarly communication practice (from which the publishers live lavishly).

IT'S US TO BLAME!

Barend Mons

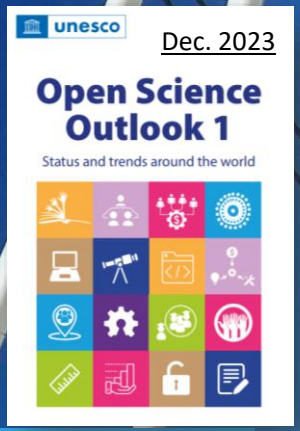
primarily communicated via human-readable narrative. However, we must realise that the evidence on which we base our knowledge should be centered on data and relevant, reproducible, observations and patterns that lead to precise claims[2], rather than on storytelling. Narrative is necessary but is *supplementary* to data and actual claims.

ly

the Global North can have our electric cars and cleaner cities? Why would science be different? The (almost) universally agreed-upon (among intellectuals) new wine, *although wonderful and tasty*, goes quickly into the old wineskins of the current, journal-based scholarly communication and reward system, which *will resist until it finally bursts*. Many

DON'T PUT NEW WINE IN OLD WINESKINS (THE CURRENT JOURNAL SYSTEM)

Open Science Key messages / 3



COLLECTIVE ACTION + INVESTMENTS

Collective, collaborative and coordinated action and investment are needed to accelerate the transition to a truly global, equitable open science.

- Open science requires investment to thrive. Significant gains may be made through reallocation of existing resources.
- Incentive systems to promote open science urgently require alignment of the values and priorities used to assess scholars and institutions with the values and principles of open science.
- Changes in the ways in which in international partnerships and co-funding for open science operate will be key for a meaningful equitable global transition to open science.

[From EOSC Symposium Prague 2022]

Final reports – Engaging policy makers

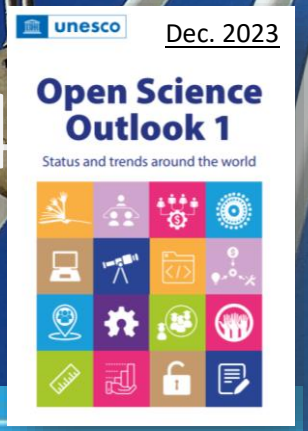
- Recommendations place responsibility clearly with different stakeholdes
- Describing tangible benefits + way forward
- Importance of investing in knowledge and people!
- Consequences of investing too little = All the cost, none of the benefits

Katrine Weisteen Bjerd, Norway

INVESTING TOO LITTLE=
ONLY COSTS, NO BENEFITS

Open Science Key messages / 4

FOR OPEN SCIENCE TO REACH ITS FULL POTENTIAL, IT MUST BE A TRULY GLOBAL EQUITABLE PHENOMENON



For open science to reach its full potential, it must be a truly global equitable phenomenon.

- Open science has the transformative power to reduce the recognized existing inequalities in science, technology and innovation, thereby also accelerating the progress towards the achievement of the Sustainable Development Goals and the fulfilment of the human right to participate in and benefit from science and its advancements.
- To ensure that open science actors from all countries have access to, participate in and benefit from open science, due consideration must be given to the gaps that exist in research and development investment, capacities to transform knowledge into innovation, regulatory environments and overall maturity of science, technology and innovation systems across the world.
- Existing differences in scientific, technological and innovation capacity implicitly shape the experience and prioritization of open science practices. Taking these complexities into account will be critical to ensure that open science reaches its potential and reduces digital, technological and knowledge divides.
- The disciplinary and regional differences in open science perspectives also need to be considered, taking into account the specific challenges of scientists and other open science actors in varied contexts and in particular in developing countries.
- The existing lack of equity in access to digital tools and infrastructures and physical equipment as well as in the skills needed to use, manage and maintain them is one of the key barriers for accessing, sharing and storing information and for collaborating at multiple and varied levels in line with the principles of open science.

[Opening, not patronizing]

The unique opportunity to advance Science as a Global Public Good:
Open Science in a world of contrasts

Arianna Becerril García
Autonomous University of the State of Mexico

UNITED NATIONS, NEW YORK | 8-10 FEBRUARY 2023
3rd Open Science Conference
Accelerating the Sustainable Development Goals, Democratizing the Record of Science
#OpenScienceUN

Arianna Becerril, Feb. 2023

On what data is the industry of prestige founded?

Which regions, countries, science fields, journals, institutions or authors are privileged by current strategies? Which ones are excluded?

Which inequalities the current system will continue to perpetuate?

Is openness structural and sustainable?

Who owns and control the knowledge? The research community interests prevail?

The future restrictions on knowledge generation depend on the ownership.

How to achieve systematic participation in science (not patronizing strategies) that enables a global conversation?

WHICH REGIONS ARE EXCLUDED?
WHO OWNS AND CONTROL THE KNOWLEDGE?
HOW TO ACHIEVE SYSTEMIC PARTICIPATION IN SCIENCE?

Open Science

- OPEN SCIENCE IS A HUMAN RIGHT
  - LEAVE NO ONE BEHIND

Sept. 21, 2019

Also noting that the global COVID-19 health crisis has proven worldwide the urgency of and need for fostering equitable access to scientific information, facilitating the sharing of scientific knowledge, data and information, enhancing scientific collaboration and science- and knowledge-based decision making to respond to global emergencies and increase the resilience of societies,

Committed to leaving no one behind with regard to access to science and benefits from scientific progress by ensuring that the scientific knowledge, data, methods and processes needed to respond to present and future global health and other crises are openly available for all countries, in accordance with the rights and obligations, including the exceptions and flexibilities, under applicable international agreements,

Affirming the principles of the Universal Declaration of Human Rights, notably those contained in Articles 19 and 27 and also affirming the 2007 United Nations Declaration on the Rights of Indigenous Peoples,

Nov. 23, 2021

Open [colla ence – being inclusive

@JFSmith434

"If we are not careful, we will have an open science that perpetuates the inequalities in academia and science." @mendulla #osfair2017

46.24 Inclusive Open Science, 7 Sept. 2017

FORCE2021
Joining Forces to Advance the Future of Research Communications
December 7-9, 2021

:.2021

Open Science Manifesto
Towards an Inclusive Open Science for Social and Evironmental Well-be

Contextu
Openness
Situating Open Scie

on merrit
Open Science - who is left behind?

Beyond Diversity and Inclusion: Challenging Structural Racism and Systemic Biases in Academic Knowledge Production

Leslie Chan
Global Development Studies
Knowledge Equity Lab
University of Toronto Scarborough
@lesliekwchan @knowequitylab

- D3.1 RRI and Open Science Datasets+
- D3.2 Cumulative Advantage in Open Science and RRI: A Large-Scale Quantitative Study+
- D3.3 Uptake of Open Science and Responsible Research and Innovation in Policy and Training+
- D4.1 Synthesis of previous research and specifications of research methods+
- D4.2 Drivers and barriers to uptake of Open Science resources in industry+
- D4.3 Quantifying the influence of Open Access on innovation and patents+
- D5.1 Scoping report of previous research on the role of Open Science resources in deliberative policy-making+
- D5.2 Results of a survey on the uptake of Open Science in information seeking practices in policymaking+
- D5.3 Networks o participation+
- D6.1 Investigatin
- D6.2 Scenario m transition+
- D6.3 Synthesis r
- D6.4 Final guide for maximising e

ejandro Posada

Main points

Contemporary inequity in knowledge production has deep historical roots – tracing back to colonialism and the spread of imperial science

Addressing compositional diversity doesn't address the underlying problems of structural racism and systemic biases rooted in whiteness

Structural racism is about the maintenance and reproduction of power

Uncritical acceptance of "openness" risks reproducing and amplifying existing inequities

Design principles based on epistemic justice and knowledge equity are possible – Centering Human Relations and Solidarity

Assoc. Prof. Leslie Chan March 31 2022
University of Toronto at Scarborough

Why are the "rich" in open science getting richer? Reflections on structural inequities and knowledge production

22.03.2022 #onmerritfinale on merrit

UNCRITICAL ACCEPTANCE OF «OPENNESS» RISKS REPRODUCING AND AMPLIFYING EXISTING INEQUITIES

It's time to talk explicitly about inclusiveness

We have talked enough about diversity in an implicit way but we have not focused on it in an explicit way and we may therefore have missed the real point:

equity, diversity and inclusiveness are non-negotiable

and they must be built into the foundation of what we do.

Stephen Curry ✓
64.823 Tweet

Sept. 19, 2019

Following

LERU @LERUnews · 19 set

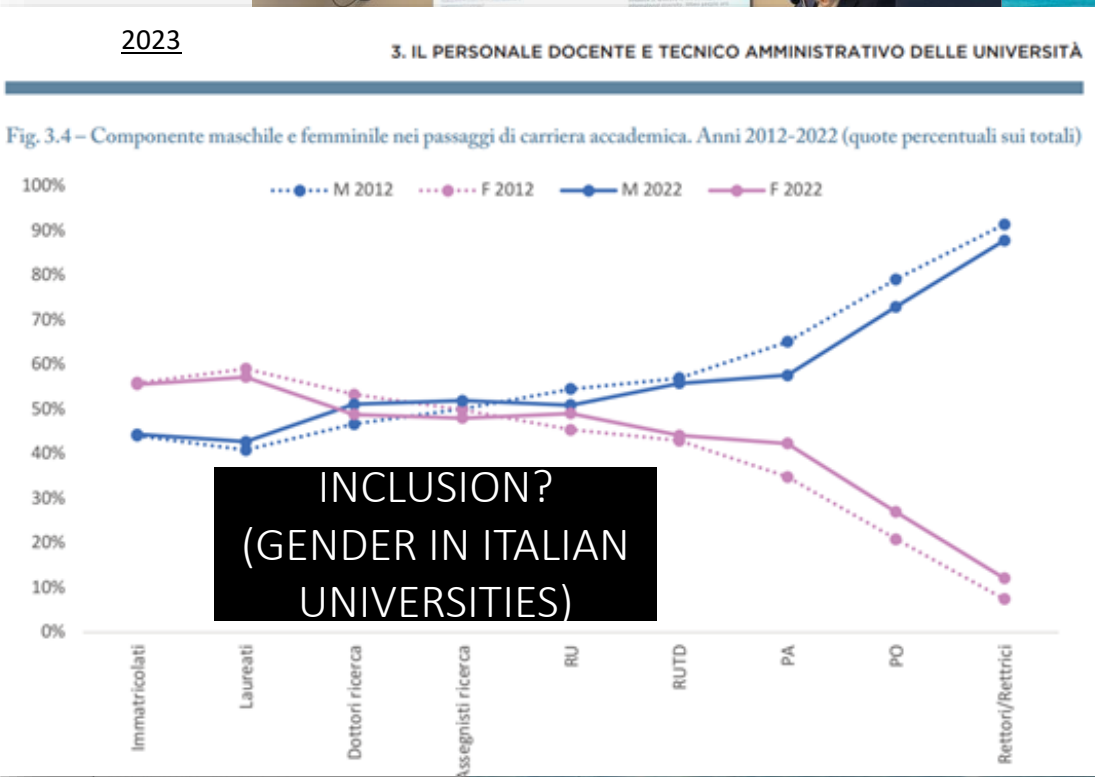
Important message to bring to university leadership is that we miss out on talent by not making equality and diversity a priority. Mixed teams work better. Addressing diversity issues is a win-win-win situation for students, staff and institutions, says @Stephen_Curry

DIVERSITY=ASSET

Feb. 13 2022

D@sapta Erwin Irawan
@dasaptaerwin

2023



INCLUSION? (GENDER IN ITALIAN UNIVERSITIES)

Research must be communicated in multiple languages

Access to research and greater interaction between science and society can only be possible if research is communicated in mul languages, including those actually used in speech and writing locally.

In the ongoing reform of the research assessment system, the call for multilingualism is the most notable omission.

INCLUSION ALSO MEANS MULTILINGUALISM

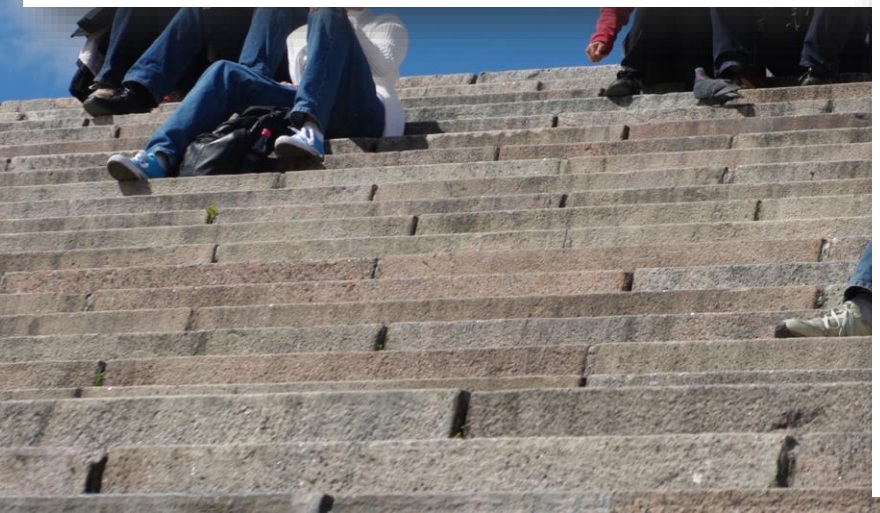
2 Retweet 1 Mi piace

Twitta la tua Rispondi

Equity, diversity, inclusion

Piv Gopalasingam, OLS6 2022

1) WHO IS IN THE ROOM
2) WHO IS TRYING TO GET IN BUT CAN'T
3) HAVE EVERYONE'S IDEAS BEEN HEARD?



You can weave diversity and inclusion into your w

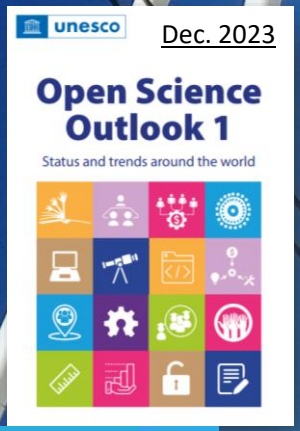
- There are many resources available - read and share!
  - Wellcome's anti-racist toolkit
- Find allies and collaborate - move the needle!
- Embed D&I into as many facets of your work - safe spaces
  - Add as a regular Agenda item in meetings, check if your work is inclusive
  - Ask "where are my/our blindspots, who are we leaving behind?" and work to counteract this

Wellcome anti racitst toolkit

https://wellcome.org/what-we-do/diversity-and-inclusion/wellcomes-anti-racist-principles-and-toolkit

EMBL-EBI

Open Science Key messages / 5



MONITOR ALL THE ASPECTS OF OPEN SCIENCE
BIBLIOMETRIC INDICATORS ARE INSUFFICIENT

Growing evidence demonstrates the rapidly increasing adoption of open science practices around the world and across multiple disciplines. However, the existing approaches used to assess open science must be strengthened to address all aspects and values of open science.

- Existing efforts to assess the status and trends of open science have shown that standard approaches and existing indicators and bibliometrics are insufficient to clearly understand and monitor the degree of openness across all the stages of the scientific cycle and across all the pillars of open science as defined in the 2021 UNESCO Recommendation on Open Science.
- A combination of open qualitative and quantitative assessments, as well as innovations in the understanding of and response to change, will be needed for a representative monitoring system for open science that itself adheres to the values and principles of open science.
- There is a need to shift from monitoring only scientific outputs, such as publications, towards assessing the values and impacts of science and with a focus on the people who are doing, engaging with and/or benefiting from science.

RETHINKING RESEARCH ASSESSMENT

BUILDING BLOCKS FOR IMPACT

DORA

Capturing scholarly "impact" often relies on familiar suspects like h-index, JIF, and citations, despite evidence that these indicators are narrow, often misleading, and generally insufficient to capture the full richness of scholarly work. Considering a wider breadth of contributions in assessing the value of academic activities may require a new mental model.

Two dimensions to illustrate "impact"

Broadening the definition of scholarly "impact" against two dimensions—the **scale of contributions' influence** and **new types of audiences**—can help institutions recognize and reward a wider variety of academic achievements and outcomes.

Collaborations, mentoring, and demonstrations of eminence that allow scholars to shape the direction of fields demonstrate increasing scales of impact.

Scale of influence

Scale of influence

New audiences

Scaled magnitude resulting in significant reach, scope, or stature

Collaborative and advisory roles through partnerships and shepherding others' work

Direct contributions through deep disciplinary expertise

	Disciplinary or field-specific audiences	Institutions or broader academic settings	Contexts external to academia
Scaled magnitude	FOR EXAMPLE Leadership roles in disciplinary societies or editorial boards; Transformative methodological advances	FOR EXAMPLE Policy advisory roles; Contributions to institutional policy (e.g. diversity, equity, and inclusion (DEI))	FOR EXAMPLE Real-world societal (e.g., cultural, patient, community, environmental, or economic) impact
Collaborative and advisory roles	FOR EXAMPLE Teaching; Mentoring, advising, and career guidance	FOR EXAMPLE Team research or interdisciplinary collaborations; Peer review and conference roles	FOR EXAMPLE Industry collaborations and commercialization
Direct contributions	FOR EXAMPLE Journal articles and conference publications; Datasets, software, or products	FOR EXAMPLE Open science/data and open access; Preprints; Asynchronous education	FOR EXAMPLE Popular press books and publications; Social media or altmetric profile

Researcher Katalin Karikó's work on mRNA immunogenicity was repeatedly dismissed by elite journals and funders, yet became key to the development of Covid-19 vaccines.

While non-academic works and social media lack the rigor of peer review, communicating the value and importance of scientific advances to wider audiences makes scholarly knowledge more approachable and meaningful.

Recognizing the impact created by cultivating future generations of scholars also rewards contributions of women and minoritized individuals who tend to bear heavier expectations and loads for mentoring.

Open datasets and open science are increasingly valued for their contributions to replication and research transparency. This broadens access and rewards a mindset of collaboration over competition.

New audiences

Reaching audiences outside of disciplinary ... can broaden ... derived from ...

Expanded definitions for "impact" can help individuals identify and embrace different goals.

While some scholars may naturally be more oriented toward disciplinary work, seeing a broader set of "impact" characteristics allows academics to define, plan for, and pursue more personally meaningful career aspirations.

Pursuing a traditional path of deep specialization within a discipline will continue to provide credibility of expertise and a significant base of influence within one's field.

Applied research, perspectives, and project work provide new forms of visibility and societal value through scholarly activities that directly contribute to real-life challenges.

Emphasizing how expertise can enrich other individuals, collaborations, or entire fields rewards scholarly activities that value interdisciplinarity and fostering new capabilities.

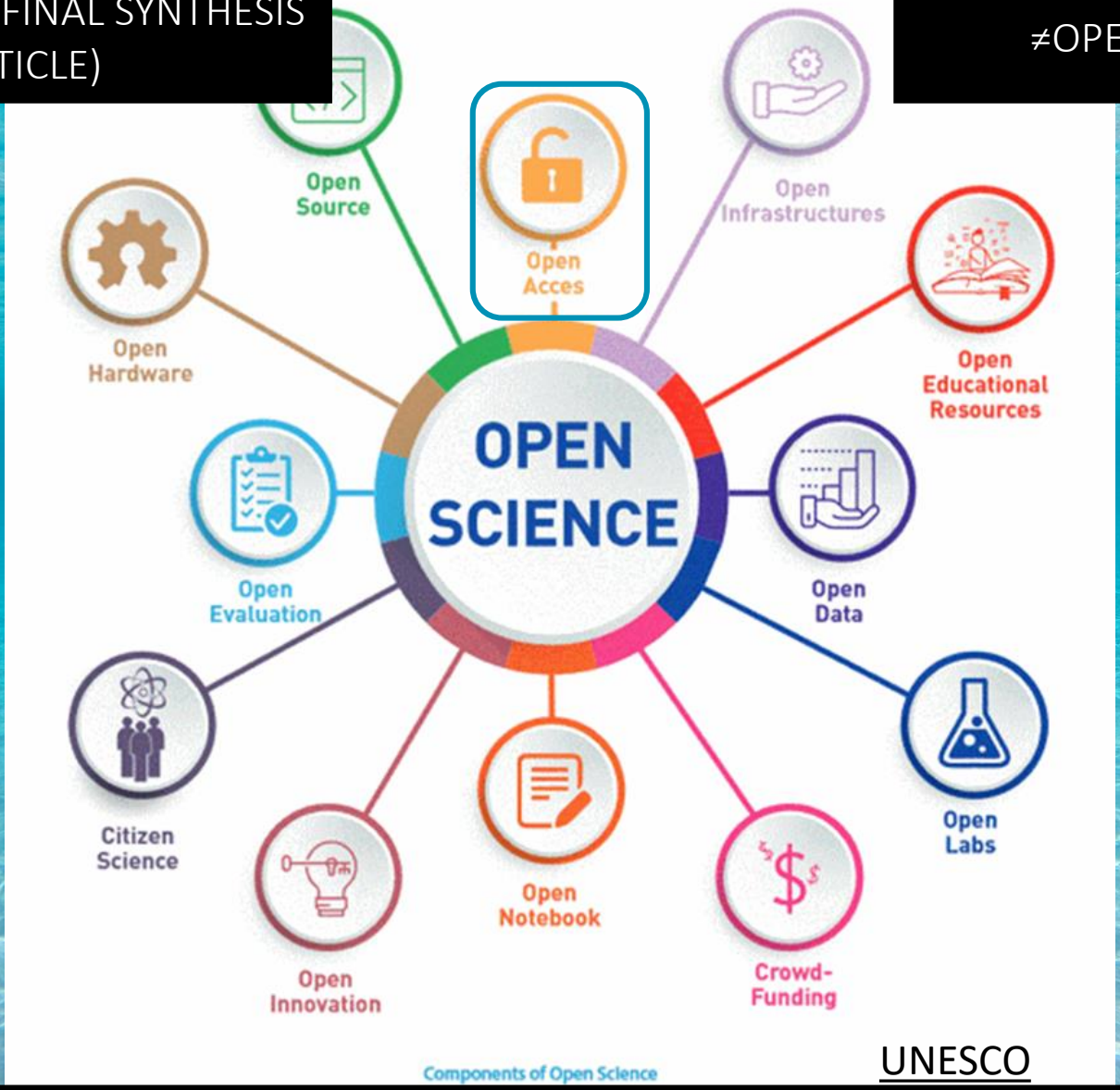
The explicit recognition of efforts that support open research or diversity, equity, and inclusion (DEI) can enhance their status as critical components of academic values.

IMPACT IS MULTI-DIMENSIONAL

2023

FOCUS ON THE ENTIRE PROCESS, NOT ONLY THE FINAL SYNTHESIS (ARTICLE)

OPEN SCIENCE ≠OPEN ACCESS



UNESCO

ALL THESE COMPONENTS TO BE EMBEDDED IN THE PROPOSAL TEMPLATE, 1.2 EXCELLENCE-METHODOLOGY AND TO BE EVALUATED UNDER «SCIENTIFIC EXCELLENCE»

…but / 2

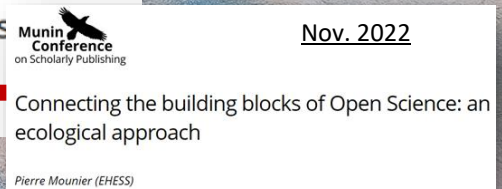
- FOCUS ON THE INTERACTIONS, NOT ON THE BLOCKS

"Connecting the building blocks" of open science is thus much more than just creating connections: it is more than ensuring technical interoperability between different systems, more than coordinating various stakeholders, more than disseminating science in society: it is to create a *milieu* of knowledge, to build the community that supports it and to open it beyond the limits of academia. In other words, it is to consider that the sum is superior to the addition of its parts, and to adopt an encompassing approach that supports open knowledge as a whole. That is why I would like to submit to discussion the relevance of adopting an ecological approach to open science. The main consequence of it would be to focus primarily not on the "blocks" taken individually, and not even primarily on the individual interactions between them, but on the systems of interactions that structure open science. The proposition would be to start from open science considered as an ecosystem supporting the creation of open knowledge, and then look at the elements from that perspective. What is in focus then, is the web of communications and interactions that compose the ecosystem. The objective is no more to "connect the building blocks" of open science, as bricks are assembled in a wall, but to support symbiotic systems of relations between initiatives, platforms, tools, communities and practices that thrive for and by open knowledge.

Winch means, when considering or even evaluating open science initiatives, projects, services and tools, to flip the order or priorities and to pay attention first to the way they move in their ecosystem: how do they nurture from it, how do they fertilise it, how do they cooperate with others, rather than other criteria that are usually considered as more important; such as innovation, efficiency, excellence. And then, when we have a comprehensive representation of the full web of interactions and interdependencies maybe we could start asking the right questions: is it sustainable? Is it inclusive? Is it creative? Is it alive?

- HOW DO THEY MOVE IN THE ECOSYSTEM? DO THEY NURTURE? DO THEY FERTILISE?

…THESE ARE THE CRITERIA, NOT «EXCELLENCE»


Munin Conference on Scholarly Publishing

Nov. 2022

Connecting the building blocks of Open Science: an ecological approach

Pierre Mounier (EHESS)

[still, the focus is on a one-way communication]

PERFECT. AGREED 100%. BUT…
IT'S STILL «DISSEMINATION»
[ONE WAY FROM ACADEMIA]

UNITED NATIONS, NEW YORK | 8–10 FEBRUARY 2023

3rd Open Science Conference

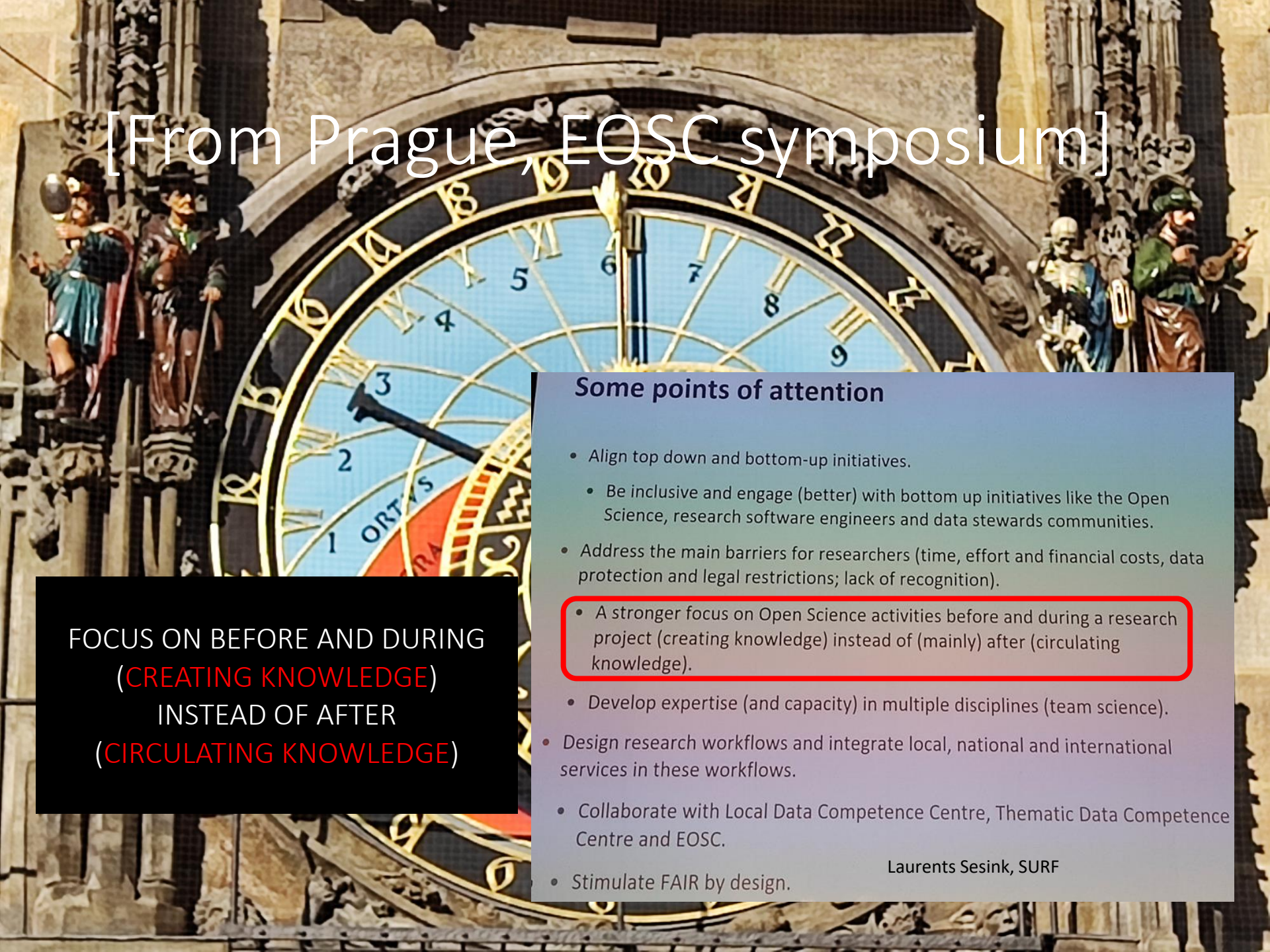
Accelerating the Sustainable Development Goals, Democratizing the Record of Science

#OpenScienceUN

What we have	What we need
Predominantly pay to access, pay to publish scholarly publishing system	A universal, quality-controlled research communications system
Focus on the "article"	All valuable research outputs
Lengthy lag times from submission to publication	Rapid sharing of preprints with open peer review
(Excessively high) 'pay to access"' fees or 'pay to publish' fees (APCs)	Public infrastructure for dissemination of research with no transaction fees
Consolidation and centralization	Distributed ecosystem to support bibliodiversity
Closed collections	Open content (AI and TDM)
Print legacy systems	Utilize the potential of the open web

K.Shearer, Feb. 2023

[From Prague, EOSC symposium]



Some points of attention

- Align top down and bottom-up initiatives.
  - Be inclusive and engage (better) with bottom up initiatives like the Open Science, research software engineers and data stewards communities.
- Address the main barriers for researchers (time, effort and financial costs, data protection and legal restrictions; lack of recognition).
- A stronger focus on Open Science activities before and during a research project (creating knowledge) instead of (mainly) after (circulating knowledge).
- Develop expertise (and capacity) in multiple disciplines (team science).
- Design research workflows and integrate local, national and international services in these workflows.
- Collaborate with Local Data Competence Centre, Thematic Data Competence Centre and EOSC.
- Stimulate FAIR by design.

Laurents Sesink, SURF

FOCUS ON BEFORE AND DURING
(CREATING KNOWLEDGE)
INSTEAD OF AFTER
(CIRCULATING KNOWLEDGE)

Scholarly «conversation»

Dr Elizabeth Gadd @lizziegadd@mastodon.online
@LizzieGadd

The term 'scholarly communication' seems to have come to symbolise one-way pronouncements - 'versions of record' -that are approved by citation or rejected by retraction. Perhaps we need to switch to 'scholarly conversation': to signify a process of two-way open review?

Traduci il Tweet

10:54 AM · 19 gen 2023 · **5.344** visualizzazioni

Jan 2023

...but (2

Embrace open and reproducible research to the extent you want and you can. Seek allies and support around you, but do not feel pressured. It isn't open or closed. It is certainly not the same open or close for everybody.

So my very first take-home messages are:

- Open and reproducible aren't binary, they are gradients, multidisciplinary and multidimensional.
- How to be an open scientist and implement RR:
- Let's be open and understanding of different situations and constraints, including our own.

- OPEN IS A WORK IN PROGRESS, A GRADIENT
- OPEN IS NOT «GOOD BY DEFAULT»

Open != reproducible

Open != good (by default)

Reproducible != good (by default)

Open research and reproducible research aren't the same thing, and one doesn't imply the other. Even though in our modern understanding of these terms and concepts, they are intimately linked, historically, they are very different. And research being open or reproducible doesn't make it good (whatever the definition of good).

but / 4

OPEN AND REPRODUCIBLE RESEARCH ARE SUPPORTED BY GOOD DATA MANAGEMENT AND LEAD TO TRUST AND VERIFICATION

But open and reproducible research are **supported by good data management** (the topic of this talk/post) and lead to **trust, verification and guarantees**:

- Trust in Reporting – result is accurately reported
- Trust in Implementation – analysis code successfully implements chosen methods
- Statistical Trust – data and methods are (still) appropriate
- Scientific Trust – result convincingly supports claim(s) about underlying systems or truths

which are a hallmark of good research.

Open Science Saves Lives: Lessons from the COVID-19 Pandemic

2021

Lonni Besançon, Nathan Peiffer-Smadja, Corentin Segalas, Haiting Jiang, Paola Masuzzo, Cooper Smout, Eric Billy, Maxime Deforet, Clémence Leyra

doi: https://doi.org/10.1101/2020.08.13.249847

This article is a preprint and has not been certified by peer review [what does t

EVEN «OPEN SCIENCE» HAS TO BE DONE RIGHT!!!

Philosoph ce in practice

https://opensciencestudies.eu/

The OS movement is transforming research, with OS policies adopted around the globe and widespread agreement implementing key OS principles like openness, transparency and reproducibility. However, the philosophy of scienc underpinning the OS movement has not been clearly articulated. Moreover, there are significant epistemic risks in implementing OS across widely different research settings, such as the marginalisation of contributions from low-resourced environments. This raises questions about the relation between *open* and *good* science.

To address these concerns, this project combines a *philosophical analysis* of the epistemic significance of research environments with *empirical research* on how researchers working in different environments enact and conceptualise OS. This "philosophy of science in practice" [PSP] approach is ideally suited to investigating the meaning and implications of OS for the conduct of research. This project extends PSP by grounding conceptual analysis of scientific practice on qualitative research *as well as* collaboration with scientists and policymakers. We aim to develop a conceptualisation of OS that reframes its key principles by outlining how exchanges across environments can boost research excellence.

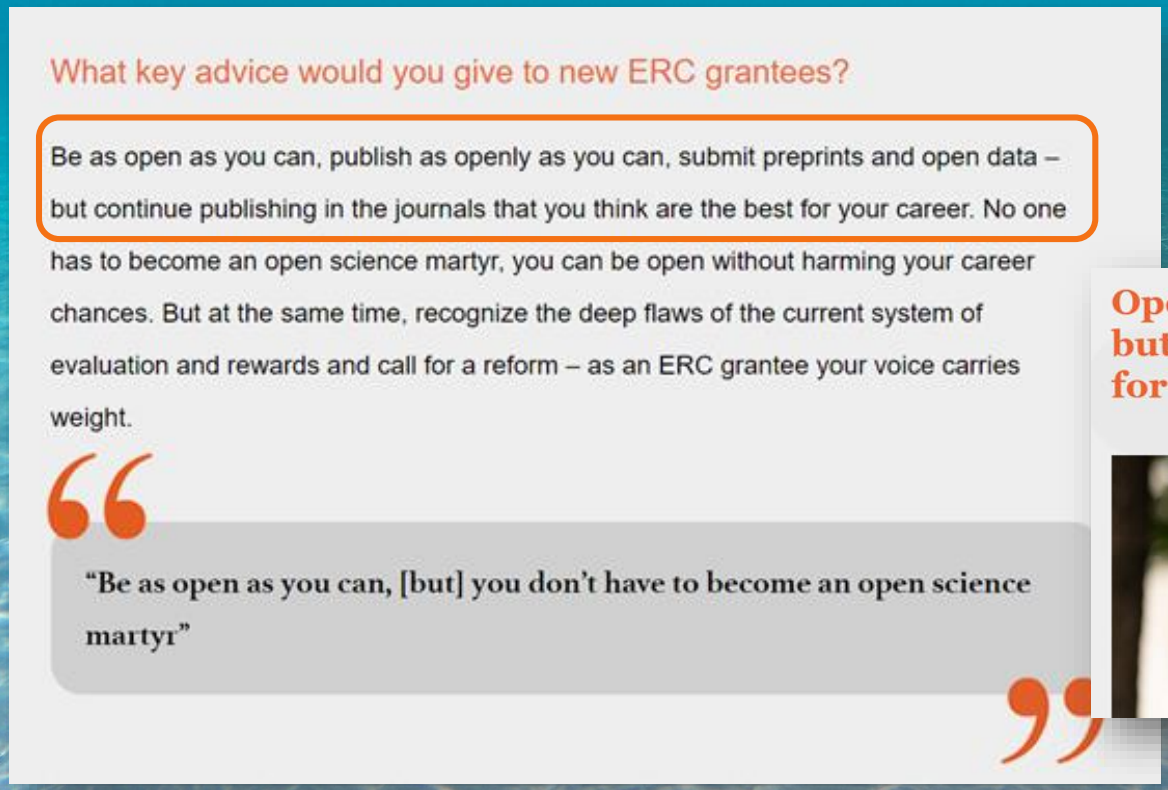
Subprojects

PHIL_OS includes empirical research on several research sites with a number of partners and collaborators, organised around eight sub-projects led by a team member with the support of the PI.

The focus is on biology and biomedicine, including plant science, animal behaviour and ecology, epidemiology and genomics:

- Citizen science and data-intensive ecology (Rose Trappes)
- Open science practices in space biology (Paola Castaño)
- Global crop data linkage (Sabina Leonelli)
- Tracking plant-pest interactions (Emma Cavazzoni)
- Tracking the SARS-Cov2 virus (Nathanael Sheehan)
- Coordination in crop science (Fotis Tsiroukis)
- From food crop research to policy (Joyce Koranteng-Acquah)

«AS OPEN AS POSSIBLE, AS CLOSED AS NECESSARY»



YOU CAN DO IT!
EVEN WITH THE CURRENT RESEARCH ASSESSMENT

Oct. 2021

Open Scie

Jon Tennant
@Protohedgehog
Following

What is the difference between open science and good science? If research papers are inaccessible, with no code or data, cherry picked results, inability to even attempt to reproduce, is that really even science? Science without openness is more anecdote and faith than science.

Tennant Sept.2018

Nov. 23, 2021

VALUES

- Quality and integrity
- Collective benefit
- Equity and fairness
- Diversity and inclusiveness

PRINCIPLES

- Transparency, scrutiny, critique and reproducibility
- Equality of opportunities
- Responsibility, respect and accountability
- Collaboration, participation and inclusion
- Flexibility
- Sustainability

OPEN SCIENCE: JUST SCIENCE DONE RIGHT

Closed/bad science

From Jon's Slideshow

Academic: *"This research paper has been published and therefore is scientifically valid."*
Non-academic: *"But it's paywalled. I can't access it. How do I know it's valid?"*
Academic: *"Because it has been peer reviewed."*
Non-academic: *"Can you show me the peer reviews?"*
Academic: *"No. But it was done by two experts in the field."*
Non-academic: *"Which experts?"*
Academic: *"We don't know. But it's in a top journal."*
Non-academic: *"Why is it in a top journal?"*
Academic: *"Because it has a high impact factor, so is highly cited."*
Non-academic: *"Why does that make the research better?"*
Academic: ***"Trust me. I'm a scientist."***

1 5

D@sapta Erwin Irawan
@dasaptaerwin

I remember he told this dialogue when we first met in person in Bali, April 2018. :). @BreznauNate And then I flashed my t-shirt showing a quote "Impact Factor is a Myth"

Traduci il Tweet

Nate Breznau @BreznauNate · 4 gen
1/6 "Open science is just good science". So said Jon Tennant; and I've transcribed, edited and appended one of his talks to deliver this message with maximum impact.
crowdid.hypotheses.org/548
@hypothesesorg
Mostra questa discussione

Jan 11 2022

9:34 AM · 11 gen 2022 · Twitter Web App

+ Open Science]

Recommendations (summary)

1. **Communicate about Open Science and Research Integrity in a positive way, as two fundamental and complementary pathways towards excellent science and greater social impact of research.** Indeed Open Science and Research Integrity both ultimately relate to the need to foster responsibility and trust in research and innovation.
2. **Commit to reforming the research assessment system to provide the right recognition, incentives and rewards** for methodological rigour, for enabling the wider uptake of open science practices, and to move at the same time towards a system that supports integrity and that rewards the plural characteristics of highquality research.
3. **Journals and publishing platforms should be transparent about their editorial processes**, including peer reviewing, and promote reproducibility of research through support of FAIR data and, whenever possible, by facilitating open access to data, codes and methodologies.
4. **Make sure that researchers** (at every stage of their career), **as well as other involved stakeholders** (like university lawyers or funders), **receive adequate training on research integrity and Open Science.**

OPEN SCIENCE + RESEARCH INTEGRITY ARE COMPLEMENTARY TOWARDS EXCELLENT RESEARCH AND MORE SOCIETAL IMPACT
KEYWORD: TRANSPARENCY

Library Element | Report

SWG OSI Guideline Report on Research Integrity and Ope Science

Uploaded by RRI Tools on January 26, 2022

2021

9. **Promote cooperation between Open Science and Research Integrity offices at a national and institutional levels.** This is essential to develop training and materials that contribute to supporting researchers in practicing open science and ensure that high standards of research integrity are complied with. It would also help ensuring that fast pace developments in the area of Open Science are taken into account and appropriately reflected in codes of conduct for Research Integrity.
10. **Publicize information and enhance visibility about main Open Science and Research Integrity policies/documents/guidelines at a national and institutional level**, notably through websites that could be considered as general knowledge hubs in this regard.

KEYWORD=TRANSPARENCY/ RESPONSIBILITY

[Responsible con

Open and Responsible Research

Roles and Responsibilities for Data Stewards

2021

LOUISE BEZUIDENHOUT

Responsible Conduct of Research

- Research misconduct (fabrication, falsification, plagiarism) is a familiar topic for most researchers
- Responsible research extends beyond research misconduct to many other areas of responsibility
- Areas of responsibility reflect multiple roles that researchers play in academic environments
- Responsible Conduct of Research (RCR) is a framework that brings together these different areas of responsibility

https://www.nap.edu/catalog/12192/on-being-a-scientist-a-guide-to-responsible-conduct-in

6

Openness as an Extension of Responsibility

Open Lab Books: Transparency in research practices
Sharing and openness: enhance transmission of values

Open Peer Review: Transparency in peer review leads to better dialogue and collegial behaviour

Open Access: Improves availability of research outputs
Open publishing: leads to improved citations, credit and collaboration

Open Data and Open Methodologies: Improve transparency and reproducibility of research

Open Science Tools: Improve collaboration

[Integrity?]

DORA

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RESOURCE

Webinar March 24, 2021

Advancing science or advancing careers? Researchers' opinions on success indicators

2. Interviews and focus groups

1. What is research **SUCCESS?** ← 2. What threatens research **INTEGRITY?**

Current research assessments

…overvalue **outputs** →	ignores research **process**
…expect **exceptional** output →	discourage **realism**
…look at researchers **individually** →	discourage **collaboration**
…are based on **competition** →	discourage **openness** and **collegiality**

We know there are core problems with research systems but approaches for integrity tend to focus on researchers

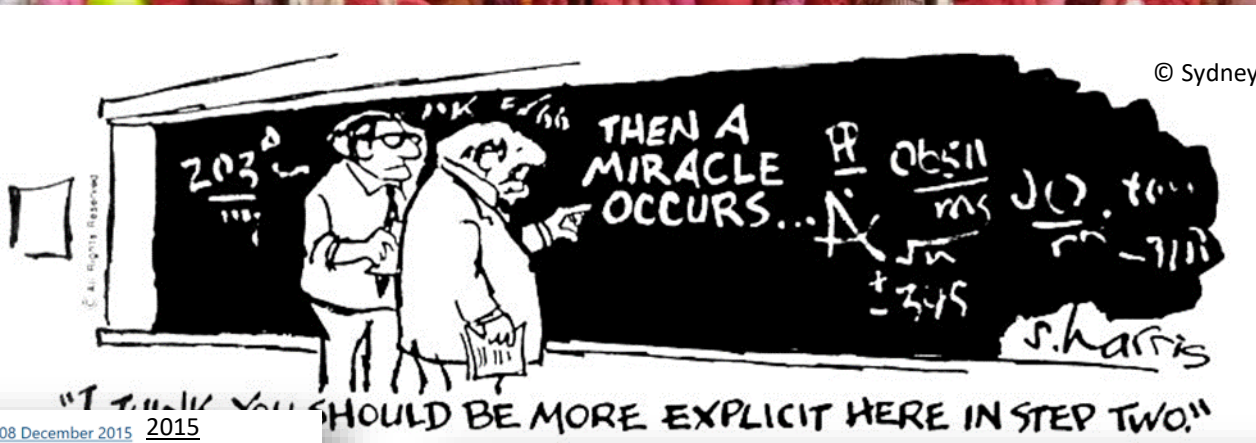
The way in which we measure success is problematic and could even lead to integrity issues

Indicators used to advance research careers are misaligned with indicators needed to advance science

THE RESEARCHER IS NOT THE FOCUS

RESEARCH CAREERS INDICATORS MISALIGNED WITH RESEARCH ADVANCEMENT

[selfis e]



Comment | Open Access | Published: 08 December 2015 2015

Five selfish reasons to work reproducibly

Florian Markowetz

Genome Biology **16**, Article number: 274 (2015) | Cite this article

18k Accesses | **38** Citations | **456** Altmetric | Metrics

Reason number 1: reproducibility helps to avoid disaster

"How bright promise in cancer testing fell apart" titled a *The New York Times* article published in summer 2011 [1] highlighting the work of Keith Baggerly and Kevin Coombes, two biostatisticians at M.D. Anderson Cancer Center. Baggerly and Coombes had exposed lethal data analysis problems in a series of high-impact papers by breast cancer researchers from Duke University [2].

Reason number 2: reproducibility makes it easier to write papers

Transparency in your analysis makes writing papers much easier. For example, in a dynamic document (Box 1) all results automatically update when the data ar
confident your numbers, figures and tables are up-to-date. Additio
are more engaging, more eyes can look over them and it is much ea

Reason number 3: reproducibility helps reviewers see it your way

Most of us like to moan about peer review. One of the complaints I hear most often is: the reviewers didn't even read the paper and had no idea what we were really doing.

This starkly contrasts with my experience during the review process of a recent paper [4], for
d well-documented code easily accessible to the reviewers.
a slight change to some analyses, and because he had access to
directly try out his ideas on our data and see how the results
pletely on board, the only thing left to discuss was the best
how a constructive review should be. And it would have been
nt and reproducible presentation of our analyses.

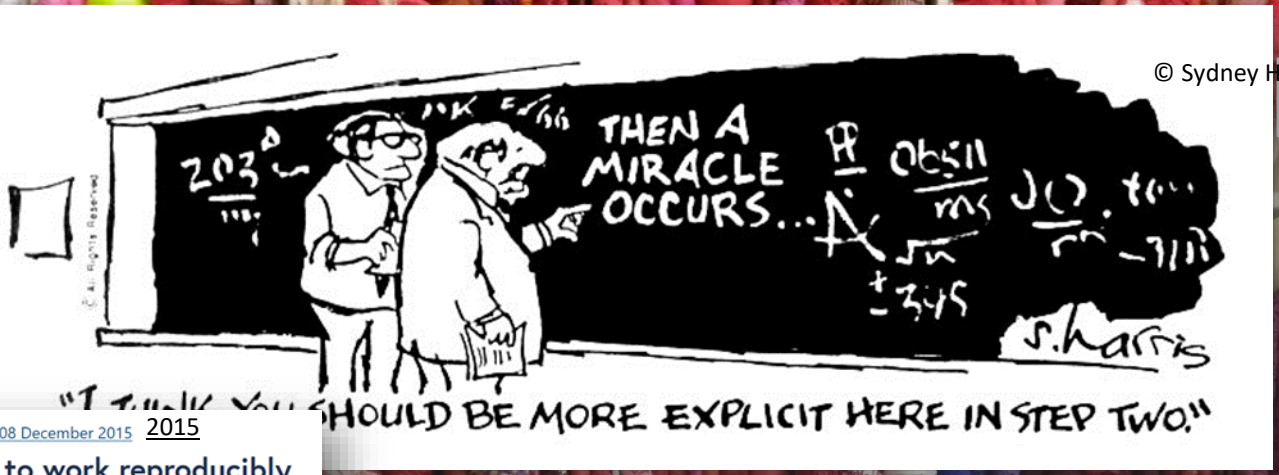
Reason number 5: reproducibility helps to build your reputation

For several papers, we have made our data, code and analyses available as an Experiment Package on Bioconductor [5]. When I came up for tenure, I cited all of these packages as research output of my lab. Generally, making your analyses available in this way will help you

Reason number 4: reproducibility enables continuity of your work

I would be surprised if you hadn't heard the following remarks before, maybe you have even said them yourself: "I am so busy, I can't remember all the details of all my projects" or "I did this analysis 6 months ago. Of course I can't remember all the details after such a long time"

[selfis e]



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What's holding you back?

Have I convinced you? Maybe not. Here is a collection of responses I sometimes get to my insistence on reproducible research (as well as my answers to them):

"*It's only the result that matters*!" You are wrong.

"*I'd rather do real science than tidy up my data*". If you don't work reproducibly, you are not doing science at all [7].

"*Mind your own business! I document my data the way I want!*" Yes, please do! There are many ways to work reproducibly [8] and you can pick whatever suits you best.

"*Excel works just fine. I don't need any fancy R or Python or whatever*". The tool you mention might work well if lots of manual curation is needed, but as soon as you do data analysis, less clicking and more scripting are the way to go. Imagine you have to do a simple analysis such as a regression plot 5 times (10 times, 20 times) and compare doing it by hand 5 times (10 times, 20 times) to writing a simple loop to do it for you. Now imagine having to do it again 3 weeks later because the data have slightly changed. R and Python are clearly the way to go.

Open Science and reproducibility

SHARE OPEN METHODS
FULLY DOCUMENT
SHARE DATA

PLOS BLOGS

The Official PLOS Blog

2022

About This Blog Contact Browse al

5 Open Science practices that improve reproducibility & support trust in science

July 12, 2022 / PLOS / Open Access Open Data Open Science Preregistration

1. Share Open Methods

Reproducibility is in the details. It's difficult to reproduce results—much less adapt a methodology for reuse—based on the information in a research article alone. Whether your methods include protocols, code, or something else, making them accessible inspires trust, facilitates reuse, and extends the life of the work.

2. Fully document and report materials

Materials are just as important to reproducibility as the procedures, protocols, and analytical tools used in conducting a study. From human specimens to microbes, the specific identity and provenance of samples can profoundly impact outcomes. In the l sciences, the MDAR checklist provides researchers with a framework for capturing an reporting these details.

3. Post Open Data in a pub

Open data provides the detai

4. Publish complementary or "scooped" research

When different research groups achieve similar results around the same time, it reinforces the validity of both studies. That makes both investigations well worth

ublish replication and validation studies

rs who take the time to validate, replicate, and reanalyze previous a valuable service—one which can underscore the rigor of the dd nuance and deepen understanding, or help to correct the scientific

INARS ON OPEN SCIENCE

tional course open to everyone, focused on Master nts covering open science topics and practices.

SAVE THE DATE

toCoffee" will be held on June 15th, 3:30 pm (CEST), the event will be online, and "A manifesto for reproducible science" by Munafò et al., 2017 will be discussed.

RN IT Italian Reproducibility Network

https://www.itrn.org/

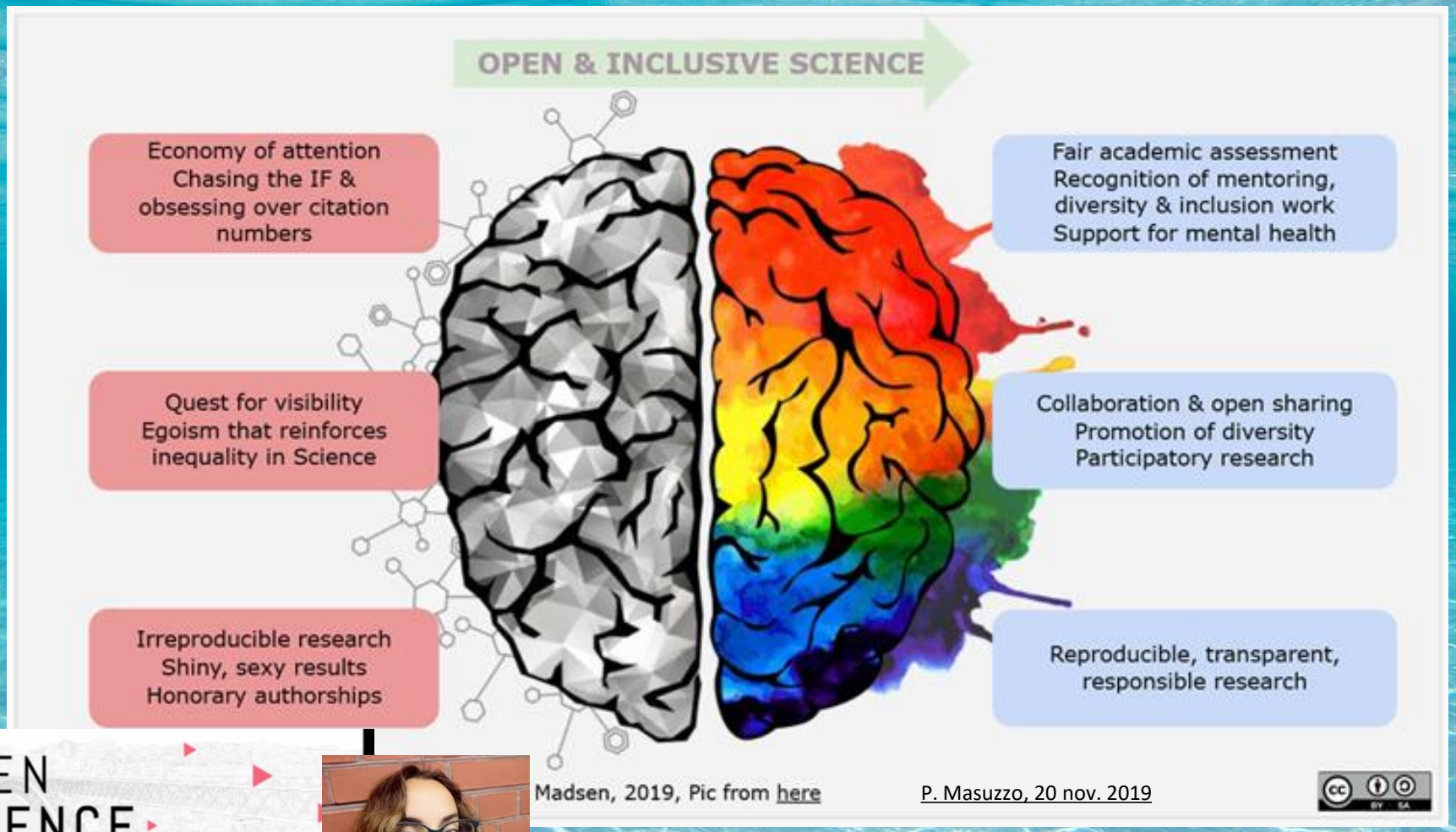
ITRN OPEN RESEARCH SURVEY

We ask you for a few minutes of your time to answer some questions about the use of Open Research practices in your research. This is the link to participate: ***RN survey***

Your responses will provide a provisional benchmark of where we are, and data will be used to shape future ITRN initiatives around Open Research.Thank you for your valuable

ITALIAN REPRODUCIBILITY NETWORK

Open and inclusive science



P. Masuzzo, Keynote, Sept. 2019

Open Science

ARTICLES? ALSO DATA, CODE, PROTOCOLS…

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 PEOPLE…

TELL IT LIKE IT IS: TAKE BACK YOUR RIGHT TO BE WRONG, REDEFINE «FAILURE», FOCUS FROM OUTPUTS TO PRACTICE

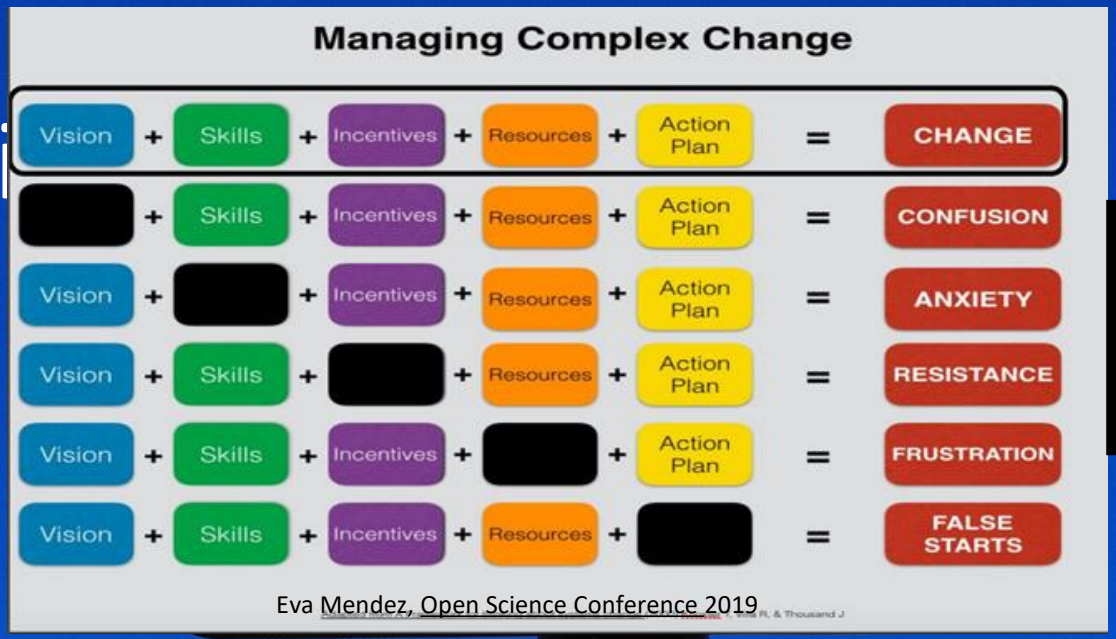
...in a nutshell...

It was really helpful to have in mind there is an alternative way [Open Science] that gives us the chance **of being treated with dignity and truly focus on the essence of our work**

[Petra, PhD, May 2020]

Going Open

[Transi



Eva Mendez, Open Science Conference 2019

YOU NEED A COHERENT VISION

A ROADMAP TO CHANGE

Open Science and its role in universities:

A roadmap for cultural change

2018

L E
R U

Implementing Open Science

Dec.20, 2020

FROM «RECOMMENDATION» TO «PRACTICAL COMMITMENTS FOR IMPLEMENTATION»

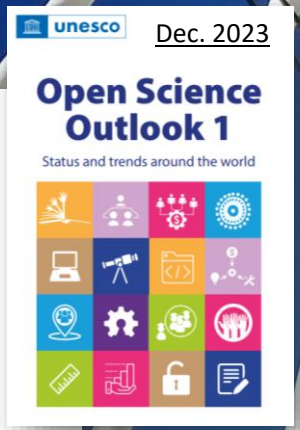
This specific mandate implied a shift from 'Recommendation Mode' to 'Implementation Mode', through PCIs: Practical Commitments for Implementation at stakeholder level. A PCI is a

June 4, 2020

Progress on Open Science: Towards a Shared Research Knowledge System

Final Report of the Open Science Policy Platform

What do you need to make Open Science «the new normal»

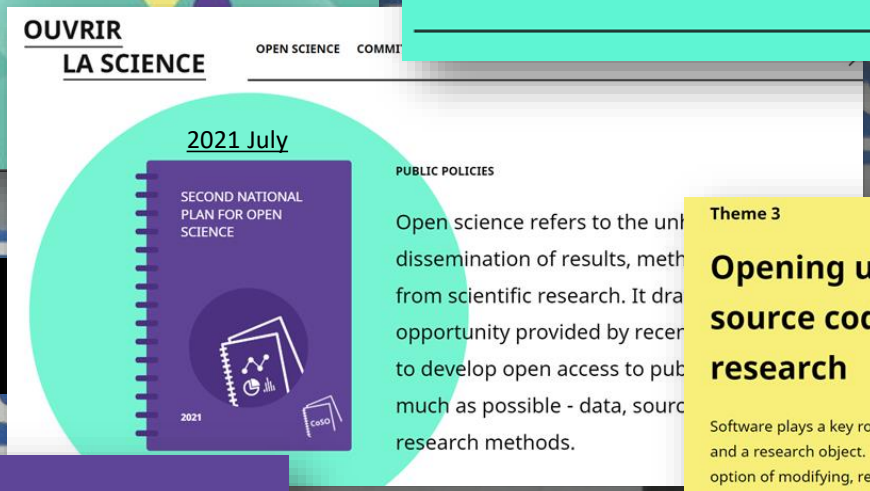


https://zenodo.org/record/34079#.WOOwY2fOPIU

http://julkaisut.va

Francia - National Plan, July 2018

«Making open science practices sustainable requires changes in the evaluation system.»



WITH NATIONAL PLANS
AND FUNDING

Theme 1

Generalising open access to publications

The practice of providing open access to scientific publications should now be inescapable, wether this is done by initially publishing the text as open access or by placi
the Research Prog
by 2030.

Theme 2

Structuring, sharing and opening up research data

Our aim is to ensure that the data produced by French public research be progressively structured to conform to the FAIR data principles (Findable, Accessible, Interoperable, Reusable), be safely preserved and, wherever possible, open to all.

Theme 3

Opening up and promoting source code produced by research

Software plays a key role in scientific research, and it can be a tool, a result, and a research object. Making software source code available, with the option of modifying, reusing and disseminating them, is a major requirement to ensure the reproducibility of scientifics findings and to support the creation and sharing knowledge, in keeping with the open

Theme 4

Transforming practices to make open science the default principle

Open science should become the default principle for researchers and it should constitute a criteria of excellence in research, as is now the case in the Horizon Europe Programme. For this, the higher education and research ecosystem must be transformed to align the incentives, strengthen capacity and increase recognition of the efforts made.

NL OS national plan 2022

key lines of action

2022

FAIR DATA
- Build a professional community of data stewards
- Incentivise FAIR digital research outputs and metadata
- Enable sustainable interoperable networks of FAIR data services
- Develop a national FAIR data trust framework with societal stakeholders

OPEN ACCESS
- Make all scholarly output Open Access
- Enable full Open Access without additional costs
- Maintain high quality and research integrity
- Get control over ownership, public values, academic and digital sovereignty
- Enable novel ways of recognition & rewards
- Grow towards less dependency on publishers

CITIZEN SCIENCE
- Raise awareness
- Consolidate and further develop best practice
- Build capacity
- Enhance transdisciplinary collaboration
- Develop Supporting infrastructures

vision

2030

OPEN SCIENCE

Better science

Connection science and society

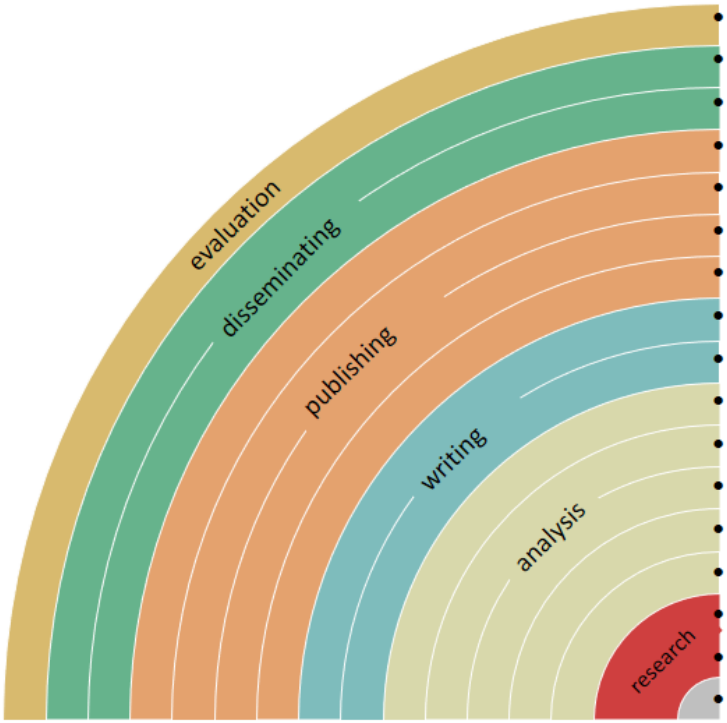
1. Scientific knowledge freely available, accessible, and reusable for everyone
2. Strong link with societal challenges and sustainable development goals
3. Transparent, diverse and transdisciplinary scientific knowledge-sharing
4. Distinction between data and publications is fluid
5. Novel digital services based on academic sovereignty
6. Protected sharing according to FAIR principles with enriched meta data


SUSTAINABLE DEVELOPMENT GOALS
17 GOALS TO TRANSFORM OUR WORLD
1 NO POVERTY
2 ZERO HUNGER
3 GOOD HEALTH AND WELL-BEING
4 QUALITY EDUCATION
5 GENDER EQUALITY
6 CLEAN WATER AND SANITATION
7 AFFORDABLE AND CLEAN ENERGY
8 DECENT WORK AND ECONOMIC GROWTH
9 INDUSTRY, INNOVATION AND INFRASTRUCTURE
10 REDUCED INEQUALITIES
11 SUSTAINABLE CITIES AND COMMUNITIES
12 RESPONSIBLE CONSUMPTION AND PRODUCTION
13 CLIMATE ACTION
14 LIFE BELOW WATER
15 LIFE ON LAND
16 PEACE, JUSTICE AND STRONG INSTITUTIONS
17 PARTNERSHIPS FOR THE GOALS
2019
SUSTAINABLE DEVELOPMENT GOALS
Enhanced Access to Publicly Funded Data for Science, Technology and Innovation
OECD
OECD data
Feb.4, 2021
eua EUROPEAN UNIVERSITY ASSOCIATION
Universities without walls
A vision for 2030
UNESCO
2021
IN BRIEF
WHAT WE DO
WHERE WE WORK
Open Science
Oct. 27, 2020
Acknowledging that Open Science should not only foster enhanced sharing of scientific knowledge solely among scientific communities but also promote inclusion of scholarly knowledge from traditionally underrepresented or excluded groups (such as women, minorities, Indigenous scholars, scholars from less-advantaged countries and low-resource languages) and contribute to reducing inequalities in access to scientific development, infrastructures and capabilities among different countries and regions,¶
Appeal for Open Science UNESCO, WHO, HCHR,
International Science Council
ABOUT US
WHAT WE DO
OUR MEMBERS
ISC
UNLEASHING SCIENCE
THE WHITE HOUSE
Aug. 26, 2022
US FEDERAL RESEARCH OPEN BY DEFAULT
BRIEFING ROOM
OSTP Issues Guidance to Make Federally Funded Research Freely
Business-as-usual approaches to science and science funding are incommensurate with the timeline for achieving the SDGs or that of addressing our current planetary crises in a humane, dignified and equitable manner. A major qualitative and quantitative step-change is needed in science to support critical societal transformations toward more sustainable, equitable and resilient future.
"When I led the Cancer Moonshot as Vice President, one of the biggest issues I talked about was how federally funded cancer researchers were not sharing their results with their peers or the public... We made federally funded cancer research more available to any patient, to any doctor, anywhere for free. And today as President, we're making sure that transparency applies to all federally funded science, beyond just cancer."
- President Joe Biden
September 12, 2022
#OAintheUSA
Sept. 12 2022
In his remarks just now on the Cancer Moonshot, @POTUS raised research sharing as "one of the biggest issues" necessary to speed discovery and highlighted his administration's work to ensure "transparency applies to all federally funded science." #OAintheUSA

Oper

ANY COMPONENT OF THIS RAINBOW SHOULD COUNT AS «RESEARCH OUTPUT»

YOU CAN MAKE YOUR WORKFLOW MORE OPEN BY…



- adding alternative evaluation, e.g. with. altmetrics
- communicating through social media, e.g Twitter
- sharing posters & presentations, e.g. at FigShare
- using open licenses, e.g. Creative Commons BY
- self archiving in archives or publishing on Open journals
- using open peer review, e.g. at PubPeer o F1000
- sharing preprints, e.g. at OSFpreprint, arXiv o biorXiv
- using actionable formats, e.g. with Jupyter o CoCalc
- open XML-drafting, e.g. at Overleaf o Authorea
- sharing protocols & workflows, e.g. at Protocols.io
- sharing notebooks, e.g. at OpenLabNotebook
- sharing code, e.g. at GitHub licensing GNU/MIT
- sharing data, e.g. at Dryad, Zenodo o Dataverse
- pre-registering, e.g. at OSFregistry o AsPredicted
- commenting openly, e.g. with Hypothes.is o Pund.it
- using shared reference libraries, e.g. with Zotero
- sharing (grant) proposals, e.g. with RIO Journal

Interactive rainbow 2021

TECHNICALLY, IT'S THERE.
WHAT IS STILL NEEDED IS THE CULTURAL SHIFT…
AND YOUR FIRST STEP!


YES, BUT…
WE ARE STILL
EVALUATED BY
IMPACT FACTOR

MATRIX NOT METRICS

CAREER DIVERSIFICATION
RESPECT OF INDIVIDUALS AND TEAM WORK
QUALITY
OPEN SCIENCE
LEADERSHIP

THE WORLD IS CHANGING, OUT THERE

YOU EVALUATE WHAT YOU VALUE

ACKNOWLEDGE DIVERSITY

OS-CAM, the Career Assessment Matrix

Research output
Research Process
Service & Leadership
Research Impact
Teaching and supervision
Professional Experience

2022

HANDBOOK ON
Research Assessment in the Social Sciences
Edited by
Tim C.E. Engels & Emanuel Kulczycki
Elgar

2017
Evaluation of Research Careers fully acknowledging Open Science Practices
Rewards, incentives and/or recognition for researchers practicing Open Science

Room for everyone's talent
towards a new balance in the recognition and rewards of academics
2020

START
- Not with what others' value (external drivers)
- Not with available data sources (the 'Streetlight Effect')

CONTEXT considerations
- WHO are you evaluating? (Entity size)
- WHY are you evaluating?
- Do you need to evaluate at all?

OPTIONS for ev
- Consider bo
- Be careful w
- Evaluate wi

PROBE deeply
- WHO might your evaluation approach discriminate against?
- HOW might your evaluation approach be gamed?
- WHAT might the unintended consequences be?
- Does the cost outweigh the benefit?

EVALUATE your evaluation
- Did your evaluation achieve its aims?
- Was it formative as well as summative?

1 Start with what you value
2 Context considerations
3 Options for evaluating
4 Probe deeply
5 Evaluate

HuMetricsHSS
HUMANE METRICS INITIATIVE
VALUES FRAMEWORK
Live your values. Transform the academy.

EQUITY
Accessibility | Equitable Access | Inclusivity | Public Good | Social Justice

OPENNESS
Accountability | Candor | Learning From Failure | Open Process | Open Source | Transparency

COLLEGIALITY
Ethical Imagination | Kindness | Generosity | Empathy | Self Care | Respect

SOUNDNESS
Knowledge Advancement | Creativity | Integrity | Intentionality | Originality | Boundary Pushing | Reproducibility

COMMUNITY
Attunement | Connection | Engagement | Holism | Leadership | Preservation

humetricshss.org

DORA
The Declaration Signers Case Studies Resources Blog
Reimagining academic assessm
stories of innovation and chan
Case studies of universities and national consortia highlight key elements of institutional change to improve academic career as

Tampere University
FINLAND
University College London
UNITED KIN
Univer
CHINA
Ghent
BELGIUM
Univer
NORWAY

STEPS FOR REALISING THE VISION FOR FAIReR ASSESSMENTS 2021

1 MAKE IT MEANINGFUL
2 MAKE IT POSSIBLE
3 MAKE IT REWARDING

FAIReR ACADEMIC ASSESSMENTS

Recognise and value diversity and disciplinary differences of academic work
Diversity needs to be represented in information supporting assessment
Diversity of outputs, activities and missions need to be included among assessment criteria

EXAMPLE RESEARCH DATA

Identify practices (e.g.):
- Sharing research data
- Creating FAIR data
- Using open data
- FAIR expertise

Develop eInfrastructures for:
- Publishing and sharing research data
- Integrating metadata and indicators for research data practices

Reward researchers for (e.g.):
- Sharing datasets
- FAIR datasets
- Data citations
- Data stewardship

TRIPLE: Team Spirit as the default approach to working in academia
2021

IMPACT
PROFESSIONAL PERFORMANCE
RESEARCH
EDUCATION
LEADERSHIP
TEAM

...chang

V.1.1 July 2021

Horizon Europe

Programme Guide

Finally, in **part A of their proposals**, proposers are asked to list up to five relevant publications, widely used datasets or other achievements of consortium members that they consider significant for the action proposed. Open access is expected for publications, in particular journal articles, while datasets are expected to be FAIR and 'as open as possible, as closed as necessary'. If publications are not open access, proposers are strongly encouraged to deposit them retroactively in repositories and provide open access to them when possible. The significance of publications will not be evaluated on the basis of the Journal Impact Factor of the venue they are published in, but on the basis of a qualitative assessment provided by the proposers for each publication.

HORIZON EUROPE DOES NOT CONSIDER IMPACT FACTOR

nature

June 2021

Explore content ⌄ Journal i

nature › career news › article

DUTCH UNIVERSITIES ABANDON IMPACT FACTOR

CAREER NEWS | 25 June 2021

Impact factor abandoned by Dutch university in hiring and promotion decisions

Faculty and staff members at Utrecht University will be eva
open science.

Spain wants to change how it evaluates scientists—and end the 'dictatorship of papers'

Officials aim to use wider range of research outputs to assess researchers at public universities

DORA

About DORA ⌄ Mee

The Declaration Signers Case Studies Resources Blog Sig

RESOURCE

July 2021

European Research Council (ERC)

ERC ABANDONED IMPACT FACTOR

The number of peer reviewed publications and preprints that can be listed is limited to ten (five for Starting Grant applicants). While it is expected that the publications have a significant reach, applicants are explicitly asked not to include the Journal Impact Factor.

I believe in a research culture that recognises a diversity of contributions to science and society; that celebrates high quality and impactful research; and that values sharing, collaboration, integrity and engagement with society, transmitting knowledge from generation to generation.

Mariya Gabriel
Commissioner for Innovation, Research, Culture, Education and Youth

...TO BE SIGNED!!!

CoARA
https://coara.eu/

Coalition for Advancing Research Assessment

Our vision is that the assessment of research, researchers and research organisations recognises the diverse outputs, practices and activities that maximise the quality and impact of research. This requires basing assessment primarily on qualitative judgement, for which peer review is central, supported by responsible use of quantitative indicators.

Nov 2022

EUROPEAN COMMISSION INITIATIVE TOWARDS A REFORM OF RESEARCH ASSESSMENT (UNITO JOINED THE COALITION, AS WELL AS ANVUR)

- SIGNATURE OF THE AGREEMENT
- IN 1 YEAR SHOW A ROADMAP
- IN 5 YEARS SHOW THE EFFECTS

NEWS | 18 January 2022 | Brussels, Belgium | Research and Innovation

Process towards an agreement on reforming research assessment

EC process

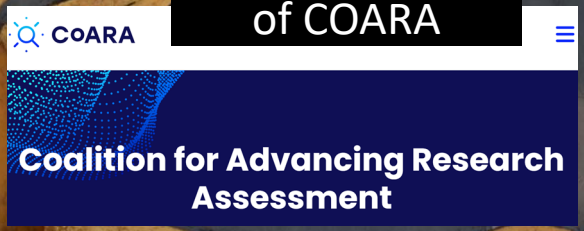
The Commission has called for organisations to express their interest in being part of a coalition on reforming research assessment.

COARA, the timeline

Nov. 2021
Scoping report

July 2022 Text of the Agreement

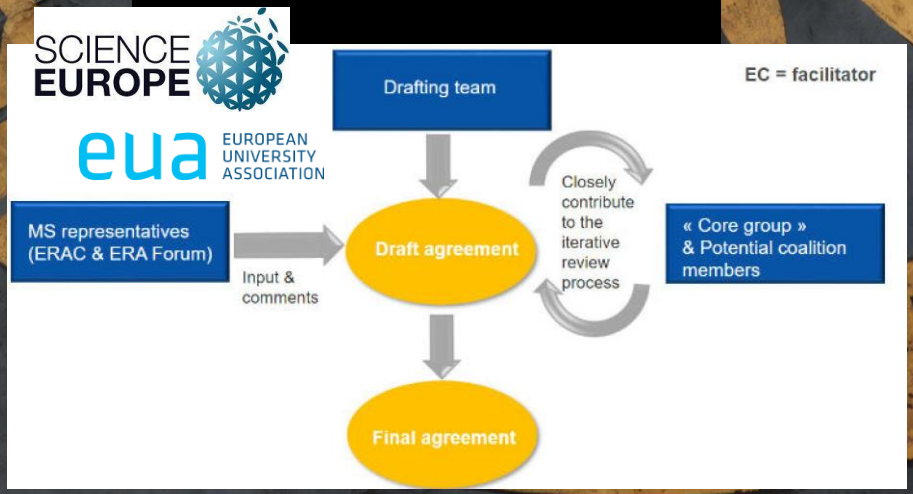
Sept. 2022
official launch
of COARA



2021 | 2022 Jan. | 2022 July | 2022 Sept. | 2022 Dec.

SURVEY/
BILATERAL
MEETINGS

COLLABORATIVE WRITING



STEERING BOARD ELECTED
DEC. 2

- 12/02/2022

Coalition for Advancing Research Assessment (CoARA) launched, Steering Board elected

COARA, the timeline

March 28, 2023

WORKING GROUPS AND NATIONAL CHAPTERS

CoARA

News > First Call for Working Groups and National Chapters

First Call for Working Groups and National Chapters

March 28, 2023

On 28 March 2023, CoARA launched a call to all Coalition members for proposals of Working Groups and National Chapters. This is the first time such a call is launched since the Coalition's inception in December 2022. This call is a significant step in the Coalition's action responding to the need to reform research assessment. Operating as 'communities of practice' under the principles of mutual learning and collaboration, the developed outputs of these Working Groups will support CoARA members in their implementation of the commitments agreed upon when joining

National Chapters

In addition, CoARA calls for proposals of National Chapters. National Chapters will contribute to CoARA's work by facilitating the exchange of knowledge, mutual learning and discussions on CoARA-relevant issues specific to different types of organisations of a given country. There is no limit as to the number of National Chapters that can be approved, however for now there cannot be more than one per country. Proposals for National Chapters will continuously be assessed on a monthly basis starting 6th of June 2023.

Compositions of Working Groups

Three types of Working Groups (interest, discipline and institutional communities) are aimed to be formed, with the objective to build upon what is already being done within the community and to add value. In addition, inclusivity is a major driver for the composition of the Working Groups, as they are expected to involve organisations of varying types and sizes, from different geographical areas, and participants of all career stages. Following a three staged approach, Expressions of Interest are submitted by April, 27, followed by a community discussion, cumulating in a full working group proposal by June, 6. All applicants submitting a working group proposal will be informed of the outcome of the selection process by 13 July 2023. A short evaluation report will also be provided.

Why / 1

- THE RESEARCH PROCESS IS CHANGING
- DATA INTENSIVE
- PUBLICATIONS ARE NO LONGER THE ONLY «OUTPUT»
- MORE COLLABORATION
- MORE INTERISCIPLINARITY
- NEEDS FOR REPRODUCIBILITY AND INTEGRITY

The research and innovation process is undergoing major evolutions, largely due to the digitalisation of the research and discovery process: the diversity of research tasks and required skills has increased, the volume of previous findings and datasets is often staggering, and desired outputs are no longer restricted to scholarly publications; sharing knowledge and tools, and openness to contributions from other stakeholders in the system (open collaboration) have become essential to efficiency and impact; and there is a growing need of multi-, inter-, and trans-disciplinary approaches and collaboration to tackle ever more complex scientific questions and societal challenges in collaboration with societal stakeholders. There is also a continuous need to make research outputs accessible and re-usable by other researchers and the whole of society and to ensure sound methodologies that increase the reliability and reproducibility (where applicable) of research outputs.

Why / 2 [distorting science]

- CURRENT INDICATORS (MOSTLY IMPACT FACTOR) ARE NO LONGER ALIGNED TO THIS NEW WAY OF DOING RESEARCH
- PUBLISH OR PERISH CULTURE COMES AT THE EXPENSE OF QUALITY, INTEGRITY, AND TRUST IN RESEARCH

These major evolutions are not aligned with the metrics that often dominate assessment: the number of publications and citations, and the quantity of publications in journals with high Journal Impact Factor (JIF). The race for publications – the so-called publish-or-perish culture – comes at the expense of quality, integrity, and trust in research. Also, using the JIF as a proxy for quality of research is shown to be inappropriate. Despite this, moving away from the use of JIF is non-trivial because it is easy to use and is engrained in academic culture, conferring prestige to authors and their institutions publishing in high JIF journals; whereas additional efforts may be required by alternatives such as more qualitative assessment methods.

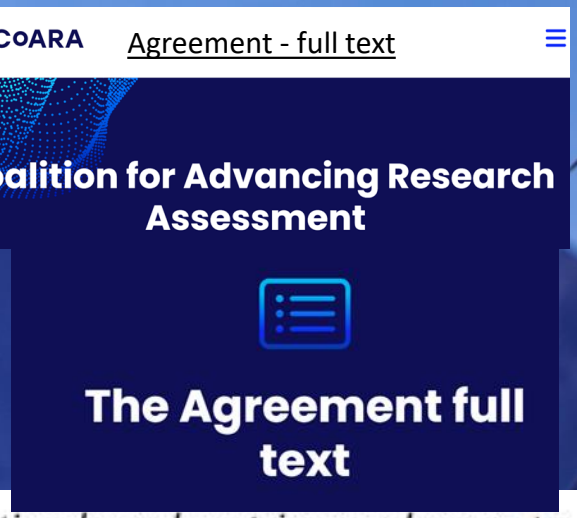
Why / 3

THE CURRENT SYSTEM RELYING ON JOURNALS

- DOES NOT RECOGNISE THE DIVERSITY OF CONTRIBUTIONS
- NEGATIVELY AFFECTS QUALITY AND INTEGRITY
- BOOSTERS PREDATORY PUBLISHING
- SUPPORT THE SUBSCRIPTION SYSTEM IN PRESTIGIOUS JOURNALS

[REMINDER: WE ARE TALKING PUBLIC MONEY]

- REDUCE INNOVATIVE IDEAS AS «RISKY»
- IT'S A WASTE OF TIME AND MONEY AS THEY DON'T PUBLISH NEGATIVE RESULTS



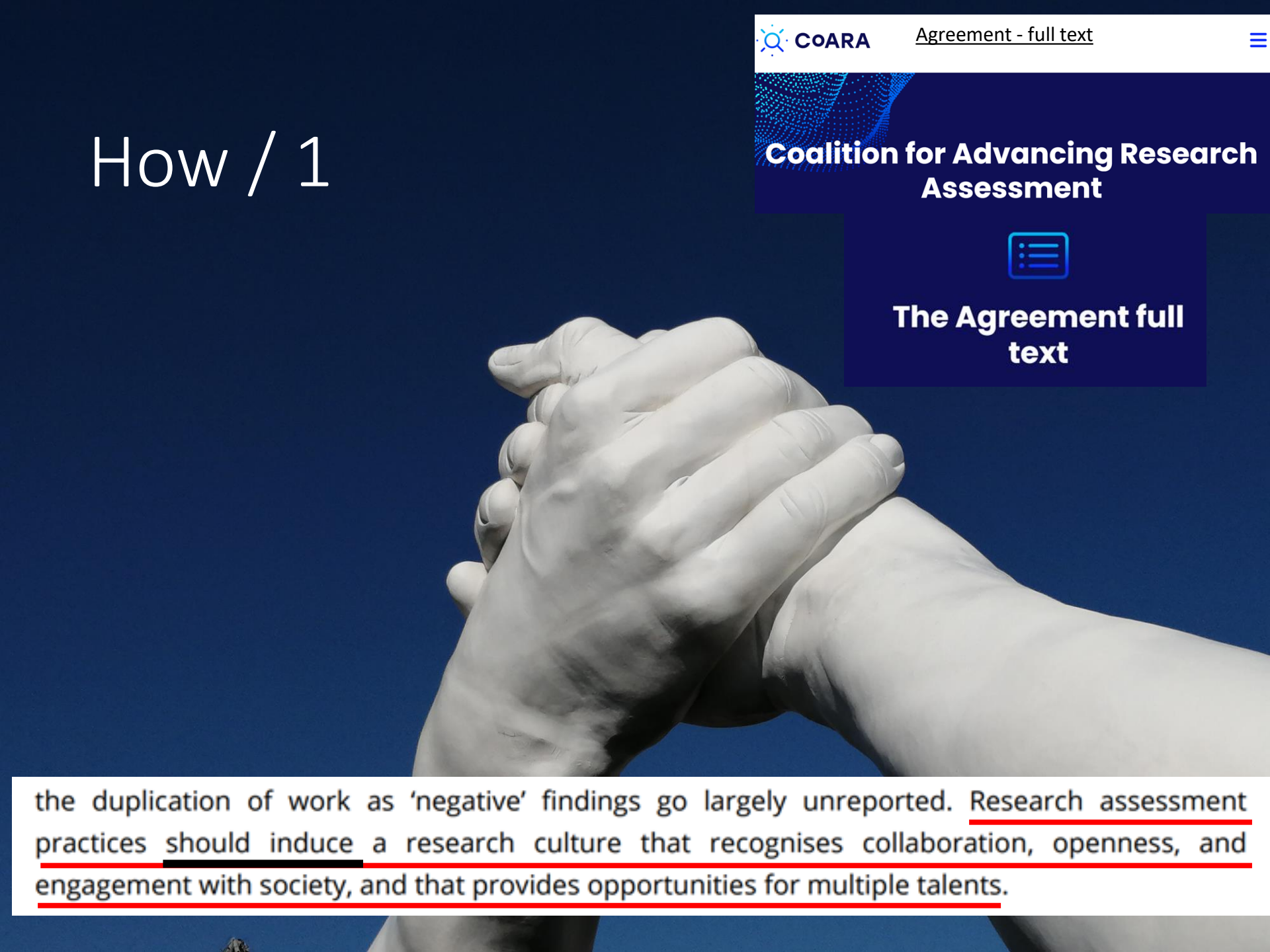
Assessment processes relying predominantly on journal- and publication-based metrics are known to result in a 'publish or perish' culture that falls short of recognising diverse approaches and could come at the expense of quality – The dominance of narrow journal- and publication-based metrics, which are often used inappropriately in research assessment, can be a hurdle to the recognition of diverse contributions and may negatively affect the quality and impact of research. For example, this dominance can: promote quantity and speed at the expense of quality and rigour; lead to the emergence of predatory journals and conferences; encourage publishing in paywalled journals because of their high impact factors, despite the availability of open access alternatives; lead to risk-aversity because taking risks may reduce the chances of publication; generate excessive attention to rankings that hinders collaboration; and waste efforts, time and resources through the duplication of work as 'negative' findings go largely unreported. Research assessment

How / 1

CoARA Agreement - full text

Coalition for Advancing Research Assessment

The Agreement full text



the duplication of work as 'negative' findings go largely unreported. Research assessment practices should induce a research culture that recognises collaboration, openness, and engagement with society, and that provides opportunities for multiple talents.

The pillars / 1

- COMPLY WITH ETHICS AND ITEGRITY RULES
- SAFEGUARD FREEDOM OF SCIENTIFIC RESEARCH

The Agreement full text

I. Base our actions on the following Principles:

Principles for overarching conditions

- Comply with ethics and integrity rules and practices, and ensure that ethics and integrity are the highest priority, never compromised by any counter-incentives. Verify before or during assessment that the highest standards of general and research- specific ethics and integrity are met. Value methodological rigour to guard against sources of bias, and promote extended forms of professional and scientific integrity, showing adherence to moral standards of conduct, and include behaviours such as early sharing of research data and results, building on the work of others, and subjecting oneself to critical external validation.
- Safeguard freedom of scientific research. By putting in place assessment frameworks that do not limit researchers in the questions they ask, in their research implementation, methods or theories. By limiting the assessment frameworks to only those necessary, as assessment must be useful for researchers, institutions and funders.

Agreement

The pillars / 2

- RESPECT THE AUTONOMY OF RESEARCH ORGANISATIONS
- ENSURE INDEPENDENCE AND TRANSPARENCY OF THE DATA, INFRASTRUCTURE AND CRITERIA

The Agreement full text

- Respect the autonomy of research organisations. By safeguarding the independence of research performing organisations in the evaluation of their researchers while implementing the present principles, yet striving to prevent contradictions between the assessment of research, researchers and institutions, and between institutions, to avoid fragmentation of the research and innovation landscape and to enable the mobility of researchers.
- Ensure independence and transparency of the data, infrastructure and criteria necessary for research assessment and for determining research impacts; in particular by clear and transparent data collection, algorithms and indicators, by ensuring control and ownership by the research community over critical infrastructures and tools, and by allowing those assessed to have access to the data, analyses and criteria used.

Agreement

The principles / 1

- FOCUS ON QUALITY
- QUALITY MEANS TRANSPARENCY, REPRODUCIBILITY, REUSE
- …HENCE A STRONG LINK TO OPEN SCIENCE, CO-CREATION, OPEN COLLABORATION
- STRIVE FOR (AND MEASURE) A REAL IMPACT ON SOCIETY

The Agreement full text

Principles for assessment criteria and processes

Agreement

Quality and impact

- Focus research assessment criteria on quality. Reward the originality of ideas, the professional research conduct, and results beyond the state-of-the-art. Reward a variety of research missions, ranging from basic and frontier research to applied research. Quality implies that research is carried out through transparent research processes and methodologies and through research management allowing systematic re-use of previous results. Openness of research, and results that are verifiable and reproducible where applicable, strongly contribute to quality. Openness corresponds to early knowledge and data sharing, as well as open collaboration including societal engagement where appropriate. Assessment should rely on qualitative judgement for which peer review is central, supported by responsibly used quantitative indicators where appropriate.
- Recognise the contributions that advance knowledge and the (potential) impact of research results. Impact of research results implies effects of a scientific, technological, economic and/or societal nature that may develop in the short, medium or long-term, and that vary

The principles / 2

- RECONGIZE THE DIVERSITY OF RESEARCH ACTIVITIES AND OUTPUTS
- REWARD EARLY SHARING AND OPEN COLLABORATION
- CONSIDER THE FULL RANGE OF TASKS (PEER REVIEW, MENTORSHIP, LEADERSHIP…)
- CONSIDER ALL THE OUTPUTS (NOT ONLY PUBLICATIONS)
- REWARD INTERACTION WITH SOCIETY

The Agreement full text

Diversity, inclusiveness and collaboration

Agreement

- Recognise the diversity of research activities and practices, with a diversity of outputs, and reward early sharing and open collaboration. Consider tasks like peer review, training, mentoring and supervision of Ph.D candidates, leadership roles, and, as appropriate, science communication and interaction with society, entrepreneurship, knowledge valorisation, and industry-academia cooperation. Consider also the full range of research outputs, such as scientific publications, data, software, models, methods, theories, algorithms, protocols, workflows, exhibitions, strategies, policy contributions, etc., and reward research behaviour underpinning open science practices such as early knowledge and data sharing as well as open collaboration within science and collaboration with societal actors where appropriate. Recognise that researchers should not excel in all types of tasks and provide for a framework that allows researchers to contribute to the definition of their research goals and aspirations.

The principles / 3

- RESPECT THE VARITEY OF DISCIPLINES
- VALORISE THE DIVERSITY ON ROLES
- ACKNOWLEDGE MULTI AND TRANS DISCIPLINARITY
- VALUE OPEN SCIENCE SKILLS AND TEAM SKILLS
- ENSURE GENDER EQUALITY AND INCLUSIVENESS

The Agreement full text

- Use assessment criteria and processes that respect the variety of scientific disciplines, research types (e.g. basic and frontier research vs. applied research), as well as research career stages (e.g. early career researchers vs. senior researchers), and that acknowledge multi-, inter-, and trans-disciplinary as well as inter-sectoral approaches, when applicable. Research assessment should be conducted commensurately to the specific nature of scientific disciplines, research missions or other scientific endeavours.
- Acknowledge and valorise the diversity in research roles and careers, including roles outside academia. Value the skills (including open science skills), competences and merits of individual researchers, but also recognise team science and collaboration.
- Ensure gender equality, equal opportunities and inclusiveness. Consider gender balance, the gender dimension, and take into account diversity in the broader sense (e.g. racial or ethnic origin, sexual orientation, socio-economic, disability) in research teams at all levels, and in the content of research and innovation.

Agreement

How / 2

The Agreement full text

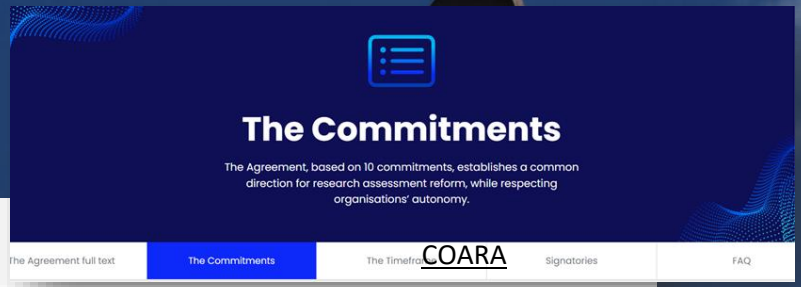
- ENGAGE THOSE BEING ASSESSED
- SHARE BEST PRACTICES
- COORDINATE

Annex 3 – Reform journey: a suggested process for achieving the Commitments

Agreement

1	**Allocate resources,** whether in terms of capacity or budget, to actively engage in the reform journey
2	**Communicate your intention to reform**, explain how you have started the process of reviewing or developing criteria, tools and processes in line with the core commitments
3	**Evaluate current assessment practices** in terms of alignment with the Principles and Commitments, consider also what currently works well and how this can be retained in parallel to any new practice - *Re-evaluate at fixed intervals, whenever broad reforms to*
4	**Engage those being assessed in the development and design of assessment criteria and processes**, work with researchers to enable consideration of differences between disciplines and career levels
5	**Develop existing and design new assessment criteria, tools, and processes** with assessors and those that are assessed; consider the diversity of contributions including: diverse outputs beyond journal publications and in different languages; diverse practices including those that contribute to robustness, openness, transparency, and inclusiveness of research and the research process including peer review, teamwork and collaboration; and diverse activities including teaching, leadership, supervision, training, and mentoring, according to the nature of each research discipline
6	**Interrogate developed and new approaches** by working with assessors and those that are assessed (e.g. who might new approaches discriminate against; how might they be gamed; what are the potential unintended consequences)
7	**Implement developed and new assessment criteria, tools, and processes** according to the Principles and Commitments; consider awareness raising, rewards, policies, training, infrastructure, and capacity building and include data collection to support monitoring, evaluation and mutual learning
8	**Evaluate developed and new assessment criteria, tools, and processes**
9	**Share data / information, participate in mutual learning within and beyond the Coalition**, supported by mechanisms developed by the Coalition
10	**Coordinate with other organisations at national and international level, and promote international coordination and harmonisation**
11	**Continue to evolve assessment criteria, tools, and processes based on learning from own evaluations and those of others**

Commitments / 1



COARA

The Commitments

1. Recognise the diversity of contributions to, and careers in, research in accordance with the needs and nature of the research

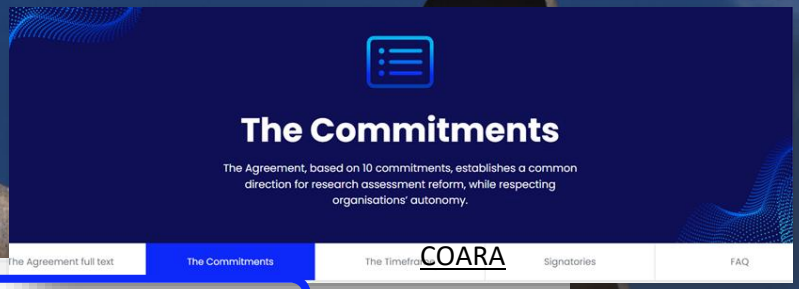
2. Base research assessment primarily on qualitative evaluation for which peer review is central, supported by responsible use of quantitative indicators

3. Abandon inappropriate uses in research assessment of journal- and publication-based metrics, in particular inappropriate uses of Journal Impact Factor (JIF) and h-index

4. Avoid the use of rankings of research organisations in research assessment

5. Commit resources to reforming research assessment as is needed to achieve the organisational changes committed to

Commitments / 2



COARA

6. Review and develop research assessment criteria, tools and processes

7. Raise awareness of research assessment reform and provide transparent communication, guidance, and training on assessment criteria and processes as well as their use

8. Exchange practices and experiences to enable mutual learning within and beyond the Coalition

9. Communicate progress made on adherence to the Principles and implementation of the Commitments

10. Evaluate practices, criteria and tools based on solid evidence and the state-of-the-art in research on research, and make data openly available for evidence gathering and research

Commitments / 3

The Timeframe

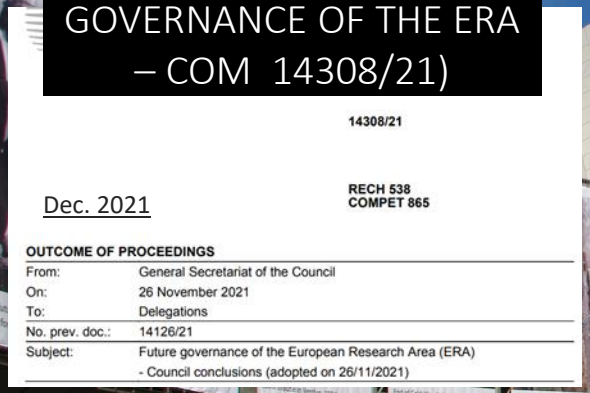
- The signatories of this Agreement agree to share with each other and with their community how their organisation has started the process of reviewing or developing criteria, tools and processes in line with the core Commitments and according to an action plan with defined milestones, **by the end of 2023 or within one year of signing the Agreement**.
- Signatories of this Agreement agree to regularly demonstrate progress towards reviewing, developing and evaluating criteria, tools and processes that fulfil the core Commitments, with a touch point **at end of 2027 or within five years of signing the Agreement**, by which time they will have worked through at least one cycle of review and development of their assessment criteria, tools and processes.

Signatories that are not assessing research projects, researchers, research units or research performing organisations commit to contribute to the reform and share progress with each other and the community respecting the same timeframe.

Timeframe

[there are legal basis]

A REFORM OF RESEARCH ASSESSEMENT IS A NEED (COUNCIL CONCLUSIONS ON THE FUTURE GOVERNANCE OF THE ERA – COM 14308/21)



14308/21

RECH 538
COMPET 865

Dec. 2021

OUTCOME OF PROCEEDINGS

From:	General Secretariat of the Council
On:	26 November 2021
To:	Delegations
No. prev. doc.:	14126/21
Subject:	Future governance of the European Research Area (ERA) - Council conclusions (adopted on 26/11/2021)

RESEARCH ASSESSMENT HAS TO CHANGE (RECOMMENDATION 790/2018)

2018

EUROPEAN COMMISSION

Brussels, 25.4.2018
C(2018) 2375 final

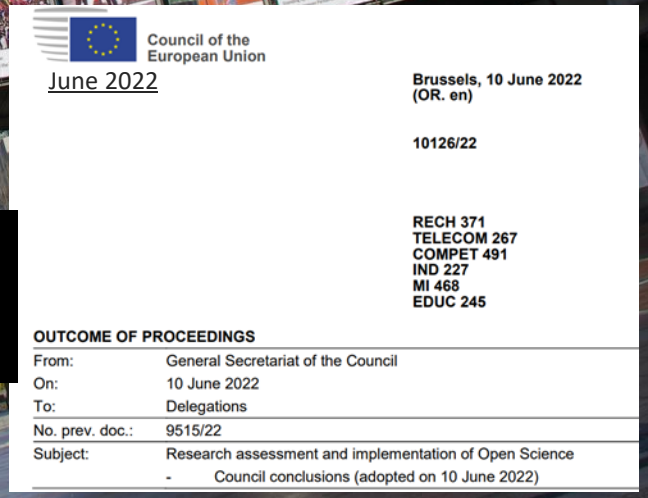
COMMISSION RECOMMENDATION

of 25.4.2018

on access to and preservation of scientific information

Open data directive

COUNCIL CONCLUSIONS ON RESEARCH ASSESSEMENT (10126/2022 JUNE)



Council of the European Union

June 2022

Brussels, 10 June 2022
(OR. en)

10126/22

RECH 371
TELECOM 267
COMPET 491
IND 227
MI 468
EDUC 245

OUTCOME OF PROCEEDINGS

From:	General Secretariat of the Council
On:	10 June 2022
To:	Delegations
No. prev. doc.:	9515/22
Subject:	Research assessment and implementation of Open Science - Council conclusions (adopted on 10 June 2022)

[ERA policy agenda]

FIRST 3 ACTIONS OF THE NEW EUROPEAN RESEA
AREA (ERA) ARE ABOUT OPEN SCIENCE

Priority Area: Deepening a truly functioning internal market for knowledge

ERA Actions	Outcomes
1. Enable the open sharing of knowledge and the re-use of research outputs, including through the development of the European Open Science Cloud (EOSC)	• Deploy Open Science principles and identify Open Science best practices • Deploy the core components and services of EOSC and federate existing data infrastructures in Europe, working towards the interoperability of research data • Establish a monitoring mechanism to collect data and benchmark investments, policies, digital research outputs, open science skills and infrastructure capacities related to EOSC
2. Propose a EU copyright and data legislative and regulatory framework fit for research	• Identify barriers and challenges to access and reuse of publicly funded R&I results and of publications and data for scientific purposes, and identify potential impacts on research, through an analysis of relevant provisions under EU copyright and data legislation and related regulatory frameworks, and of relevant institutional and national initiatives • Propose legislative and non-legislative measures to improve the current EU copyright and data legislative and regulatory frameworks
3. Advance towards the reform of the Assessment System for research, researchers and institutions to improve their quality, performance and impact	• Analysis of legal and administrative barriers at national and trans-national level for a modern research assessment system • Create a coalition of European research funders and research performers who agree on a new approach for research assessment, following wide and inclusive consultations at European and international level • Implementation plan of the coalition to roll-out the new approach, including pilots in different domains

[Open Science in EU]

COUNCIL RECOMMENDATION (EU) 2021/2122

of 26 November 2021 Nov.2021

on a Pact for Research and Innovation in Europe

COUNCIL RECOMMENDATION 2021
«PACT FOR RESEARCH AND INNOVATION»

Working better

(d) Free circulation: Free circulation of researchers and support staff, scientific knowledge and technology should be promoted, attracting talent and avoiding potential talent drain. This involves sharing scientific knowledge, data and tools as early as possible, in particular through open science practices, attractive and merit-based careers, the recognition of researchers' and support staff's skills throughout their careers, enhancing framework conditions for researchers' mobility, contributing to the circulation of researchers across the Union, encouraging exchanges between academia and industry (as well as other sectors), diffusing innovation and supporting open access to research infrastructures, technology infrastructures and their services;

Deepening a truly functioning internal market for knowledge

(a) Open science: Support and reward a true open science culture across the Union, including mainstreaming open access to scholarly publications and research data (i.e. following the 'as open as possible, as closed as necessary' principle) and the diffusion and uptake of open science principles and practices, whilst considering differences between disciplines and cultural differences, including multilingualism, supporting the development of open science skills, and further developing and integrating the underpinning digital infrastructure and services;

(b) Research infrastructures: Develop further the open access to, and better exploitation and connection of existing and new European and national research infrastructures, including e-infrastructures, in all the fields of science; exploit better their integrative function in the knowledge and innovation ecosystem and their potential in providing solutions to global challenges, in forming partnerships and pooling resources and connection to the European Open Science Cloud; improve their connection and interaction with technology infrastructures and industry to increase their impact; promote the creation of new infrastructural capacities on a European scale. Doing so will provide foundations for scientific excellence and help European science

[Open Science in EU]

COUNCIL CONCLUSIONS ON RESEARCH EVALUATION (2022)

Council of the European Union

June 2022

Brussels, 10 June 2022
(OR. en)

10126/22

RECH 371
TELECOM 267
COMPET 491
IND 227
MI 468
EDUC 245

OUTCOME OF PROCEEDINGS

From:	General Secretariat of the Council
	10 June 2022
	Delegations
c.:	9515/22
	Research assessment and implementation of Open Science
	- Council conclusions (adopted on 10 June 2022)

2. ACKNOWLEDGES that in order to accelerate the implementation and the impact of Open Science policies and practices across Europe, action has to be taken to move towards a renewed approach to research assessment, including incentive and reward schemes, to put in place a European approach in accordance with the Pact for Research and Innovation in Europe, and strengthen capacities for academic publishing and scholarly communication of all research outputs, and encourage where appropriate, the use of multilingualism for the purpose of wider communication of European research results;

ACKNOWLEDGES THAT THE CURRENT ASSESSMENT LEAD TO NEGATIVE BIASES IN TERMS OF INTEGRITY AND QUALITY

I. Reform of research assessment systems in Europe

3. ACKNOWLEDGES that research assessment systems should focus on quality and impact, and RECALLS that the current research assessment systems are nowadays to a great extent too focused on the use of some quantitative journal- and publication-based indicators and the evaluation of a narrow range of research outputs; CONSIDERS that such an approach may lead to negative biases in terms of research quality, reproducibility and integrity; STRESSES that research assessment should include other research outcomes and processes and promote early knowledge sharing and collaboration to accelerate the implementation of Open Science policies and practices;

8. SUGGESTS that the evolution of the research assessment systems in Europe should be guided by the following principles, while respecting the autonomy of research institutions and the freedom of scientific research, as well as the diversity of national and disciplinary contexts, and taking into account their consistency with international initiatives:

a. moving to a more balanced approach between the quantitative and the qualitative evaluation of research, by strengthening the qualitative research assessment indicators while developing the responsible use of quantitative indicators;

b. recognising all forms of research and innovation output and processes, including *inter alia*, datasets, software, codes, methodologies, protocols and patents, and not only publications; STRESSES that data should be findable, accessible, interoperable and re-usable, in line with the FAIR principles;

c. taking into consideration diverse career pathways and all research and innovation activities, including mentoring, leadership roles, entrepreneurship, data management, teaching, knowledge valorisation, industry-academia cooperation, support for evidence-informed policy making, interaction with society, including citizen science and public engagement;

d. taking into consideration the specificities of the various research disciplines, the range from basic to applied research, the stages of research careers and the missions of research institutions;

e. ensuring that ethics and integrity are accorded the highest priority and are not compromised by counter-incentives;

f. ensuring diversity, gender equality, and actively promoting women in science;

Council of the European Union

June 2022

Brussels, 10 June 2022
(OR. en)

10126/22

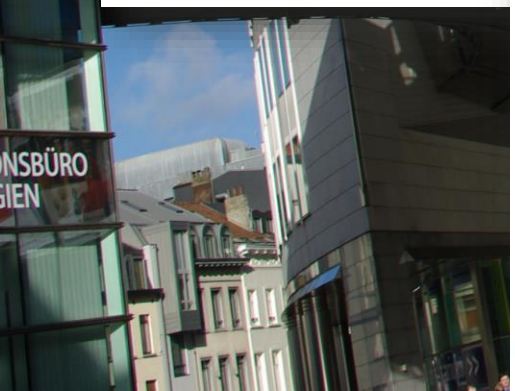
RECH 371
TELECOM 267
COMPET 491
IND 227
MI 468
EDUC 245

OUTCOME OF PROCEEDINGS

From: General Secretariat of the Council
On: 10 June 2022
To: Delegations

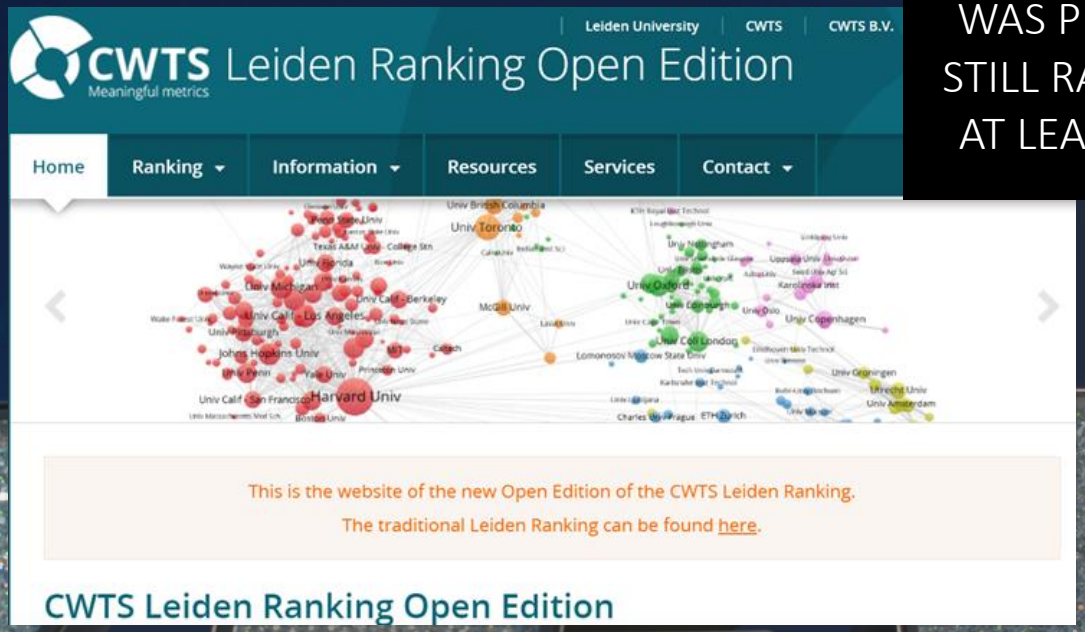
COUNCIL CONCLUSIONS ON RESEARCH EVALUATION (2022)

PRINCIPLES OF THE NEW EVALUATION

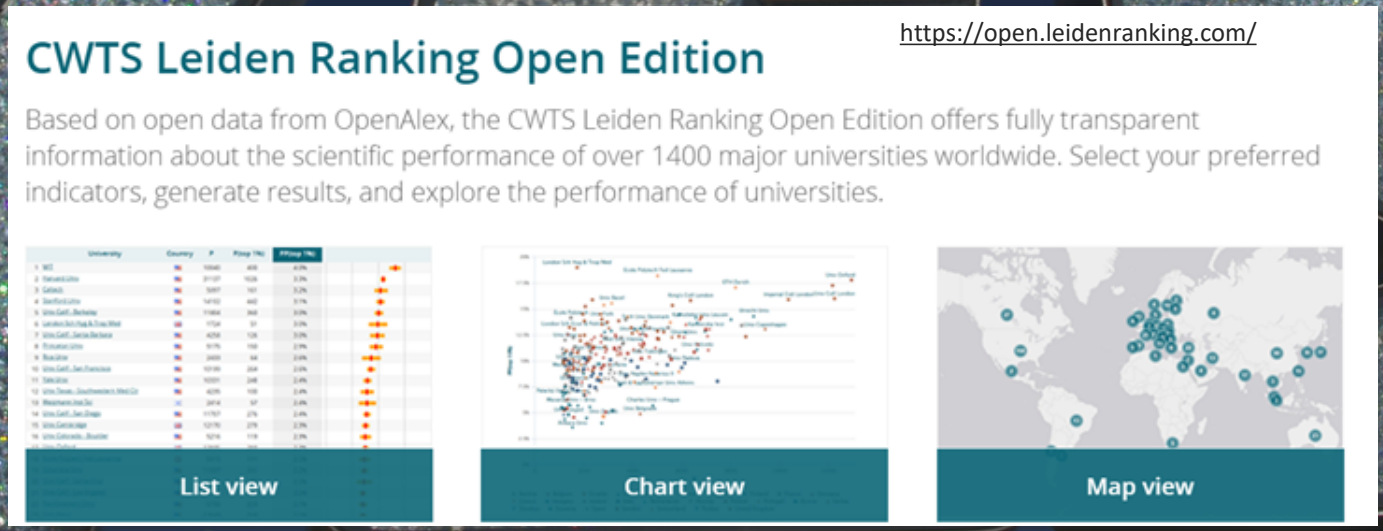


First effects

ON JAN. 30, 2024 THE FIRST OPEN RANKING WAS PUBLISHED … STILL RANKING, BUT AT LEAST «OPEN»!



https://open.leidenranking.com/



UniUtrecht withdrew from THE ranking

Jeroen Bosman aka @jeroenbosman@akademienl.social
@jeroenbosman

Utrecht University @UniUtrecht in the Netherlands has withdrawn itself from the World University ranking @THEworldunirank provided by @timeshighered. As this has generated quite some reactions - praise, questions, some doubts, I want to provide some context. Hence a thread
1/16
Traduci post

Oct. 1 2023

RANKING | SCORES

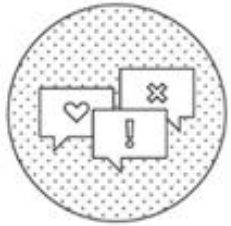
Rank	Name Country/Region	No. of FTE Students	No. of students per staff	International Students	Female:Male Ratio
✖	Utrecht University Netherlands	32,532	17.1	13%	62 : 38

Jeroen Bosman aka @jeroenbosman@akademi... @jeroenbo... · 20h

2/16 Our removal from the ranking is a direct effect of not providing data anymore. Only universities that provide data are listed. The main reasons - apart from cost/time investment of providing data - are misalignment the ranking's values with ours: uu.nl/en/organisatio...

Future-proof teaching culture

A future-proof teaching culture that focuses on quality and innovation.



Close-knit community

A close-knit community of involved students, employees and alumni, in which there is mutual care and concern as well as space for development, connecting with one another, knowledge sharing and an open dialogue.

Sustainable development

A focus on sustainable development:

Jeroen Sondervan @jeroenson · 28 set

Short translation: @UniUtrecht is not appearing in the World University Ranking 2024.

They didn't submit the requested data: rankings are misleading and often misused. More attention to collaboration & #openscience!

Couldn't agree more! Again, I'm a proud former employee! 🤩

DUB @dubnieuws · 28 set

De @UniUtrecht is niet opgenomen in de World University Ranking 2024. Ze stuurde geen gegevens in. Rankings leggen volgens de UU te veel nadruk op scoren en competitie, terwijl de universiteit juist nadruk wil leggen op samenwerking en open science.dub.uu.nl/nl/nieuws/univ
...

France is leading the way

SORBONNE UNIVERSITÉ

Dec. 2023

EDUCATION

Open Science

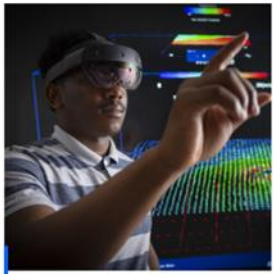
Sorbonne University unsubscribes from the Web of Science

Sorbonne University has been deeply committed to the promotion and the development of open science for many years. According to its commitment to open research information, it has decided to discontinue its subscription to the Web of Science publication database and Clarivate bibliometric tools in 2024. By resolutely abandoning the use of proprietary bibliometric products, it is opening the way for open, free and participative tools.

cnrs

2024

Our research · Our innovations · Our challenges



Home › CNRS Info

The CNRS has unsubscribed from the Scopus publications database

January 11, 2024

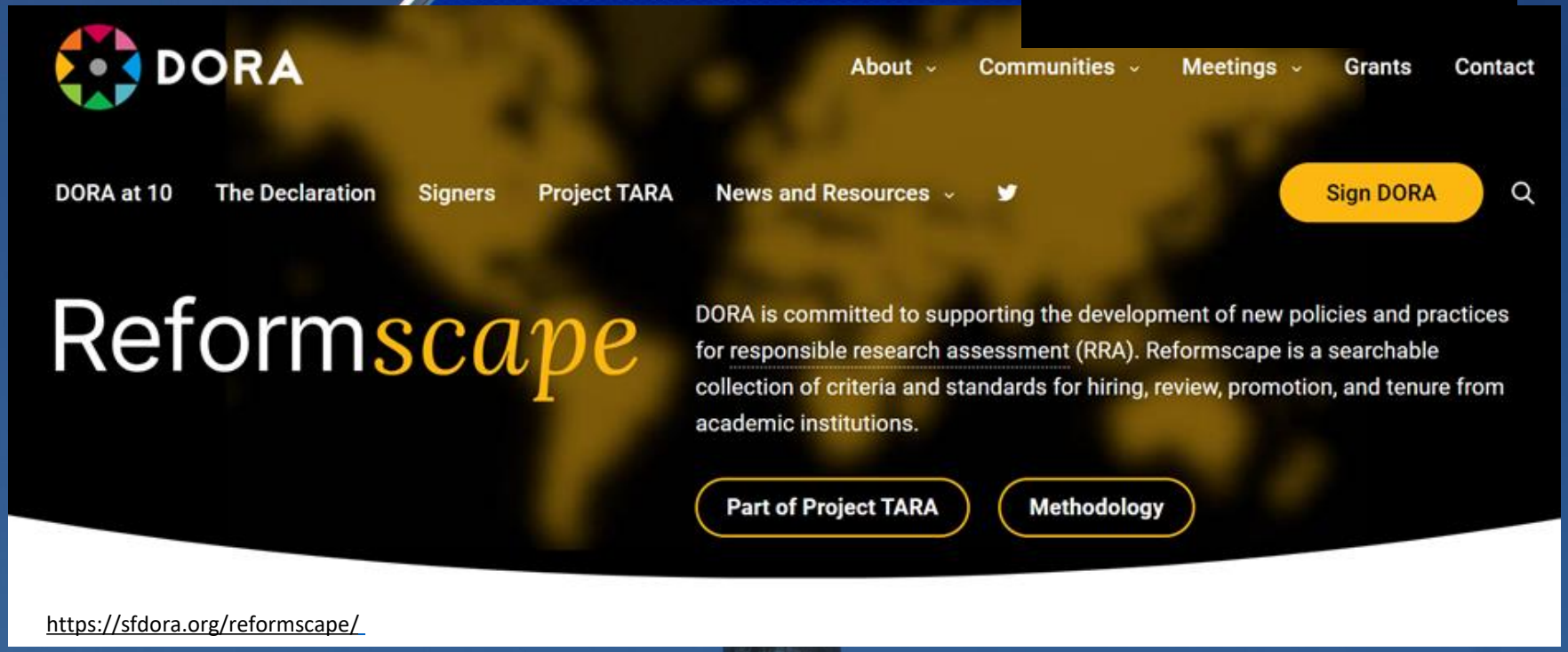
RESEARCH

The CNRS has an ambitious open science policy (*French link*) aimed at opening up scientific publications, sharing and reusing data (*French link*), rethinking research assessment (*French link*) and developing text and data mining methods and open source software. The drive towards CNRS researchers reappropriating the results of their own work and making science accessible to the whole of society is clearly an issue of considerable importance.

Unsubscribing from the Scopus bibliographic database[1] is the first stage of the process of freeing the CNRS from commercial databases and gradually switching to free bibliographic tools that are more in line with its open science policy. The savings made on this subscription will enable the CNRS to support and consolidate sustainable open solutions.

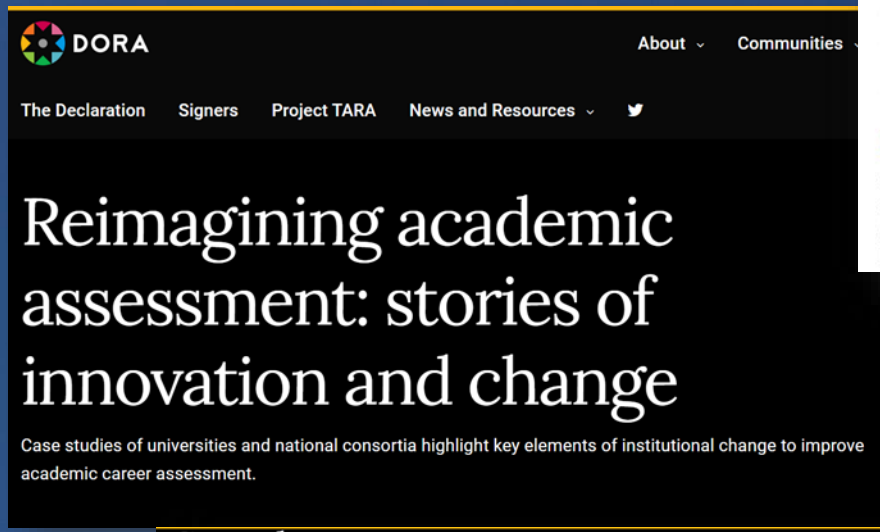
…in practice

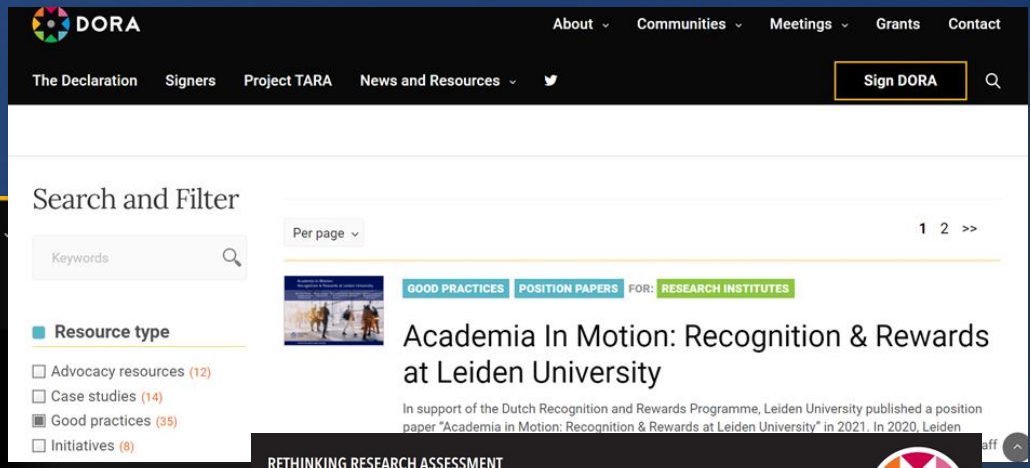
FIND THE SUGGESTION/GOOD PRACTICE THAT YOU NEED

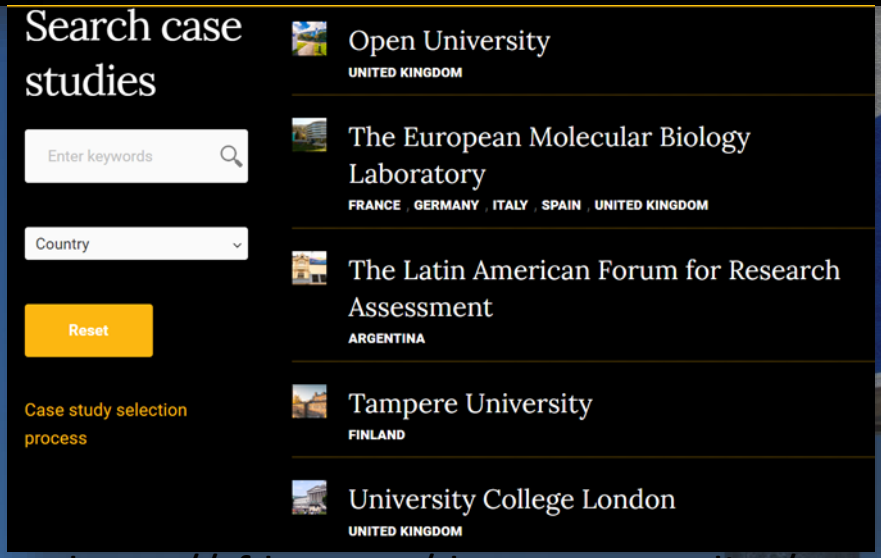


https://sfdora.org/reformscape/

…in practice







https://sfdora.org/dora-case-studies/

in practice

[Deliverable 3.1: Indicators and Metrics to Test in the Pilots]

https://opusproject.eu/about/

Figure 1: Categories, Subcategories, and Indicator Groups of Researcher Assessment Framework

… in practice /

Agreement

Annex 4 – Toolbox: practical tools and options to consider

Commitment	Examples of tools to support this commitment/ options to consider
Recognise the diversity of contributions to, and careers in, research in accordance with the needs and nature of the research	• Enable greater diversity in **career paths and profiles** by recognising more diverse competencies and talents[5] • Use approaches that allow academics to make a mark in one or more **key areas of study that are important to them**, and allow their area profile to change over the course of their career[6] • Use a **portfolio approach** to test competencies or progression in different domains relevant to the researcher's role[7]
Base research assessment primarily on qualitative evaluation for which peer review is central, supported by responsible use of quantitative indicators	• Consider specific actions captured under the **Leiden Manifesto**[8] • Explore **options** for assessment; as a rule of thumb, use quantitative indicators for quantitative things (if
Avoid the use of rankings of research organisations in research assessment	• Consider specific actions described in the **INORMS**[12] tools for rethinking global university rankings • Consider the recommendations in the **Metric Tide** report[13]
Commit resources to reforming research assessment as is needed to achieve the organisational changes committed to	
Review and develop research assessment criteria, tools and processes	
[Part 1 – Criteria for units and institutions] With the direct involvement of research organisations and researchers at all career stages, review and develop criteria for assessing research units and research performing organisations, while promoting interoperability	• Consider a '**narrative CV for institutions**' that could include case studies on how early sharing of data or collaboration efforts have resulted in knowledge generation e.g. others building on shared data or collaboration leading to outputs or impacts that otherwise would not have been achieved

UK Europe USA Australia & NZ Africa World Opinion Fu

Dec. 12, 2022

OPINION 12 DEC 2022

The tide is turning. Revisiting the Metric Tide

By Stephen Curry, Elizabeth Gadd and James Wilsdon Share

HARNESSING THE METRIC TIDE:

indicators, infrastructures and priorities for responsible research assessment in the UK

Stephen Curry, Elizabeth Gadd and James Wilsdon

Report of *The Metric Tide Revisited* panel
December 2022

2022

We propose that the REF realises and rewards more of that latent value by placing greater weight on the environment statement (following an evidence-informed narrative structure). This could include issues such as gender and race equality, team-leadership skills, workload management, and measures to eliminate bullying and harassment. The data needed to support such an innovation need to be carefully considered, to avoid growing the assessment burden of the REF.

Overall, despite valuable innovations in recent years (e.g. the Initiative for Open Citations and Overton.io) there is still no magic solution to the challenges of large-scale research assessment. We remain persuaded that a mixed-methods approach will best serve the purposes of the REF.

If the purposes of the REF are clear, there is an opportunity for more radical surgery, which we suggest takes place over two REF cycles to allow the research community time to consult and co-design. One option worth exploring is to reconsider the scale at which assessment is performed, potentially moving from department-level units of assessment to main panel or institution-level. This would create scope for the use of aggregated data which may provide a more reliable indication of dimensions of research quality.

EU s

Our remit is to give advice on indicators to foster the engagement of researchers with open science. Currently, researchers are usually not encouraged to engage in open knowledge practices. In career and research assessments open knowledge is usually not part of the performance requirements. The extra work involved may also be off-putting, especially in very competitive fields. And often it is simply unclear what "open science" should mean in practical terms. Therefore, simply taking away the current career and assessment criteria and replacing them with novel performance criteria that are oriented towards open science will not work. There are too many factors that hinder or promote open knowledge practices and they interact with each other. This creates a puzzle for the application of indicators in science and scholarship. On the one hand, there is the huge variety of scientific and scholarly practices. Universal indicators cannot address this dynamic variety. On the other hand, it is not practical to expect all scientific communities to have the technical expertise to develop and apply their own indicators in a responsible way. This explains why the alternative to universal indicators, creating large baskets of potential indicators that users can choose from as they see fit, is not advisable either.

2019

European Commission

Indicator Frameworks for Fostering Open Knowledge Practices in Science and Scholarship

1. **Infrastructure indicators oriented to the scientific system at national, international and disciplinary levels**

   The first suite of qualitative and quantitative indicators of the development of open knowledge infrastructures includes their creation, the growth of their numbers, the nature of their contribution, and their use and uptake by the research communities. This toolbox should build on the results of the Open Science Monitor and be linked to the European Open Science Cloud.

2. **Indicators of open knowledge capabilities in research communities**

   The second toolbox of quantitative and qualitative indicators monitors the levels of open knowledge capabilities in the scientific and scholarly communities (including their support personnel). This toolbox will enable the identification of resource availability in specific communities, thus highlighting success cases as well as measures needed to redress the scarcity of capabilities in order to increase the inclusiveness, diversity and equity of the research system.

3. **Indicators of pioneering open knowledge practices**

   The third toolbox consists of a suite of mainly qualitative, case-study based indicators, maintained and regularly updated on a public platform, that give a state-of-the-art overview of pioneering open knowledge practices. The database of case studies organized in the context of the UK Research Excellence Framework, maintained and openly accessible, might be an excellent starting point for such an international platform, provided that mechanisms are also built in for review and update on ongoing developments and initiatives. This platform may be maintained by a collective investment in the form of an annual fee by funders, publishers, and research performance organizations. Alternatively, it may be maintained in the context of an Annual Open Science Observatory (see below).

4. **Individual level indicators for careers**

   The fourth toolbox consists of a suite of career-oriented qualitative and quantitative indicators, based on the principles of responsible metrics as formulated by the Metric Tide, the Leiden Manifesto for Research Metrics, and the DORA declaration. Again, it is not necessary to start from scratch, as several prototypes and basic design matrices for this toolboxes have already been proposed (eg. the ACUMEN portfolio, and the Open Science Career Evaluation Matrix). In relation to the use of

Indicator	OS Dimension indicated	Infrastructure	Capabilities	Champions	Career assessment	Data source	Strengths	Weaknesses	Potential
Types of data usage	A typology of different kinds of data usage	Y	N	EXEMPLARY CASES	N	Surveys among data users	Identifies developing demand for data	Must be done with a certain periodicity and with the same groups for comparability	Insight into actual data use
Accessibility of open data or code as % of all data or code produced by publicly funded projects.	Accessibility	Y	N	EXEMPLARY CASES	N	Researchers, Universities, funders	Encourages openness.	Privileges groups with money and competence to engage with research	Tracks open data infrastructure
Nr Funders requiring TOP Guidelines in publications	Adoption of TOP Guidelines	Y	N	EXEMPLARY CASES	N	Cos.io	Monitors OA among funders	Survey required	
Attitudes of researchers to data sharing	Attitudes of researchers to data sharing	N	Y	EXEMPLARY CASES	Y	Surveys	Qualifies types of data sharing behaviior; may identify best practices	Not clear categories yet exist	Inspiring examples may lead to new practices
Nr publications that can be tracked by the different altmetric sources (e.g.with a	Availability of altmetric data					Scopus, Web of	Monitors Open Data		
Nr Data Sharing Journals	Data sharing adoption	Y	N	EXEMPLARY CASES	Y	Vasilesky et al. 2017	Monitors Data Sharing	data sharing policies for practice	
Nr Open Data Repositories	Data sharing adoption	Y	Y	EXEMPLARY CASES	Y	Re3Data	Monitors Open Data		
Nr of repositories with open meta-data	Data sharing adoption	Y	Y	EXEMPLARY CASES	Y	OpenDoar	Monitors Open Data		
Nr institutes with data management infrastructure	Data sharing adoption	Y	Y	EXEMPLARY CASES	N	Surveys	Monitors Open Data		
Nr institutes with FAIR data policies	Data sharing adoption	Y	Y	EXEMPLARY CASES	N	Surveys	Monitors Open Data		
% of researchers that share data	Data sharing adoption	N	N	EXEMPLARY CASES	Y	Surveys	Tracks adoption of data sharing practices	Data sources for this indicator not available in all fields	
% Publications with data	Data sharing adoption	Y	N	EXEMPLARY CASES	Y	DataCite	Monitors data sharing practices	Does not check the quality of the data shared	Encourages data sharing

…if you want to know more

2022

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