

# OPEN SCIENCE WHY AND HOW

Innovation Acta, November 8<sup>th</sup>, 2023

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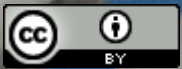
Innovation acta, Nov. 8, 2023

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 [@egiglia](#)



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# Housekeeping

SLIDES ARE AVAILABLE ON ZENODO

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

...PHOTOS ARE MINE  
SO NO RIGHTS  
ISSUES. FEEL FREE TO  
REUSE FROM FLICKR!

# Why are we here today? / 1

## *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

**BECAUSE OF A DIRECT CALL:  
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**

# Why are we here today? / 2



**OBJECTIVES**  
EOOSC SRIA 1.0

Open Science practices and skills are rewarded and taught, becoming the 'new normal'

OPEN SCIENCE IS THE  
«NEW NORMAL»



#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?

Why should we care about Open Science

What is Open Science / and what is not

3 focuses: Open Access, FAIR/EOSC, evaluation

# 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»...**

 **Jon Tennant**   
@Protohedgehog

Following

My first talk of the year! Message is going to be that the opposite of 'open science' isn't 'closed science' - it's bad science.

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

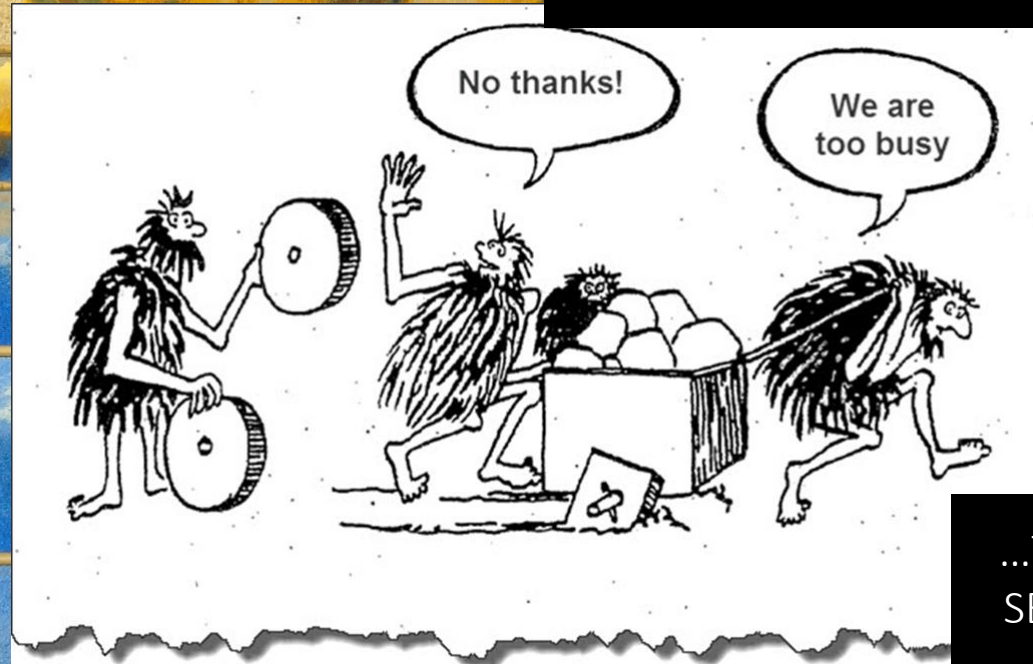
Horizon Europe: what's new on Open Science

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



# Open Science?

OPEN SCIENCE IS NOT A TARGET PER SE.  
IT IS A TOOL FOR A SCIENCE WHICH IS  
MORE TRANSPARENT, SOUNDER, 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



# 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



...JUST KIDDING!  
LET'S START

# WHY DO YOU DO RESEARCH?

...but first, a question

SEI CIÒ CHE  
VOLEVI ESSERE  
OGGI?

TE.SOLOOGGI

"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 Nilsson and Toma Susi

Share [f](#) [t](#) [in](#) [e](#)

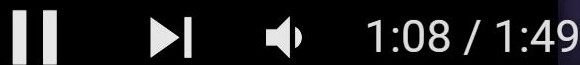
# Let's start with a video...

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

Academic Journals Doing Crime



Impostazioni



Scorri per i dettagli



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»



free to the public so that anybody can appreciate

4-6

# 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



What costs? Reviewing the article. Yeah. We don't pay reviewers.

Why so much? Oh, you know, all the costs?

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

«THE COST OF FORMATTING?»

WRONG. IT'S A PDF ONLINE [IN 2023!!!]



# 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. EVERY YEAR IN UNITS 4.4 MILLION EUROS IN SUBSCRIPTIONS

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

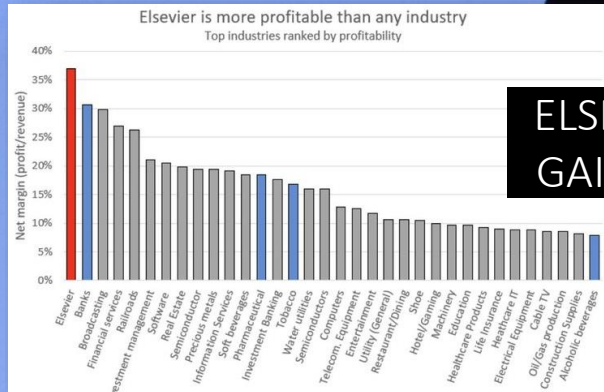


“

“...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 keep their jobs or get promoted

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



So it's extortion

«SO, IT'S  
EXTORTION»

# [reminder #2]



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



**Ivo Grigorov**  
@OAforClimate

In risposta a [@EvaHnatkova](#), [@Eurodoc](#) e altri 8

Challenges for [#OpenScience](#): “Publishing should serve Science, but it doesn't! Science seems to serve publishers”, Kostas Glinos [@KGlinos](#) [@EU\\_Commission](#) [#KRECon2021](#)

[Traduci il Tweet](#)

1:32 PM · 11 nov 2021 · Twitter for iPhone [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?**

# [Opening, not patronizing]

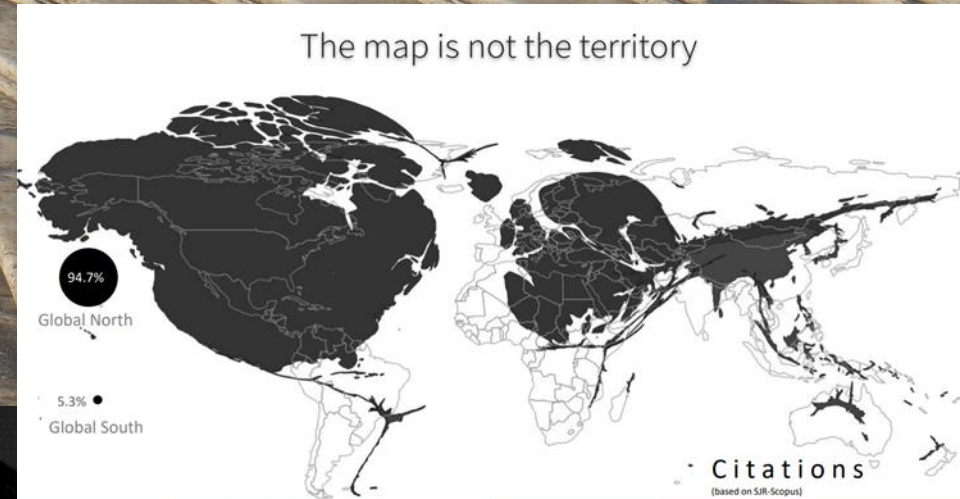
The unique opportunity to advance  
Science as a Global Public Good:  
**Open Science** in a world of contrasts



Arianna Becerril García

Autonomous University of the State of Mexico

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?

# It says it all / 5



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

«THIS, OF COURSE, IS INSANE»



**Jon Tennant**  
@Protohedgehog

The smartest business model ever. Have all of your products and services performed for free by researchers, and then sell it back to them with an unholy markup. Try describing the model to a non-researcher, and they mock us for falling for it.

[Traduci il Tweet](#)



**Steven Salzberg** ❤️👍 @StevenSalzberg1 · 15 apr 2018

Nature and other Springer journals make all of their money from free labor provided by scientists, who write all the papers and do all of the peer review. And now they are cashing in: "Springer Nature aims to raise 1.2 billion euros in new money in IPO" [reut.rs/2qqhp93](https://reut.rs/2qqhp93)

10:46 AM · 15 apr 2018 da Ubud, Indonesia

2018

IT'S ACADEMICS,  
BABY

It's academics, baby.

.. and there is more...



WORSERSE  
WODCE  
EVERYBODY  
DANCES  
BOB DYLAN  
19.03.22  
KVS/BXL

USBETH GRUIWEZ & MAARTEN VAN GALIENBERGHE



SOME  
YEARS  
OF VOET  
VOLK  
03.02 →  
20.03.22

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WODCE  
AB / BXL  
BOZAR / BXL  
KVS / BXL

WORSERSE  
WODCE  
PENELOPE  
03.02  
→ 20.03.22  
BOZAR / BXL

VIDEO INSTALLATION BY DIRK BRAECKMANN & WOUTER  
SOME

WORSERSE  
WODCE  
AB / BXL  
BOZAR / BXL



...shameless...

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

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 decision

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 initiation

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

Plan S Making full & immediate Open Access a reality

Oct. 21, 2023

Plan S Princip

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.

Oct. 27 2023

COAR Confederation of Open Access Repositories

Oct. 24, 2023

Home New

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

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.

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!

.. and there is more...



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OF VOET  
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BOZAR / BXL

VIDEO INSTALLATION BY DIRK BRAECKMANN & WOUTER  
SOME

WORSERSE  
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# Elsevier world

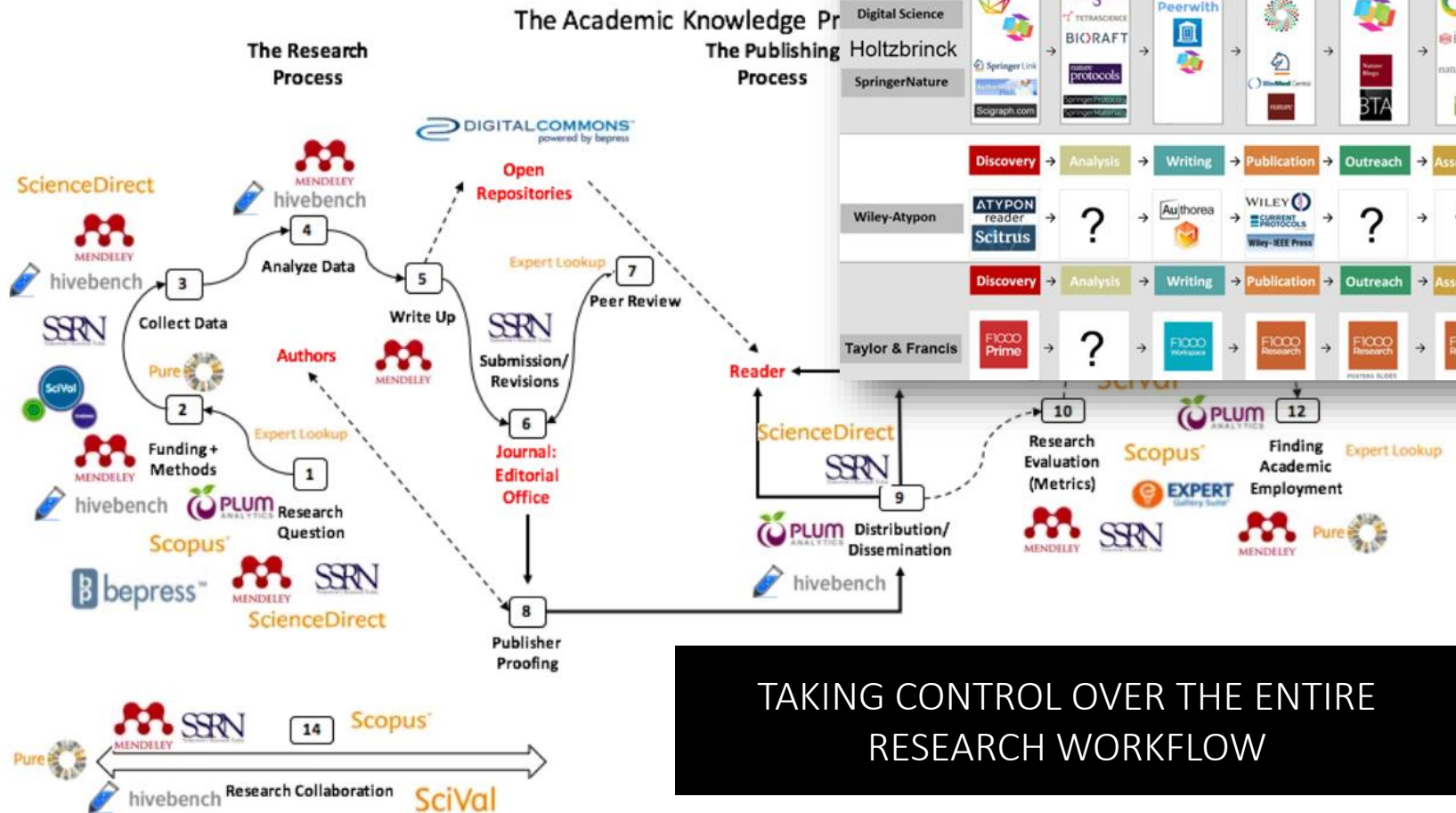
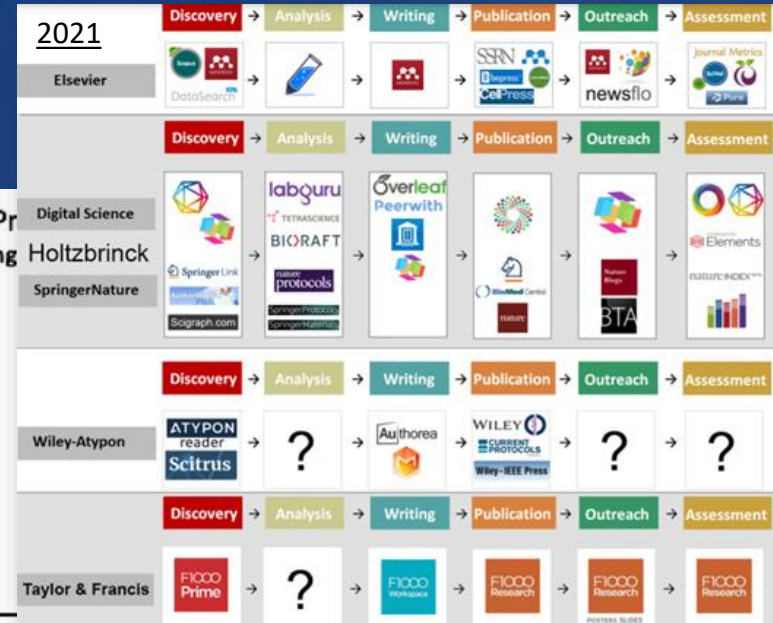
Publishers are increasingly in control of scholarly infrastructure and why we should care

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

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

FROM PUBLICATIONS TO  
DATA ANALYTICS

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 for Elsevier. Facebook, Google, and Bytedance 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.<sup>3</sup> 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.



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



# Beware: privacy issues

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

2023

SPARC\*

## NAVIGATING RISK IN VENDOR DATA PRIVACY PRACTICES

An Analysis of Elsevier's ScienceDirect

November 2023

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*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\*

2021  
UPDATE

SPARC Landscape Analysis  
and Roadmap for Action

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 highlighting 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

# ... so what about the current system?

WE ARE STILL **TOO FOCUSED ONLY ON PAPERS** (FOR EVALUATION)

WE PAY 10 BN \$ TO LOCK UP BEHIND PAYWALLS A CONTENT PRODUCED WITH PUBLIC MONEY AND GIVEN FOR FREE

...WITH AN AVERAGE PUBLICATION TIME OF 9-18 MONTHS...

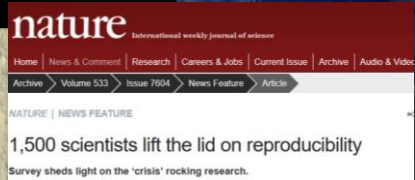
...AND 179% INCREASE IN SELF-CITATIONS...

...AND 70% OF STUDIES WHICH ARE NOT REPRODUCIBLE...

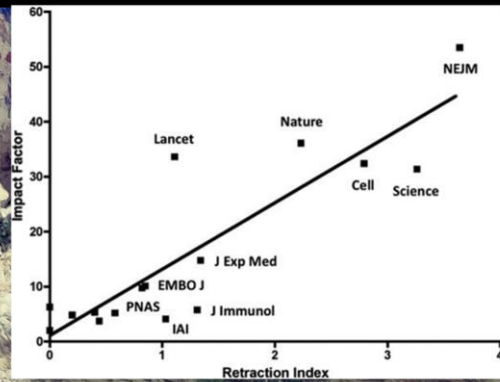
... AND 43% RETRACTIONS FOR FRAUD, WITH A DIRECT CORRELATION BETWEEN THE #RETRACTIONS/JOURNAL IMPACT FACTOR

### Retraction Watch

Tracking retractions as a window into the scientific process



WHY? BECAUSE EVALUATION BECAME AN OBSESSION, AND PEOPLE GAMED THE SYSTEM AT EVERY LEVEL



# Retractions

## The Retraction Watch Leaderboard <https://retractionwatch.com/>

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 (175) See also: [Editors-in-chief](#)
3. Hironobu Ueshima (123) See also: [our coverage](#)
4. Yoshihiro Sato (112) See also: [our coverage](#)
5. Ali Nazari (96) See also: [our coverage](#)
6. Jun Iwamoto (87) See also: [our coverage](#)
7. Diederik Stapel (58) See also: [our coverage](#)
8. Yuhji Saitoh (56) See also: [our coverage](#)
9. Adrian Maxim (48) See also: [our coverage](#)
10. Chen-Yuan (Peter) Chen (47) See also: [our coverage](#)
11. Shahaboddin Shamshirpour (46) See also: [our coverage](#)
12. Fazlul Sarkar (41) See also: [our coverage](#)
13. Hua Zhong (41) See also: [our coverage](#)
14. Shigeaki Kato (40) See also: [our coverage](#)

### 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).*

Dec. 2020

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

An undergraduate stu-

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

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 an international research fraud ring.*





## Retracted coronavirus (COVID-19) papers

[Retraction watch](#)



137 RETRACTIONS  
22 PREPRINT  
115 PEER REVIEWED  
PAPERS

# ew: does it wor

# THE LANCET

### Retraction—Hydroxychloroquine or chloroquine with or without 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](https://doi.org/10.1016/S0140-6736(20)31324-6) · Check for updates

After publication of our *Lancet* Article,<sup>1</sup> 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



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

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."<sup>1</sup> 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.

Related Articles

ORIGINAL ARTICLE JUN 18, 2020

Cardiovascular Disease, Drug Therapy, and

# ...funny frauds

Gideon Lewis-Kraus investigates the cases of two behavioral scientists who became famous for their research on dishonesty—and who now both stand accused of fabricating data.

[Traduci post](#)



19 56

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NEW YORKER

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Sept. 30 2023

ANNALS OF INQUIRY

## THEY STUDIED DISHONESTY. WAS THEIR WORK A LIE?

*Dan Ariely and Francesca Gino became famous for their research into why we bend the truth. Now they've both been accused of fabricating data.*

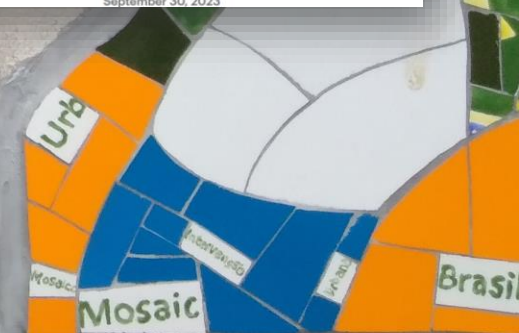
By Gideon Lewis-Kraus

September 30, 2023

newyorker.com

They Studied Dishonesty. Was Their Work a Lie?

Dan Ariely and Francesca Gino became famous for their research into why we bend the truth. Now they've both been accused of fabricating data.



# 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/>

## 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 *Nature* analysis examines the ‘paper mill’ problem – and how editors are trying to cope.

Holly Elise & 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.



### 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/>



Philip Stark

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

## 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

What is a line on a CV worth? Does it make that grant a little more likely? Does it get you past the magic threshold to get on the applicant short list? Is there a shortcut? Researchers are experts at behaviour optimisation and seeing how systems work. I simply don't buy the "hapless victim" stance and a lot of the hand wringing is disingenuous at best. On a harsh economic analysis this is perfectly rational behaviour. Smart people doing dumb things for smart reasons.

In both cases the researcher is presented as a hapless victim, "hoodwinked" as the headline states into parting with money (either directly in the form of APCs or indirectly through their libraries). But really? I've no intent to excuse the behaviour of these publishers, but they are simply serving a demand. A demand created by researchers under immense pressure to demonstrate their productivity. Researchers who know how to play the game.

Scott Edmunds perhaps summed it up best at the FORCE2015 meeting in Oxford:



*It is no longer the case that people are gaming the system, the system has become a game. It's time to say Game Over.*



If we cast ourselves as mere victims we'll never change the rules. The whole narrative is an excuse for doing nothing.

Researchers are not 'hoodwinked' victims. All choose to play the publishing game and some can choose to change it.

2015

RESEARCHERS ARE NOT VICTIMS  
IT'S NOT PEOPLE GAMING THE  
SYSTEM. THE SYSTEM IS A GAME.  
TIME TO SAY GAME OVER

At times it is tempting to suggest that it is not publishers that are predatory, but researchers. But of course the truth is that we are all complicit, from publishers and authors producing content that no-one reads, through to administrators counting things that they know don't matter, and funders and governments pointing to productivity, not to mention secondary publishers increasing the scope of their indices knowing that this leads to ever increasing inflation of the metrics that makes the whole system go round.

We are all complicit. Everyone is playing the game, but that doesn't mean that all the players have the same freedom to change it. Commercial suppliers are only responding to demand. Governments and funders can only respond to the quality assessments of the research community. It is only the research community itself that can change the rules. And only a subset of that.

# Predatory???

THE CASE OF MDPI -  
«PREDATORY  
REPORTS». IS IT  
TRUSTWORTHY?



Gianluca Sbardella  
@g\_sbardella

11 MARZO 2023



MDPI journals have been included in the list of predatory journals. It was about time.

[Traduci il Tweet](#)



[predatoryreports.org](https://predatoryreports.org)

List of all MDPI predatory journals

MDPI as a publisher of open-access scientific journals was spun off from the Molecular Diversity Preservation ...

8:27 AM · 11 mar 2023 · 2,2 Mln visualizzazioni

Predatory Reports is an association of scientists and researchers who seek to help researchers identify trusted journals and publishers for their research. Through a variety of practical tools and resources, including the Predatory Publishers List, this international and cross-sectoral initiative aims to educate researchers and students, promote integrity, and build trust in scientific research and publications.

[— Show Less](#)

[Predatory reports](#)

## Characteristics

Complaints that are associated with **predatory journals (open-access)** publishing include:

- Accepting articles quickly with little or no peer review or quality control, including hoax and nonsensical papers.
- Notifying academics of article fees only after papers are accepted.
- Aggressively campaigning for academics to submit articles or serve on editorial boards.
- Listing academics as members of editorial boards without their permission, and not allowing academics to resign from editorial boards.
- Appointing fake academics to editorial boards.
- Mimicking the name or web site style of more established journals.
- Making misleading claims about the publishing operation, such as a false location.
- Using ISSNs improperly.
- Citing fake or non-existent impact factors.



# [Elsevier = predatory]

björn.brembs.blog

## 1. entities that prioritize self-interest at the expense of scholarship

Elsevier consistently prioritizes mega-profits over scholarship. Too many examples to list, would need new server, so here is some more.

Check

## 2. false or misleading information

Elsevier published nine fake journals. And, of course, Dezenhall/PRISM and many other FUD campaigns, past and ongoing. Extensive track record.

Check

## 3. deviation from best editorial and publication practices

Chaos, Solitons and Fractals? The recently sold journal "Homeopathy"? Ghostwriting?

Check

## 4. lack of transparency

Widespread use of non-disclosure agreements in subscription contracts.

## 5. aggressive and indiscriminate solicitation practices

Everybody who has received a "call for papers" outside their fields from Elsevier journal raise their hands. Advertising extra products or datab, access to authors? Aggressive and misleading negotiation tactics?

Dec 11

## ELSEVIER NOW OFFICIALLY A "PREDATORY" PUBLISHER 2019

In: Science Politics • Tags: Elsevier, predatory publishing, publishing

For a number of years now, publishers who expect losing revenue in a transition to Open Access have been spreading fear about journals which claim to perform peer-review on submitted manuscripts, but then collect the publishing fee of a few hundred dollars (about 5-10% of what these legacy publishers charge) without performing any peer-review at all. Identifying such journals, however, in order to study if they have any actual detrimental effect on scholarship beyond the claims

ELSEVIER PERFECTLY MATCHES THE DEFINITION OF PREDATORY PUBLISHER

*Predatory journals and publishers are entities that prioritize self-interest at the expense of scholarship and are characterized by false or misleading information, deviation from best editorial and publication practices, a lack of transparency, and/or the use of aggressive and indiscriminate solicitation practices*

# Predatory?

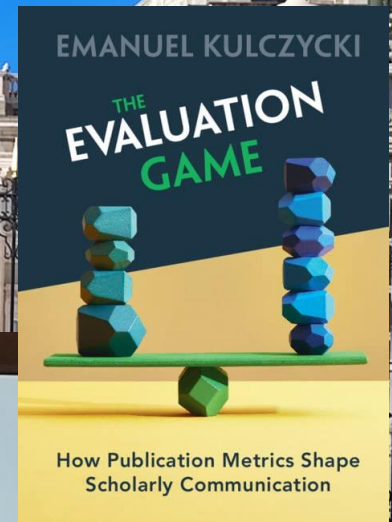
## Predatory journals and predatory publishers

Easy to use labels to describe complex practices in scholarly communication.

However, these practices often result from unequal power relations between central and semi-peripheral countries and institutions.



**The real predators are not where the labels point. They are the publisher oligopolies with their aggressive business models that exploit scientists.**



# [predatory in practice]

## QUESTIONABLE PRACTICES

- **Retconning**  
Recognized predatory publishers rebrand themselves and offer the same titles under a different name. For example, OMICS, a predatory publisher and conference organizer, has other publishing brands like Hilaris, ImedPub and Longdom.<sup>16</sup>
- **Publishing bootlegged articles**  
These publishers republish or plagiarize articles from legitimate journals and pass them off as original work. This also includes fabricating archives by copying articles and changing the dates to make them look as though they were published earlier.<sup>17</sup>
- **Hijacked journals**  
These are duplicate websites or illegal 'clones' of a legitimate journal, including print journals, with the purpose of misleading authors to believe they are the authentic journal and collect author charges.<sup>18</sup>
- **Questionable conferences**  
Many journals, especially those that conceal their business models, run sham conferences. Authors are lured to present at conferences held in international destinations and conference fees are collected in exchange for promised publication of their presentation. Conference organizers and committee members may often be found on the journal's editorial board, implying little or no peer review due to the conflict of interest.<sup>19</sup>
- **Selling authorship**  
These publishers not only sell articles that may have been already accepted but also offer co-authorship to these articles. Authors are promised publication in legitimate journals cited in coveted indexes.<sup>20</sup>

## Predatory publishing practices: what researchers should know before submitting their manuscript

Predatory publishing is currently a critical problem for researchers, particularly with the continuous rise of online journals and the increasing challenge of distinguishing between journals that can be trusted and those which should be avoided. This article begins by providing an overview of predatory publishing, focusing specifically on its definition and impacts and the prevailing predatory practices current in scientific publications. Next, the article discusses how researchers can avoid publishing with predatory publishers. We recommend that researchers do not rely solely on watchlists, rather that they develop their own skills to enable them to detect predatory practices. Finally, the article provides some practical recommendations and resources for researchers to use to assess journals as publishing venues.

## Tools from other industry organizations

- The DOAJ<sup>29</sup> maintains a list of journals that falsely claim to be in the DOAJ
- Retraction Watch<sup>30</sup> provides an updated list of hijacked journals
- Think. Check. Submit<sup>31</sup> is a tool for researchers to identify presumed legitimate publications
- Think. Check. Attend<sup>32</sup> is a tool that guides researchers to choose whether an academic conference can be trusted to attend and submit their abstracts to
- Latindex<sup>33</sup> a regional indexing database in Latin America, creates guidelines for local researchers to avoid publications in predatory journals
- B!SON<sup>34</sup> is a journal recommender tool using DOAJ metadata to give researchers a list of suitable OA journals for their publication based on thematic relevance.

TOOLS  
(INCLUDING A LIST OF  
JOURNALS PRETENDING TO BE  
IN DOAJ)



# Predatory publishing practices: what researchers should know before submitting their manuscript

10 Oct. 2023

Predatory publishing is currently a critical problem for researchers, particularly with the continuous rise of online journals and the increasing challenge of distinguishing between journals that can be trusted and those which should be avoided. This article begins by providing an overview of predatory publishing, focusing specifically on its definition and impacts and the prevailing predatory practices current in scientific publications. Next, the article discusses how researchers can avoid publishing with predatory publishers. We recommend that researchers do not rely solely on watchlists, rather that they develop their own skills to enable them to detect predatory practices. Finally, the article provides some practical recommendations and resources for researchers to use to assess journals as publishing venues.

## Recommendations

# WHAT YOU SHOULD CHECK [Practice]

<p>1. Read the journal's focus and scope to confirm whether their published articles do match the stated scope</p>	<p>Claiming a wide scope with articles accepted from any topics</p>		
	<p>Advertising international scope, but with articles published mainly by local authors and on local topics</p>	<p>3. Investigate the journal's editorial boards or other advisory bodies to verify if they are experts in the subject areas stated in the journal's aims and scope</p>	<p>The expertise of the editorial boards fails to match the scope of the journal</p>
<p>2. Look closely at the journal and its publisher to make sure they have good credentials among the research communities</p>	<p>References cited are not related to the scope of the article published</p>		<p>Editorial board members listed cannot be verified with the provided credentials</p>
	<p>Misleading information: Impact Factors displayed from unknown or nonstandard services</p>		<p>Editorial board members are listed without their knowledge</p>
	<p>False claims to be affiliated or listed in legitimate industry organizations such as the DOAJ, COPE, DORA etc. /societies/universities that fail verification</p>		<p>Multidisciplinary scope but with an editorial board that is not sufficient to review all areas</p>
	<p>Displaying an ambiguous or fabricated 'western' address to pose as an international publisher</p>	<p>4. Assess the quality of the journal's website. It should be clear, easy to navigate and contain the required information accessible from the homepage</p>	<p>Claiming an international focus with no international editorial board members</p>
	<p>Geographic location of the publisher is different from the editorial board</p>		<p>Missing or unclear information on the journal's website about editorial process, author charges, contact details, publication ethics, etc.</p>
	<p>Lack of transparency in the publisher information about the ownership and business models</p>	<p>5. Read author guidelines with particular attention to the journal's peer review policy and check the content the journal publishes for quality and relevance to your research field</p>	<p>Intrusive advertising: not related to the focus of journal</p>
		<p>6. Check the other services the publisher makes available to the authors</p>	<p>Claiming quick process for reviewing articles</p> <p>Publishing articles of suspicious qualities, such as out of scope and plagiarized contents</p>
			<p>Organizing conferences with promised publication in their own journals</p> <p>Offering paper editing services for authors with</p>

... 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



REPowerEU

# It does not work, the way it is

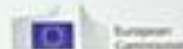
Kostas Glinos based on Danny Kingsley, May 30, 2022

## Some of the challenges for science today

- Skewed perceptions of quality; reproducibility, replicability
- Focus on 'stars' rather than collaboration
- Publishing in a market where client is not the king; closed access
- Obsession with rankings
- Risk-averse research
- Hyper-publishing and hyper-authorship
- Fight for funding
- Wasting (data) resources, repeating doomed research
- Gaming the system

Is this the culture we want?

Slide adapted from a presentation by Danny Kingsley, Flinders University



IS THIS THE RESEARCH CULTURE WE WANT?



Open Science  
might help?



# 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. PMID: 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, [Dana M. Klug](#). Conceptualization



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](#)

[Feb. 4 2022](#)

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



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.

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.



# Lessons learned from COVID

TRADITIONAL SUBSCRIPTION  
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

Sanjee Baksh, PhD @S\_Baksh · 21h

Congratulations to the authors but I am not strong enough for this

Mostra questa discussione

<https://doi.org/10.1038/s41586-022-04627-y>

Received: 25 June 2019

Accepted: 4 June 2021

Published online: 20 April 2022

VIEWPOINTS

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

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

Visual: Wenjin Chen / Getty Images

2020

# Lessons learned from the pandemic

## Implications of pandemic for publications



### 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)

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



Impact Factor is a toxic indicator



## Use of pre-prints – calling time on subscription



- WHO repository IRIS 150 publications relating to Covid-19 - 25% referencing pre-prints
- NEW development WHO [Living Guidelines](#) available online via the MAGICapp
- 3 WHO Living guidelines for Covid-19. Therapeutics 6 versions since November 2020.  
Analysis of version 5 March 2021
  - 44% of its references as pre-print
  - 33% unpublished results shared with WHO
  - Therefore < 25% from traditional published literature.....

<25% FROM TRADITIONAL LITERATURE INCLUDED IN WHO GUIDELINES  
THEY FAILED US RIGHT WHEN WE NEEDED THEM MORE



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



# Lessons learned from COVID / 5

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 climate of open science suggests that science-as-usual creates barriers. (Amélie Philibert)

Health · Second Opinion

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

Feb.1, 2020

...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.

# 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**

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

[From Prague, EOOSC symposium]

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

### 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 EOOSC.
- Stimulate FAIR by design.

Laurents Sesink, SURF

# Open NOT only at the end



Brian Nosek 2023

Synthesis

Participatory Research



Corrections

Open Access

Open Peer Review

Open Data

Open Code

Preprints

Open Materials

Discussing

Publishing

Reporting

Creative Design

Interpreting

Resourcing

Planning

Conducting

Data Management Plans

Preregistration

Team Science

Open Notebooks

Open Protocols



Danny Kingsley (She/Her) • 1st  
Scholarly Communication Cons...  
5h • 🌐

is itself an issue, but regardless research integrity issues are discussed here (in my experience) in terms of the behaviour of the researcher, rather than in the context of the research environment.

This morning I stumbled on this opening talk by Brian Nosek from the Centre for Open Science - <https://lnkd.in/g6H4hFWU>.

He notes if we only think of 'openness' as something that happens after the fact, through sharing the final outcome, then we are not doing the things that need to happen earlier to mean the outputs are more credible. The graphic accompanying this statement is below.

We have to stop talking about 'open access' as if it is the end point. It is only one aspect of a much bigger discussion. #research #researchculture #openscience #openresearch

NOT ONLY WHAT YOU SHARE AT THE  
END BUT HOW YOU APPLIED OPEN  
PRACTICES IN BETWEEN, IN DOING  
YOUR RESEARCH

# [Houston, we have a problem]

**NOT PEER-REVIEWED**  
\*PeerJ Preprints is a venue for early communication or feedback before peer review. Data may be used for research purposes. Learn more about preprints or browse peer-reviewed articles instead.

Preprint  
 View 34 items W

Ten myths around open scholarly publishing

[Library review](#) [Science and Medical Education](#) [Science Policy](#)

<b>1/12</b> Open Science is just a gimmick...	<b>2/12</b> Open Science is all about publishing Open Access	<b>3/12</b> Open Science is a plot against publishers	<b>4/12</b> I already deposit my works on ResearchGate
<b>5/12</b> An open access dissertation has less chances of being published	<b>6/12</b> I'm afraid of plagiarism	<b>7/12</b> There is no open access journal in my discipline	<b>8/12</b> Open Science is for STEM. As a researcher in SSH this is not important to me
<b>9/12</b> Science is for researchers only. Citizens cannot improve my research	<b>10/12</b> A Data Management Plan is useless	<b>11/12</b> I am not a Data Manager	<b>12/12</b> Open access to research data is not mandatory

### 10 Myths around Open Scholarly Publishing March 11, 2019

<b>Myth 1</b> <b>Preprints will get your research 'scooped'</b> Preprints typically provide a time-stamp and a DOI, therefore establishing priority of discovery	<b>Myth 6</b> <b>Copyright transfer is required to publish and protect authors</b> Copyright transfer procedures do not protect authors nor contribute to the advancement of scientific progress
<b>Myth 2</b> <b>JIF and journal branding are measures of quality for researchers</b> The JIF is a flawed metrics that was never meant to be used for evaluation of research and researchers	<b>Myth 7</b> <b>Gold Open Access is synonymous with the APC business model</b> Most DOAJ-indexed journals do not have APCs and are funded from other sources, such as research institutes and grants
<b>Myth 3</b> <b>Approval by peer review proves that you can trust a research article</b> The current peer review system is prone to a number of flaws including corruption, human bias and ghostwriting	<b>Myth 8</b> <b>Embargo periods on 'green' OA are needed to sustain publishers</b> Traditional journals can peacefully coexist with zero-embargo self-archiving policies on author manuscripts
<b>Myth 4</b> <b>Without journal peer review, the quality of science suffers</b> Researchers are more than responsible and competent enough to ensure their own quality control as part of intrinsic scientific integrity	<b>Myth 9</b> <b>Web of Science and Scopus are global databases of knowledge</b> Neither represent the sum of current global research knowledge including Africa, Latin America and Southeast Asia
<b>Myth 5</b> <b>Open Access has created predatory publishers</b> Predatory journals have been around for a long time before the recent push towards Open Access publishing	<b>Myth 10</b> <b>Publishers add no value to the scholarly communication process</b> Publishers are responsible for quite some key functions, from peer-review management to production and archiving of final version articles

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

**DIFFUSED MISCONCEPTIONS:  
 OPEN SCIENCE=OPEN ACCESS, YOU ALWAYS PAY TO PUBLISH,  
 OA= PREDATORY, I CAN'T OPEN MY DATA.....**

Open

«AS OPEN AS POSSIBLE, AS CLOSED AS NECESSARY»



Carlos Moedas ✓  
@Moedas

2/4 "Open as possible, as closed as necessary" is the new principle for all #data from publicly funded #research in Europe #openaccess

RETWEET  
76

MI PIACE  
32



### What key advice would you give to new ERC grantees?

Be as open as you can, publish as openly as you can, submit preprints and open data – but continue publishing in the journals that you think are the best for your career. No one has to become an open science martyr, you can be open without harming your career chances. But at the same time, recognize the deep flaws of the current system of evaluation and rewards and call for a reform – as an ERC grantee your voice carries weight.

“

“Be as open as you can, [but] you don’t have to become an open science martyr”

”

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

Oct. 2021

28 October 2021



# Open Science

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

OPEN  
SCIENCE ≠ OPEN  
ACCESS



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

# Open Science definition




**Open science increases scientific collaborations and sharing of information for the benefits of science and society**




**OPEN SCIENCE**

UNESCO video



**makes multilingual scientific knowledge openly available, accessible and reusable for everyone**



**opens the processes of scientific knowledge creation, evaluation and communication to societal actors beyond the traditional scientific community.**

unes Nov. 23, 2021

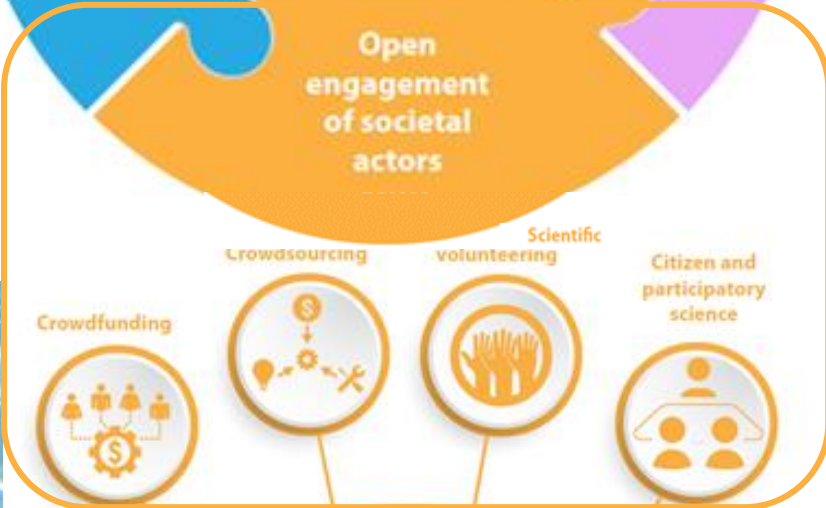
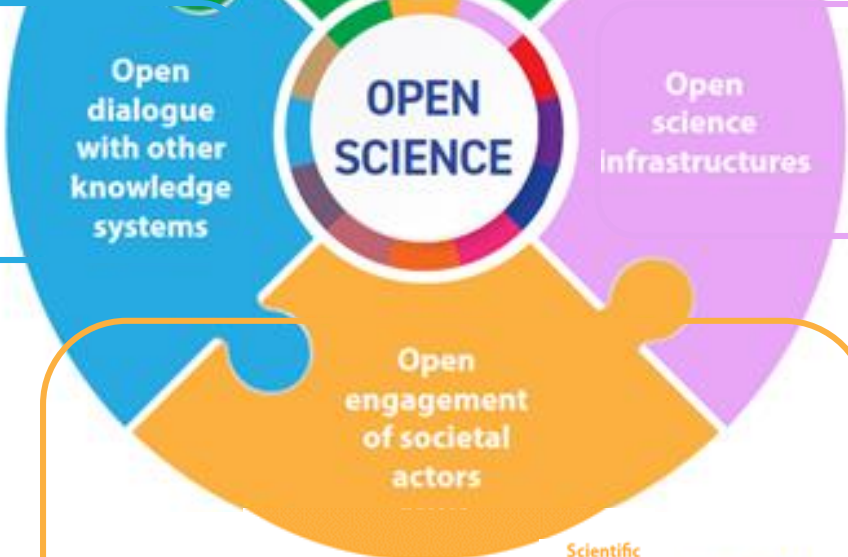
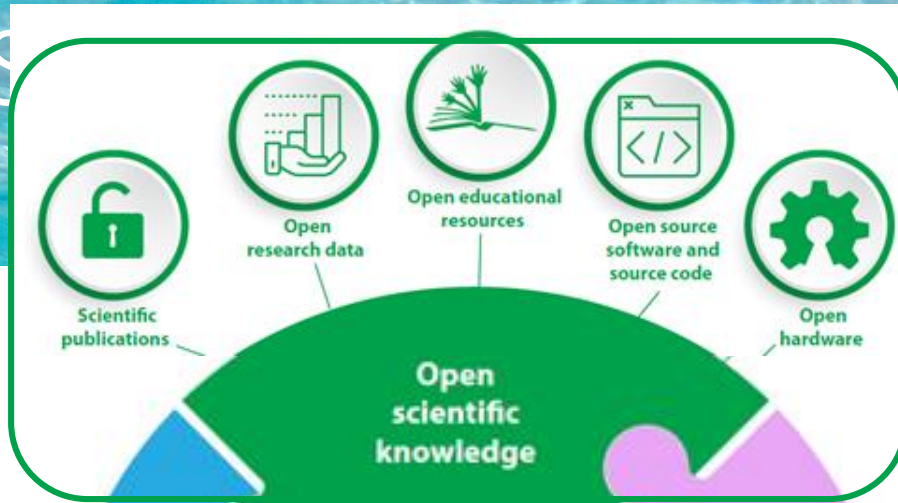


UNESCO Recommendation on Open Science



...Open S

S



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

# Open Science



**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



Video

THE REVOLUTION  
OF OPEN SCIENCE



BY JONATHAN TENNANT 2020

Open Science = Open Outputs + Open Infrastructure

Access, reuse & discoverability

X Culture (change)

Evaluation & Researcher behaviour

C. Mac Callum, UKSG, April 2018

Open Science Depends on Open Minds



**Neelie Kroes** ✓



Iscriviti

851

# [...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

14 September 2021

One scientist said without referring to said.

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

One astrophysicist 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,



**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.



Yvonne Nobis @yvonnenobis · 1h

Aug. 20

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

Sent 14 2021

rdian.com/education/2021...

Twitter

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

# 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]



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

*Pierre Mounier (EHES)*

## 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

...but / 2

“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?

- FOCUS ON THE INTERACTIONS, NOT ON THE BLOCKS

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

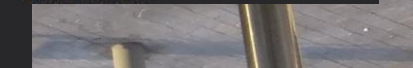
...THESE ARE THE CRITERIA, NOT «EXCELLENCE»

## 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.



Barend Mons



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

Jan. 2022

...but / 1

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

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!

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.

fortunate people of their playful youth and natural resources so that we in 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



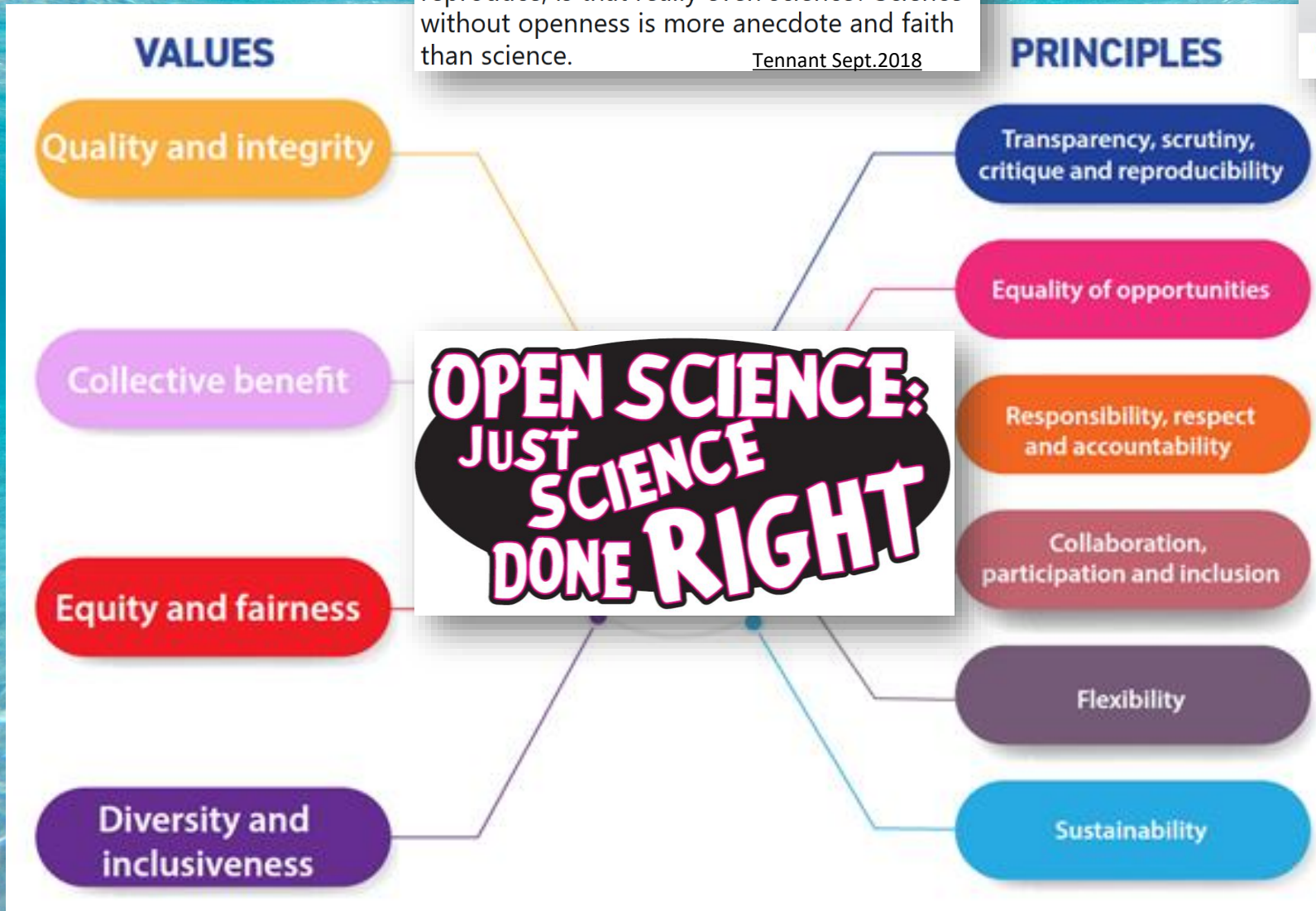
# ...Open Science

 **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



# Open Science

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

Jon Tennant ✓

107.241 Tweet

Following

[Open] Science is a Human Right

## 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.
- 1) Toda persona tiene derecho a participar libremente en la vida cultural de la comunidad, a gozar de las artes y a participar en el **progreso científico y en los beneficios que de él resulten.**
  - 2) Toda persona tiene derecho a la protección de los intereses morales y materiales que le correspondan por razón de las producciones científicas, literarias o artísticas de que sea autora.

<https://www.un.org/en/universal-declaration-human-rights/>

@protohedgehog

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,*

unesco Nov. 23, 2021



UNESCO Recommendation on 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**

BMC Research Notes 2022

Home About [Articles](#) [Submission Guidelines](#) [Collections](#) [Submit manuscript](#)

Commentary | [Open Access](#) | [Published: 20 September 2022](#)

### Promoting trust in research and researchers: How open science and research integrity are intertwined

[Tamarinde Haven](#) [✉](#), [Gowri Gopalakrishna](#), [Joeri Tjeldink](#), [Dorien van der Schot](#) & [Lex Bouter](#)

Library Element Report

SWG OSI Guideline Report on Research Integrity and Open Science

2021

Uploaded by [RRI Tools](#) on January 26, 2022

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.

# Open [collaborative] Science

Assoc. Prof. Leslie Chan  
University of Toronto at Scarborough

March 31 2022

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



December 7-9, 2021

Dec. 2021

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

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 multiple 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

Comité pour la science ouv...  
@ouvriřascience

#OSEC2022 #PFUE2022  
Le multilinguisme, un oublié de la réforme de l'évaluation, Emanuel KULCZYCKI (Adam Mickiewicz University in Poznań) - @ekulczykcki - @ScholarlyCommRG

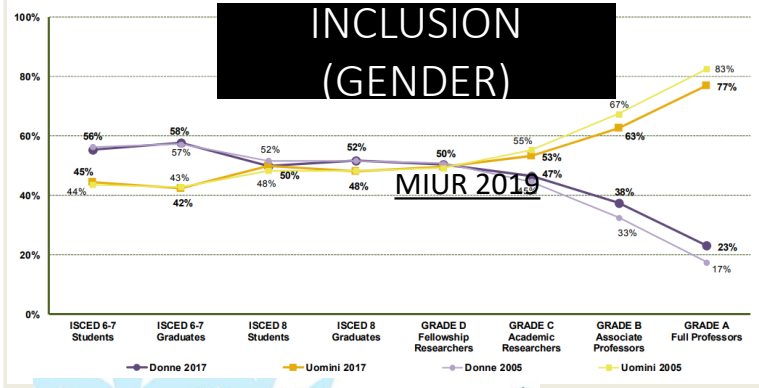
Traduci il Tweet

10:26 AM - 5 feb 2022 - TweetDeck

2 Retweet 1 Mi piace

Twitta la tua Rispondi

Grafico 1: Proporzioni di donne e uomini in una tipica carriera accademica: studenti e personale docente e ricercatore - Anni 2005 e 2017



## #WomenInScience

In 2018, women represented **32.8%** of the total population of researchers at the European level.

Women are **under-represented** at the highest level in research. They transition to Principal Investigators at a **20%** lower rate than men.<sup>1</sup>

8 March 2023

In 2019, **11.1%** of women researchers in the EU worked part-time and under precarious working contracts compared to **7.2%** of men researchers.<sup>1</sup>

In 2021, **66%** of women scientists experienced **gender-based violence**.<sup>2</sup>

Sources:  
1. The European Commission  
2. European Commission

## 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

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

# Equity, diversity, inclusion

Piv Gopalasingam, OLS6 2022

## Equity, Diversity, Inclusion and Accessibility



### DIVERSITY



Is the representation of various identities and differences

### EQUITY



Focuses on fair treatment, equal opportunity and equal access to resources

### INCLUSION



Is the active engagement of the contributions and participation of all people

DIVERSITY  
ASKS

WHO  
— IS IN —  
THE ROOM

EQUITY  
ASKS

WHO IS  
— TRYING TO —  
GET IN THE ROOM  
BUT CAN'T

INCLUSION  
ASKS

— HAVE —  
EVERYONE'S  
IDEAS BEEN  
HEARD

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

source: <https://diversecitylabs.com/>

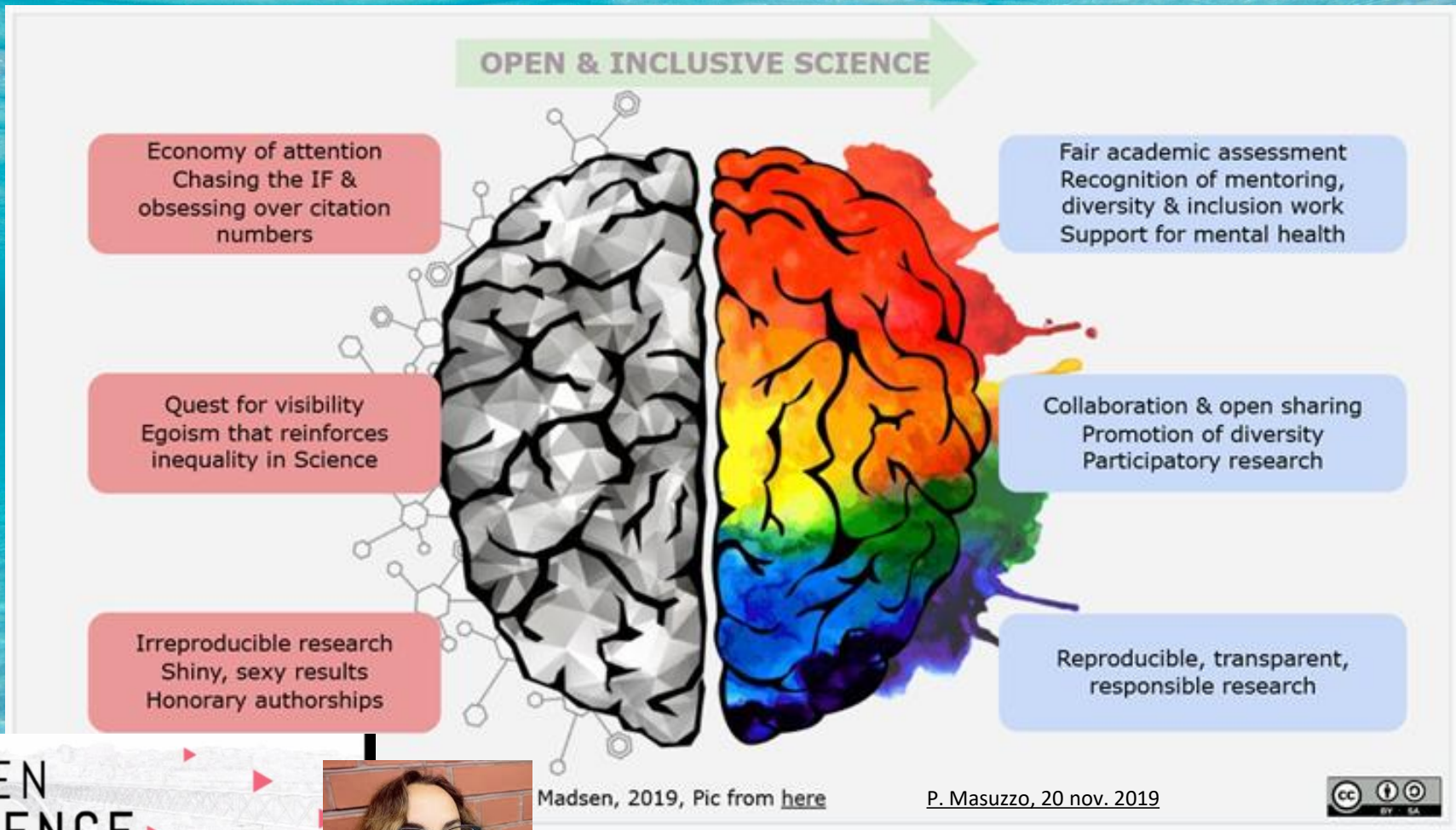
## You can weave diversity and inclusion into your work

- 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 racist toolkit](#)

# Open and inclusive science



OPEN  
SCIENCE  
FAIR



Synergies for Sustainable, Open & Responsible Research  
P. Masuzzo, Keynote, Sept. 2019

# Open Science

ARTICLES? ALSO DATA,  
CODE, PROTOCOLS...

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



REDEFINE  
«EXCELLENCE»...

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



TAKE BACK CONTROL,  
ENGAGE PEOPLE...



@pcmasuzzo  
Oct.5, 2020

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]

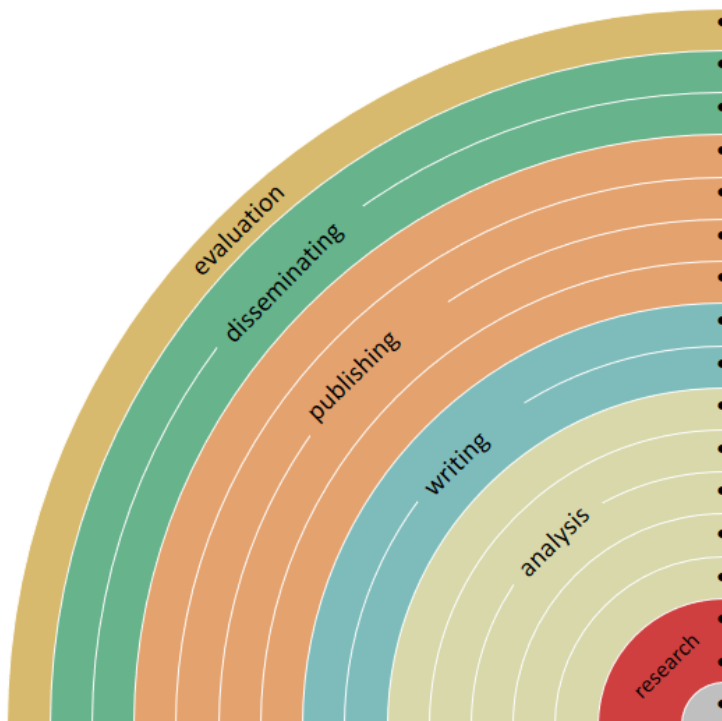


Going Open

Open

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 [Pundit.it](#)
- using shared reference libraries, e.g. with [Zotero](#)
- sharing (grant) proposals, e.g. with [RIO Journal](#)



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



FOCUS #1  
RESEARCH ASSESSMENT

# OS-CAM, the Career Assessment Matrix

## MATRIX NOT METRICS

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

### HANDBOOK ON Research Assessment in the Social Sciences

Edited by Tim C.E. Engels & Emanuel Kulczycki



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

Room for everyone's talent

towards a new balance in the recognition and rewards of academics

THE WORLD IS CHANGING, OUT THERE

- 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 evaluation

- Consider both individual and collective
- Be careful with data sources
- Evaluate with care

#### 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?

YOU EVALUATE WHAT YOU VALUE

**VALUES FRAMEWORK**  
HuMetricsHSS HUMAN METRICS INITIATIVE  
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](http://humetricshss.org)

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

### STEPS FOR REALISING THE VISION FOR FAIRer ASSESSMENTS 2021



#### FAIRer ACADEMIC ASSESSMENTS

Recognise and value diversity and disciplinary differences of academic work

- Output
- Mission
- Impact

Diversity needs to be represented in information supporting assessment

Diversity of outputs, activities and missions need to be included among assessment criteria

ACKNOWLEDGE DIVERSITY

#### EXAMPLE RESEARCH DATA

**Identify practices (e.g.):**

- Sharing research data
- Creating FAIR data
- Using open data
- FAIR expertise

**Develop infrastructures 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



The Declaration Signers Case Studies Resources Blog

## Reimagining academic assessment stories of innovation and change

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 KINGDOM

University of Jiaxing  
CHINA

Ghent University  
BELGIUM

University of Oslo  
NORWAY

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



- IMPACT
- PROFESSIONAL PERFORMANCE
- RESEARCH
- EDUCATION
- LEADERSHIP
- TEAM

...changing

nature

June 2021

Explore content



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 > 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 evaluated by their commitment to open science.

ERC ABANDONED IMPACT FACTOR

DORA About DORA Meer

[The Declaration](#) [Signers](#) [Case Studies](#) [Resources](#) [Blog](#) [Sign](#)

July 2021  
European Research Council (ERC)

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.

# 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
<b>X</b>	Utrecht University Netherlands	32,532	17.1	13%	62 : 38

**Jeroen Bosman** aka @jeroenbosman@akademienl.social @jeroenbosman · 2011

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/organisatie](https://uu.nl/en/organisatie)

**Current university rankings are not consistent with Open Science**

Oct.31 2023

**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 scores en competitie, terwijl de universiteit juist nadruk wil leggen op samenwerking en open science. [dub.uu.nl/nl/nieuws/univ](https://dub.uu.nl/nl/nieuws/univ)

*Rector Magnificus Henk Kummeling, Utrecht University*

You may have heard: Utrecht University (UU) is not included in the Times Higher Education (THE) World University Ranking 2024. THE ranks universities worldwide on academic performance and reputation. Last year UU came in 66th position in the ranking. Why is Utrecht University not included this year?

UU chose not to submit data. A very conscious choice: rankings put too much emphasis on comparison and mutual competition, while we want to focus on collaboration and Open Science. At Utrecht University, we believe it is impossible to capture the quality of all educational and research programmes in one rating. Universities differ in size, budget and ambitions. We excel in very different areas. And it is precisely those differences that make us collectively worthwhile. Those same differences ensure that we like to join forces and collaborate with each other. Moreover, research shows that the methods and data used by the institutions responsible for creating rankings, especially the so-called league table rankings, are often questionable. Only

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



# 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 of quantitative indicators.



## Signatories

The agreement is open for signature to organisations from across the world. As of 29 September 2023, 626 organisations have signed the agreement. This page is updated on a regular basis following signature checks by the CoARA Secretariat.

626  
ORGANIZATIONS  
HAVE SIGNED

The Agreement full text

The Commitments

The Timeframe

Signatories

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

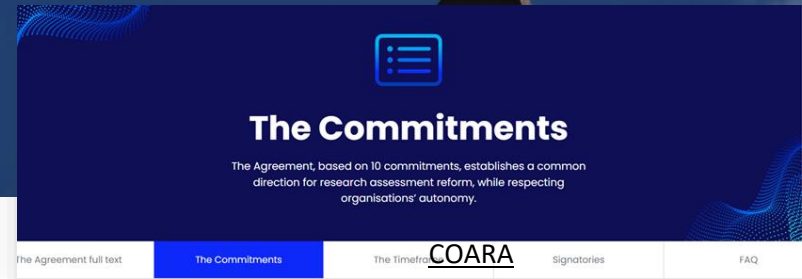
NEWS | 18 January 2022 | Brussels, Belgium | Research and Innovation

## 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.

# Commitments / 1



## 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



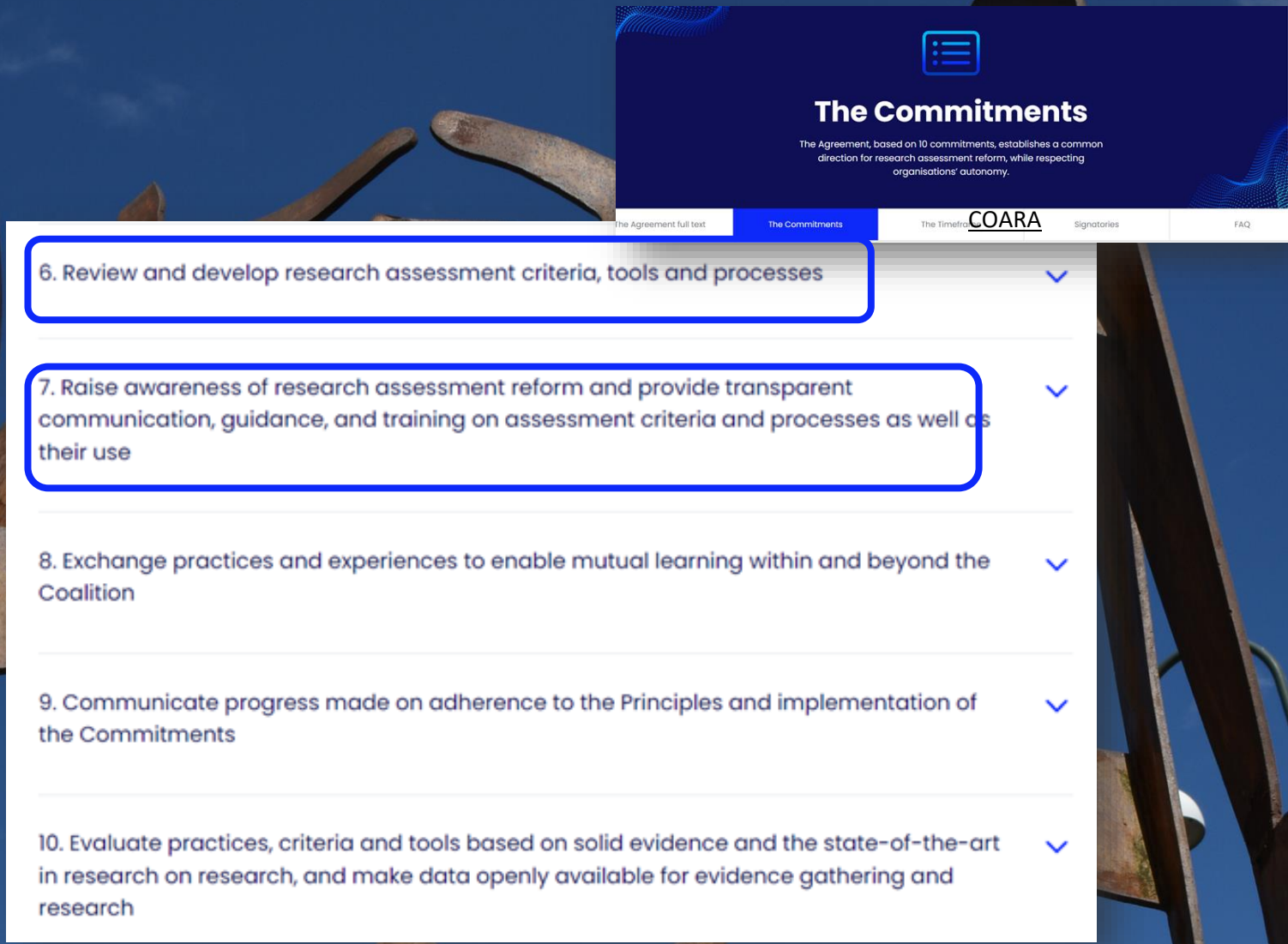
4. Avoid the use of rankings of research organisations in research assessment



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



# Commitments / 2



The screenshot displays the 'The Commitments' page of the COARA website. The page features a dark blue header with a menu icon and the title 'The Commitments'. Below the header, a navigation bar includes links for 'The Agreement full text', 'The Commitments', 'The Timeline', 'COARA', 'Signatories', and 'FAQ'. The main content area lists ten commitments, with the first two (6 and 7) highlighted by blue rounded rectangular boxes. Each commitment is followed by a downward-pointing chevron icon.

**The Commitments**

The Agreement, based on 10 commitments, establishes a common direction for research assessment reform, while respecting organisations' autonomy.

The Agreement full text | **The Commitments** | The Timeline | **COARA** | Signatories | FAQ

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

ACTION PLAN IN 1 YEAR  
FIRST RESULTS IN 5 YEARS

## 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

# Why / 1

- THE RESEARCH PROCESS IS CHANGING
  - DATA INTENSIVE
- PUBLICATIONS ARE NO LONGER THE ONLY «OUTPUT»
  - MORE COLLABORATION
  - MORE INTERDISCIPLINARITY
- 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.



Nov. 21

**Towards a reform of the  
research assessment system**

Scoping Report

# 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

## 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.

# 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**

# How / 3

- WORKING GROUPS AND NATIONAL CHAPTERS

**COARA**

15th December 2023  
10:00 - 13:00 (CET)

- 09/15/2023  
**Save the date: CoARA General Assembly**  
The Coalition for Advancing Research Assessment (CoARA) will host the next General Assembly on the 15th December 2023, 10:00 - 13:00 CET. Legal representatives of CoARA members are invited to participate.  
[Read more →](#)

**Working Group Call 2023**

- 09/01/2023  
**Second round in the 2023 Call for Working Group Proposals**  
The Coalition for Advancing Research Assessment (CoARA) launches the second round in the 2023 Call for Working Group Proposals. The timeline for this second round has been published.  
[Read more →](#)

**Working Group Call 2023**

- 08/07/2023  
**Formation of first CoARA Working Groups and National Chapters**  
The Coalition's ambition of reforming the current environment of research assessment sees a significant step forward with the very first Working Groups and National Chapters being appointed from the pool of submitted proposals.  
[Read more →](#)

# The principles / 1

- 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 VARIETY 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.

# [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

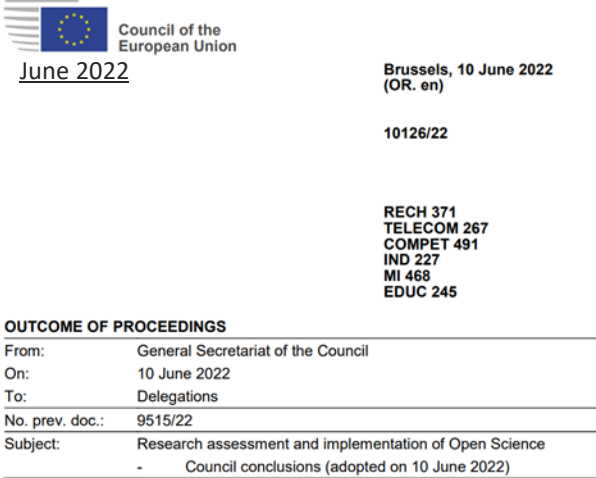
Dec. 2021

**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)

Open data directive

RESEARCH ASSESSMENT HAS TO CHANGE (RECOMMENDATION 790/2018)



COUNCIL CONCLUSIONS ON RESEARCH ASSESSEMENT (10126/2022 JUNE)

# [ERA policy agenda]

## European 2022 Research Area Policy Agenda

Overview  
of actions for  
the period  
2022-2024

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

of the  
in Union

Brussels, 26 November 2021  
(OR\_en)

14308/21

RECH 538  
COMPET 865

OUTCOME OF PROCEEDINGS

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

### *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)

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;

 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)



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 reusable, 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 CONCLUSIONS ON RESEARCH EVALUATION (2022)

## PRINCIPLES OF THE NEW EVALUATION

# Chueca

... and a project

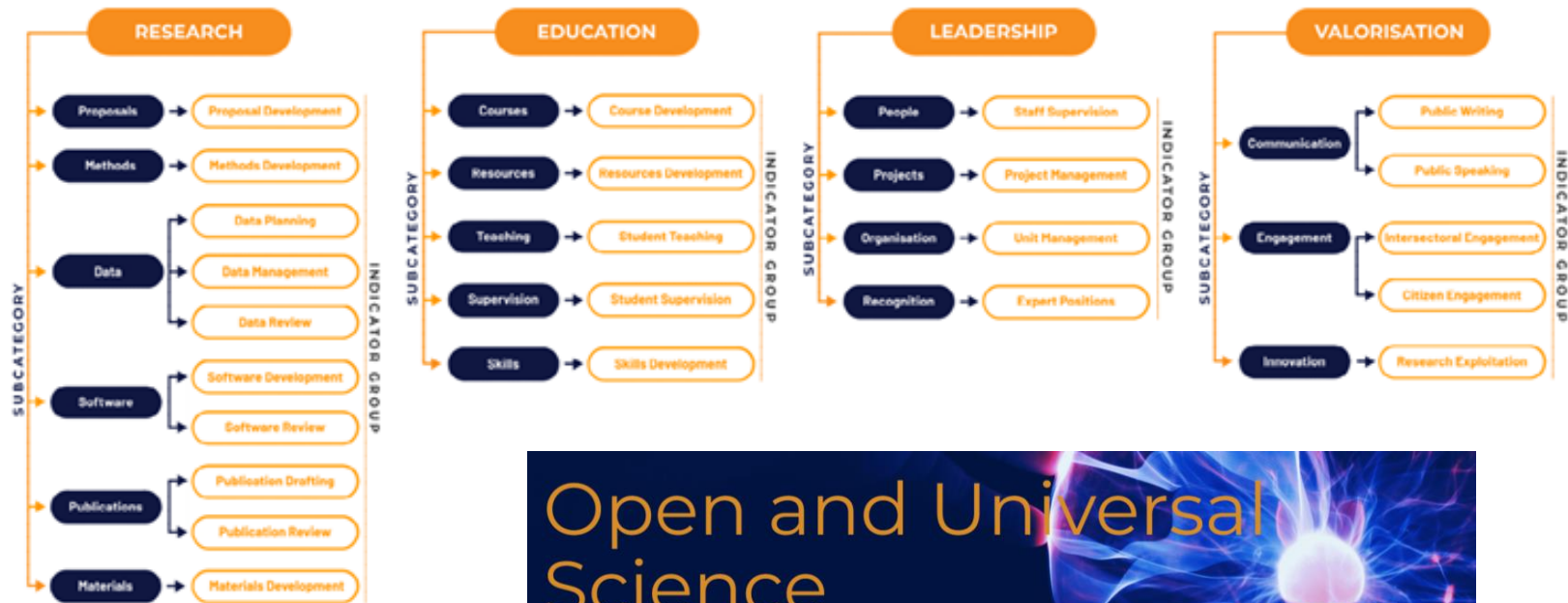
Andén 2 / Platform 2

Salida / Exit 

[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



## Open and Universal Science

OPUS helps reform the assessment of research towards a system that incentivise researchers to practice #OpenScience

BREAK ...  
QUESTIONS?





# ...it's time for Open Science


## PhD on track

PhD on Track: A guide for researchers

- REVIEW AND WRITE** learn about:
  - reviewing
  - types of reviews
  - searching
  - searching techniques
  - writing
  - the dissertation
- SHARE AND PUBLISH** learn about:
  - where to publish
  - submitting articles
  - co-authorship
  - copyright
  - the Crislin system
  - citation impact
- OPEN SCIENCE** learn about:
  - open access publishing
  - open archives
  - research data
  - data management
  - sensitive data
  - preregistration

## YouTube

Cerca



### OLS openlifescience full course online

## Open LifeSci

@OpenLifeSci  
332 iscritti

Video Riproduci tutti

- Open Leadership: Academia, industry and beyond! (1:22:25)
- Community Design for Inclusivity (1:25:00)

OLS6 / week 9 / Open Leadership: Academia, industry and beyond! (12 visualizzazioni • 2 giorni fa)

OLS6 / week 8 / Community design for inclusivity (5 visualizzazioni • 7 giorni fa)

## Open Science MOOC

Welcome! What is Open Science?

What is European Open Science Cloud (EOSC)? Research data management

Completion Credits

In this module you will learn about the Open Science movement and its principles. We will also look at the practical advantages of embracing these principles and present some easy steps to join the movement.

By the end of this module, you will be able to:

- Define the concepts of Open Science and Open Access.
- Explain the benefits of Open Science practices from a researcher's and society's perspective.
- Start practising Open Science.

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## A new guide on open science especially for beginning researchers

2023

17 May 2023

What should I pay attention to when it comes to open science? How do I set up my research openly and transparently? Where can I publish? NWO, in collaboration with UNL, DANS-KNAW and UKB (the partnership of university libraries and the KB) has published a guide on open science. The guide answers some frequently asked questions that (young) researchers have when getting started with open science.



## The Turing Way

Welcome

The Turing Way is an open source community-driven guide to reproducible, ethical, inclusive and collaborative data science.

Our goal is to provide all the information that researchers, students, industry, government and the third sector need at the start of their projects.

The book started as a guide for technical skills and is now a comprehensive guide to open science.

In February 2020, The Turing Way was published as an open source book on communication, collaboration and open science.

Visit our GitHub Repository  
This book is powered by Jupyter Book

## The Turing way

### OUVRIRE LA SCIENCE


OPEN SCIENCE COMMITTEE WORKING GROUPS BLOG SCHEDULE RESOURCES

## 2020

### PASSPORT FOR OPEN SCIENCE - A PRACTICAL GUIDE FOR PHD STUDENTS

GUIDES

The Passport For Open Science is a guide designed to accompany PhD students at every step of their research career, whatever their disciplinary field. It provides a set of tools and good practices that can be directly implemented.



## FOSTER

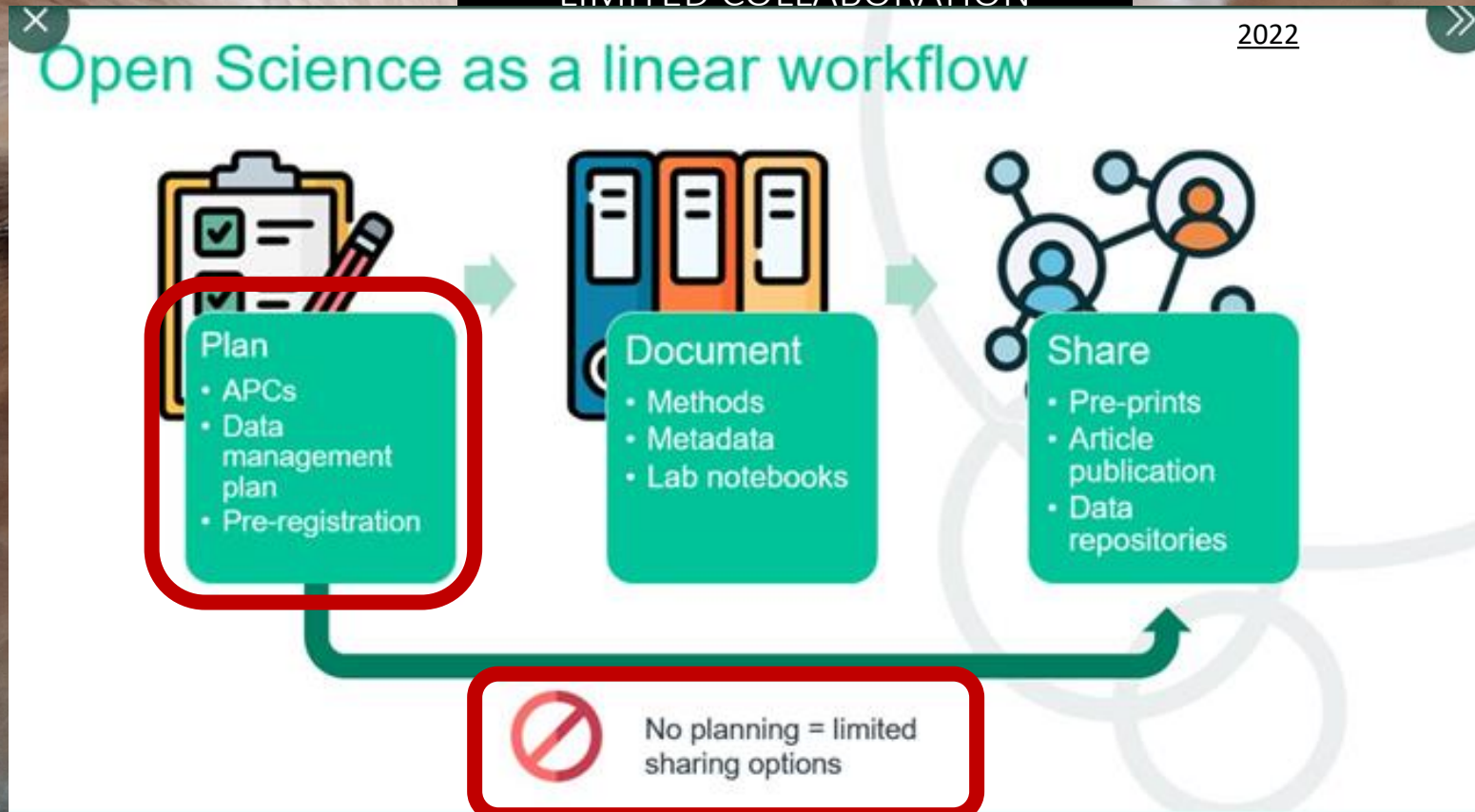
About Resources Events Courses News Search for...

### 2018

## Open Science Training Handbook

[born Open]

NO PLANNING =  
LIMITED SHARING OPTIONS,  
LIMITED CO-CREATION,  
LIMITED COLLABORATION



# A DIFFERENT WAY

FROM  
ANOTHER  
POINT  
OF VIEW

RoomMate  
HOTELS

CHALLENGE YOURSELF:  
HOW OPEN ARE YOUR  
CHOICES IN RESEARCH?

## Open Science Game: Open Up Your Research

[OS game](#)

You will follow the researcher Emma on her way to a PhD. You get to decide at each stage whether Emma should practice an open science approach or go the conventional route. How should Emma's research process look like? What will await Emma at the end?



### OPEN UP YOUR RESEARCH

With this game, you follow Emma on her way to her PhD and decide for her to either practice science the traditional way or to follow a more open approach. While this game is intended to make researchers aware of the Open Science practices that could be applied in one's research workflow, not all of these practices might be equally suitable

# Open by design



Openlifescience

OLS program ▾ OLS-7

## The OLS-7 program

**Purpose:** Training for early stage researchers and young leaders interested in furthering their Open Science skills

**Outcome:** Ambassadors for Open Science practice, training and education across multiple European and international borders

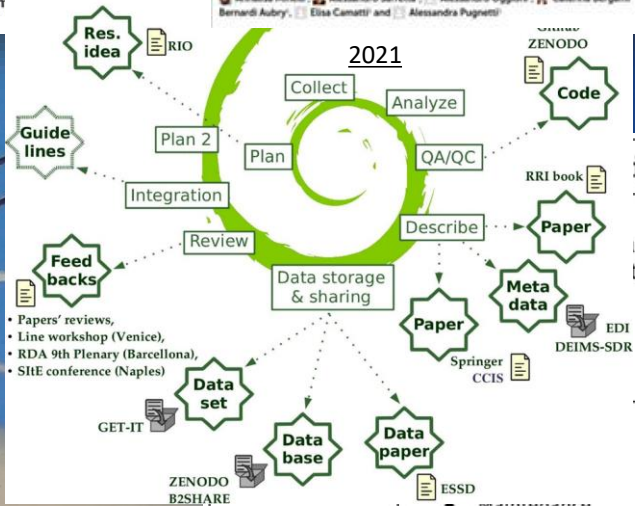
**Process:** A 16-week mentoring & training program, based on the [Mozilla Open Leader program](#), helping participants in using three principles:

1. **Sharing** essential knowledge re
2. **Connecting** members across di expertise.
3. **Empower**

### Opening Marine Long-Term Ecological Science: Lesson Learned From the LTER-Italy Site Northern Adriatic Sea

Annalisa Minelli, Alessandro Sarreita, Alessandro Oggioni, Caterina Bergami, Mauro Bastianini, Fabrizio Bernardi Aubry, Elisa Comazzi and Alessandra Pugnetti

for them to share their experiences and



- Design
  - Illustrate the need for a project, its vision, and its goals
  - Embrace and communicate the benefits of Open Science and how to strategically apply
  - Identify the public resources to share their data
  - Identify the different type of Open Access and associated journals
- Build
  - Start any project with openness in mind from day one
  - Setup a project repository on GitHub using best practices for enabling collaboration
  - Choose and apply open licenses appropriately
- Empower
  - Create and enforce a safe working environment
  - Promote the values of Open Science to empower others to lead and collaborate
  - Include a broad range of contributors in their work
  - Communicate their work and vision in a 2min demo of elevator pitch
- Lead an open project in science

A RESEARCH WORKFLOW OPEN BY DESIGN

	Sharing	Participation & Inclusion
ing	<ul style="list-style-type: none"> <li>• Information-sharing focus</li> <li>• Community interactions                             <ul style="list-style-type: none"> <li>◦ Gifting</li> <li>◦ Enhancing value exchange</li> <li>◦ Networking common interests</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Governance focus</li> <li>• Community interactions                             <ul style="list-style-type: none"> <li>◦ Creating together</li> <li>◦ Soliciting ideas</li> </ul> </li> <li>• Project identity</li> </ul>
actions through use	<ul style="list-style-type: none"> <li>• Commons-based production</li> <li>• Data stewardship</li> <li>• Documentation</li> <li>• Licensing</li> <li>• Networking</li> </ul>	<ul style="list-style-type: none"> <li>• Decision-making</li> <li>• Delegation</li> <li>• Event planning</li> <li>• Community Management</li> <li>• Mentoring</li> </ul>
Empower for...	<ul style="list-style-type: none"> <li>• Maintains clarity of vision &amp; purpose</li> <li>• Maintain authenticity &amp; integrity</li> <li>• Stays curious</li> </ul>	<ul style="list-style-type: none"> <li>• Embraces failure</li> <li>• Ensures safety</li> <li>• Inspires contribution</li> </ul>



# The Turing Way

Search this book...

## Welcome

Guide for Reproducible Research

Guide for Project Design

Guide for Communication

Guide for Collaboration

Guide for Ethical Research

Community Handbook

## Afterword

- Welcome
- Guide for Reproducible Research
- Guide for Project Design
- Guide for Communication
- Guide for Collaboration
- Guide for Ethical Research
- Introduction to Research Ethics
- Research Ethics Committees Workflows
- Ethical Decisions in Preclinical Research
- Law, Policy and Human Rights in Ethics
- Research Ethics for Social Data
- Activism for Researchers
- Internal Policy Advocacy
- Self-Reflection
- Ethical Considerations for Open Source Governance Models
- Community Handbook
- Afterword

## The Turing Way

Search this book...

Welcome

Guide for Reproducible Research

Guide for Project Design

Overview of Project Design

Creating Project Repositories

Personas and Pathways

File Naming Convention

Code Styling and Linting

Sensitive Data Projects

Managing Sensitive Data Projects

Working on Sensitive Data Projects

Guide for Communication

## Guide for Ethical Research

This guide covers topics related to ethical aspects in data science.

Data scientists make data-driven decisions that require the collection of data approaches that can have serious implications for health, security, politics, social associated with them. Researchers or any kind of stakeholders in data science should consider the ethical standards and their impact of people's lives [Mar18].



## Guide for Project Design

This guide covers topics related to effective project planning and management.

In this guide, we compile best practices and guidance for designing research projects by including different aspects of project management and (iterative) development practices derived from academia and industry.

Before starting a project, researchers must define the project's scope. Researchers should start by identifying the main questions they aim to address through their work. Scope definition also includes defining the project goals, possible outcomes, resources requirements, people involved (collaborators, users and target audience) and possible constraints.

Researchers can then proceed to identify the expected minimum viable product of their project, synergies with other projects (similarities as well as differences), measure(s) of success, and the overall impact they hope to achieve. After these essential questions are addressed, planning can focus on the operational

## Guide for Collaboration

Getting Started With GitHub

Maintainers and Reviewers on GitHub

Organising Meetings

Organising Online Coworking Calls

Organising Conferences

Chairing Events

Participating in Events

Informal Coffee Chats

Tools for Facilitating Collaboration

Managing a New Community and Team

Leadership in Data Science

Research Infrastructure Roles

Remote Collaboration

Shared Ownership in Open Source Projects

Sustainability of Open Source Projects

## The Turing way

Data science is defined by its interdisciplinarity. Our work can only reach its highest potential with diverse teams of people involved in designing and delivering the research or product.



Fig. 91 There is more to collaboration than we see. The Turing Way project illustration by [author]. Used under a CC-BY 4.0 licence. DOI: 10.5281/zenodo.3332807.

There are many different skills required to work well in groups with a wide range of expertise. In this guide, we welcome contributions in developing guidance on following (but not limited to)

# Some recipes / 1

TO  
STORE+DISSEMINATE:  
CREATE A  
COMMUNITY ON  
ZENODO

OSFHOME

Search Support Donate

<https://osf.io/>

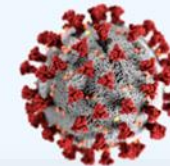
## The place to share your research

OSF is a free, open platform to support your research and enable collaboration.

zenodo

Featured communities

<https://zenodo.org/>



Coronavirus Disease Research Community - COVID-19

This community collects research outputs that may be relevant to the Coronavirus. Scientists are encouraged to upload their outcome in this collection to facilitate. Although Open Access articles and datasets are...

Curated by: Covid19\_Team\_OpenAIRE

TO  
COLLABORATE+STORE:  
CREATE A PROJECT ON  
OPEN SCIENCE  
FRAMEWORK

Get started

zenodo

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Upload Communities

elena.giglia@unito.it

OPERAS: open scholarly communication in the european research area for social sciences and humanities

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May 18, 2021 (v2) Presentation Open Access

OPERAS Open Chats: Wir müssen reden... heute über die OPERAS Angebote mit Bibliotheken und Fachinformationsdiensten

Topfer, Marlen;

Presentation of the event on the OPERAS Infrastructure held by OPERAS-GER on 18 May 2021.

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May 14, 2021 (3) Presentation Open Access

OPERAS, l'infrastruttura di ricerca per le scienze umane e sociali

Giglia, Elena.

View

New upload

Community

OPERAS

open scholarly communication in the european research area for social sciences and humanities

OPERAS: open scholarly communication in the european research area for social sciences and humanities

OPERAS is the European research infrastructure for

# Some recipes / 2



The Turing Way

Search this book...

- Welcome
- Guide for Reproducible Research
- Guide for Project Design
- Guide for Communication
- Guide for Collaboration
- Getting Started With GitHub
- Motivation for Using GitHub
- First steps on GitHub
- Using more GitHub features
- Advanced GitHub features
- Maintainers and Reviewers on GitHub
- Organising Meetings

## First steps on GitHub

Turing way / Github

Here, we provide step-by-step instructions to get started with GitHub.

### 1. Create a GitHub account

Go to <https://github.com/> and create a new account

### 2. Create a repository

When you have created a new account and you are

A repository or repo is the online space where you

## Motivation for Using GitHub

GitHub is an online web interface for collaborating, developing. It's designed to be easily accessible (you do not need to be allowed other people to test, modify, remix and reuse it. It also allows for documentation and maintenance.

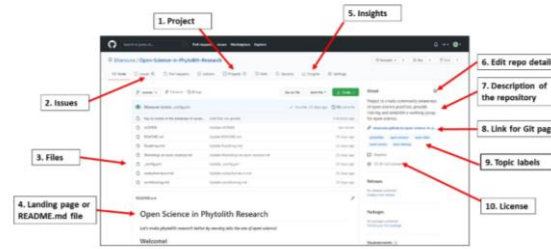
GitHub is not the only available development platform, but it is a disciplinary and private-public boundaries. Thus, this chapter through other platforms probably have analogous functions

Some key things to know about GitHub: – it has terrific project management and communication tools that are useful for any project with a large set of documents.

- it can be used to store documentation, data and make web pages for projects.
- it provides an easy-to-use interface for **version control** that allows all activities to be recorded so you can revisit past versions and you know who made each contribution to the project.
- it has many options for automating repeated project management tasks.

## Using GitHub Features to foster collaboration

This is what a repository looks like when it is set up to include many of these features, making it a welcoming, collaborative workspace.



## 5. GitHub for Collaboration

Suggest changes

As you learned in a previous section, GitHub is a web-based interface for version control. To review, version control is a way of keeping track of changes made to a collection of working documents. GitHub also provides an array of collaborative tools as well as structure and space for communicating about collaborative work on open source. You've already got your project set up on GitHub in the previous section, in this section you'll establish a workflow to create a respectful and productive environment for your collaborators.

First, you'll learn a bit more about how repositories are shared, stored, and updated on GitHub. You'll learn about GitHub-specific concepts related to making those changes: branches, pull requests, merges, forks, and issues. And you'll get some practice managing and making changes to a repository.

### In This Section

GitHub for collaboration



Cerca GitHub for collaboration OLS6



## GitHub for Collaboration

Patricia Herterich

Using slides by Malvika Sharan and Yo Yohudi

References: [Mozilla Science Lab's Study Group Orientation](#), [Friendly GitHub Intro by Kirstie Whitaker & GitHub Collaborating Document by Malvika Sharan and Esther Plomp](#)  
Visual description: <https://learn.github.com/>

1:19 / 1:02:17

cohort / Week 5 / GitHub for Collaboration!

USE GITHUB  
TO MANAGE YOUR PROJECT IN A  
COLLABORATIVE WAY  
(TASK MANAGER CHECKLIST, DATA,  
SOFTWARE, TEXTS,  
COLLABORATION,  
VERSION TRACKING...)

moz://a

README

- 1. Intro to Open Leadership
- 2. Opening Your Project
- 3. Building Communities
- 4. Get Your Project Online
- 5. GitHub for Collaboration
  - > Getting Around In GitHub
  - > Collaborative Workflow

# ...start with with a bit of creation

2021



## ORION INSPIRING STORIES

Ideas & examples

### ORION INSPIRING STORIES INDEX



#### CITIZEN SCIENCE

Introducing co-creation in fundamental life sciences?

PAGE 8

PAGE 8

#### CO-CREATION

Encouraging co-creation through a funding call



#### OPEN SCIENCE

Aligning an entire country to develop an Open Science action plan

PAGE 8

PAGE 10

#### PUBLIC DIALOGUES

Thinking differently through dialogue



#### PUBLIC ENGAGEMENT

Using Art as a way to level the playing field when discussing science

PAGE 12

### What is Co-creation?

Co-creation has been defined as “purposeful action of associating with strategic customers, partners or employees to ideate, problem solve, improve performance, or create a new product, service or business”. In essence, co-creation experiences are a way in which to connect multiple stakeholders, bringing them together to discover their interests and values and using these opportunities to discuss, develop and implement projects or ideas to achieve new, inclusive, forward-thinking research strategies. As a result, co-creation experiences allow high-quality interactions and unique experiences, with those involved becoming connected, informed and empowered.

### Co-creation menu

Co-creation experiences seek to engage multiple stakeholders at all points of the research lifecycle, from conception of a novel research project, through funding selection and resourcing, to dissemination of research findings and use of those findings within society, which in turn informs future funding calls. In this way, the hopes, concerns and aspirations of the end users of research, the public, are integrated from the very beginning of the process right through to the end. This concept maps well with the idea of making science truly open, transparent and responsive to societal needs, a new approach of the European Research Area known as Open Science.

Rathenau Instituut [2022](#)

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REPORT

INCLUSIVE SCIENCE

23 FEBRUARY 2022

## Moving forward together with open science

Towards meaningful public engagement with research

Participants in the National Garden Bird Count (photo: Sabine Jo)



# ...and a bit of citizen science

CITIZEN SCIENCE IS NOT ONLY ABOUT DATA COLLECTION – IT'S A PARTICIPATORY PROCESS

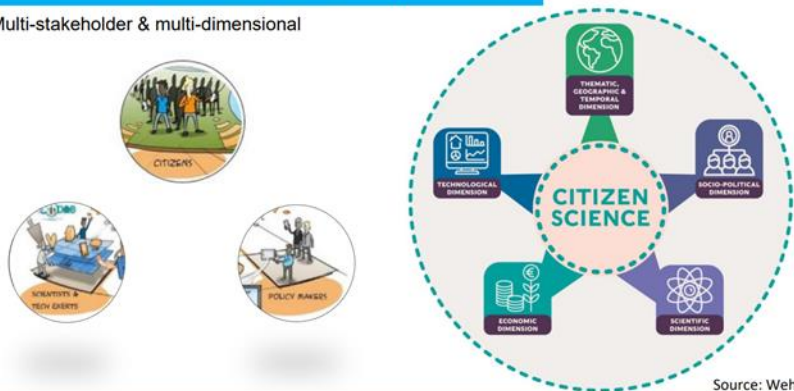
## Citizen Science & Open Science Community of Practice

2023



### Citizens Science is about process

Multi-stakeholder & multi-dimensional



Source: Wehn (2022)

**"Citizen Science is NOT only about data collection - means for open, holistic and participatory processes of knowledge generation"**  
**"Citizen Science can be understood as providing meaning to Open Science in a process dimension"**



## PARTHENOS

HOME TRAINING MODULES FOR TRAINERS FOR LEARNERS

# CITIZEN SCIENCE IN THE (DIGITAL) ARTS AND HUMANITIES

## Citizen science and the Humanities

This module will look at the variety of practices within 'citizen science', how you as a humanist might get started working with them, what issues you might be wary of along the way and how Research Infrastructures can potentially help you.

## UCL Citizen science

Help & contact us About us

UCL Home > Library Services > Research Support > Open Science > Citizen Science

### Citizen Science

Citizen Science is members of the public having a greater role within research and recognising the invaluable role they play in providing insights

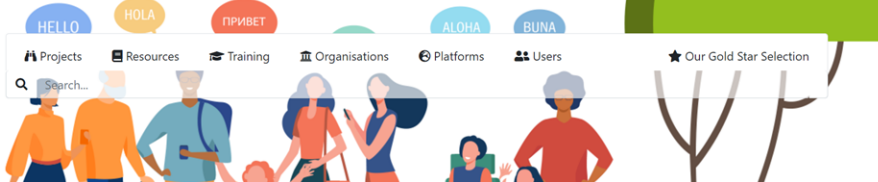
### 8 Pillars of Open Science

[eu-citizen.science](https://eu-citizen.science) Search Blog Events Moocs Forum FAQ About

<https://eu-citizen.science/>

## eu-citizen.science

Welcome to the platform for sharing citizen science projects, resources, tools, training and much more



# Co-design and ci

**Cos4Cloud** The Project Citizen Science innovation Cos4Cloud Services Co-design News & Events

<https://cos4cloud-eosc.eu/>

## Learn how to use co-design in citizen science:

Download our presentation! It explains **what co-design is, why it is useful and how to apply it in citizen science** in general and in creating technological citizen science services in particular to explain it, we will use the Cos4Cloud\* experience.

[DOWNLOAD THE ENGLISH VERSION](#) →

[DOWNLOAD THE SPANISH VERSION](#) →

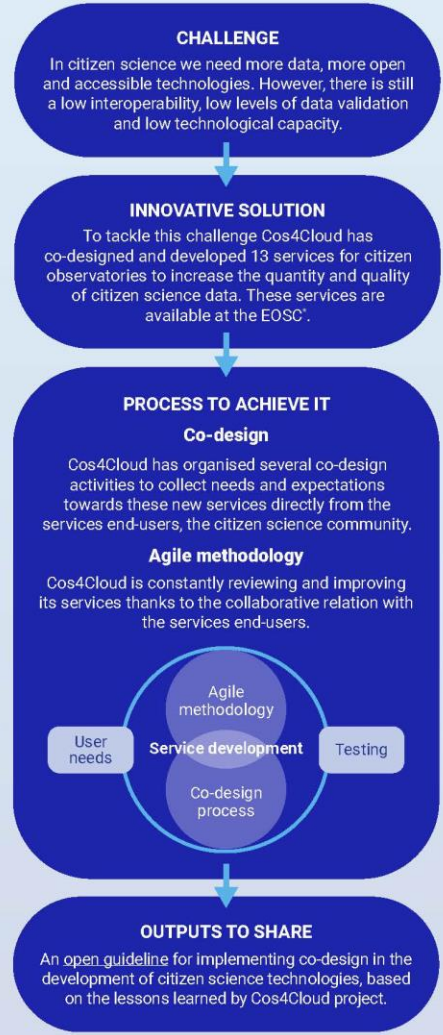


## CO-DESIGN AS A SERVICE IN CITIZEN SCIENCE

### CO-DESIGN: WHAT IS IT?



### A SUCCESS CASE: COS4CLOUD



## CO-CREATION IN DIALOGUE WITH SOCIETY

**OPERAS**  
open scholarly communication in the european research area for social sciences and humanities

**COESO**  
connecting research and society

Research for  
**vera**  
activating research

**OPERAS**  
open scholarly communication in the european research area for social sciences and humanities

Vera **OPERAS Vera**

A space for co-creation that provides a set of tools to discover potential partners, to define and co-design the activities, to co-create new knowledge and solutions, and to deliver them to society.

VERA is an online collaboration platform where a diverse set of actors can build social science and humanities research projects together. It's a virtual gathering place for professionals and practitioners of all kinds and researchers. It's a place where projects can be dreamed and built, where collaborations can take place, and where links to funding can be found.

The COESO project (Collaborative Engagement on Societal Observatories) is a participatory research project, funded by the European Commission and supported by the OPERAS research infrastructure. It involves several communities: the social sciences and humanities community, the citizen science community, and the open science community. It will thus contribute to the development of citizen science in the social sciences and humanities through a service-first approach. The project will

# ...opening up the entire cycle



Open Research Leeds  
@OpenResLeeds

.@MarcusMunafa on preregistration vs established (post hoc) peer review:

"If we are going to fly an aeroplane, we do our pre-flight checks before we take off, not when we are about to land" #ukrnLeeds #OpenResearch



Dec. 14 2021

## CONTENT

- Why preregister studies?
- How to preregister your study
- Where to preregister?
- Deviating from preregistered plans
- References

## Preregistration

## Preregistration da PHDontrack



Preregistration involves specifying your hypotheses, study design and data analyses before writing up your final report. Sometimes, preregistration takes place before any data are collected, while in other cases (when using pre-existing data), it takes place before the data are analysed. Preregistration is typically done in a time-stamped, non-editable file, which is then deposited in a secure online archive. While not yet equally relevant in all disciplines or to all types of study, the practice of preregistration is currently expanding.



The open registries network

Search registrations...

<https://osf.io/registries/>

Search

256,423 searchable registrations as of May 13, 2018

CREATE

Creating AsPredicteds (e.g. approve, make public)

Your email address (used in AsPredicted)

SEE OWN

PREREGISTRATION  
OSF Registries o AsPredicted  
- PRIORITY  
- HARD TO FALSIFY DATA  
- NEGATIVE RESULTS

necessary to generate it takes

### How does it work?

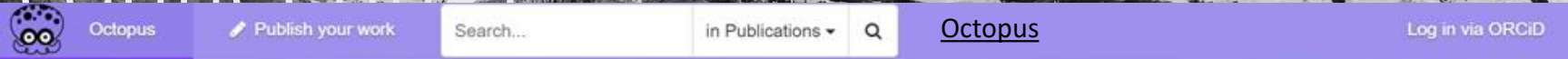
- One author briefly answers 9 questions.
- All participating authors receive an email asking for approval.
- If everyone approves, it is saved and stays private until an author acts to make it public, or it remains private forever. ([Why?](#))
- Authors may share anonymous .pdf with reviewers.
- If made public, a single-page .pdf is generated. That document can be used as a supplement. ([See sample](#))
- The .pdf contains a unique URL that allows for one-click verification. That URL can be included in the paper.
- The .pdf is automatically stored in the web-archive. ([See sample](#))
- There are no accounts, userids, or passwords.

### What if things don't go "as predicted"

You can just say so in the paper:

- "Contrary to expectations, we found that..."
- "Unexpectedly, we also found that..."
- "In addition to the analyses we pre-registered we also ran..."
- "We encountered an unexpected situation, and followed our Standard Operating Procedure" (.pdf)

# ...opening every bit (and then connecting)



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# ...being reproducible



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EDUCATIONAL NEXUS ▾

PEDAGOGIES


PUBLICATIONS



Open Access | Published: 10 January 2017

2017

## A manifesto for reproducible science

Marcus R. Munafò , Brian A. Nosek, Dorothy V. M. Bishop, Katherine S. Button, Christopher D. Chambers, Nathalie Percie du Sert, Uri Simonsohn, Eric-Jan Wagenmakers, Jennifer J. Ware & John P. A. Ioannidis

Framework for  
Open and  
Reproducible  
Research  
Training

FORRT



# FORRT

Welcome

Guide for Reproducible Research

- Overview
- Open Research
- Version Control
- Licensing
- Research Data Management
- Reproducible Environments
- BinderHub
- Code quality
- Code Testing
- Code Reviewing Process
- Risk Assessment
- Case Studies



© Sydney Harris 1977

Comment | Open Access | Published: 08 December 2015 | 2015

### Five selfish reasons to work reproducibly

Florian Markowitz 

*Genome Biology* 16, Article number: 274 (2015) | [Cite this article](#)  
18k Accesses | 38 Citations | 456 Altmetric | [Metrics](#)

Research Compendia

Previous  
Welcome

[Turing way/reproducible research](#)

Next  
Overview of Reproducible Research

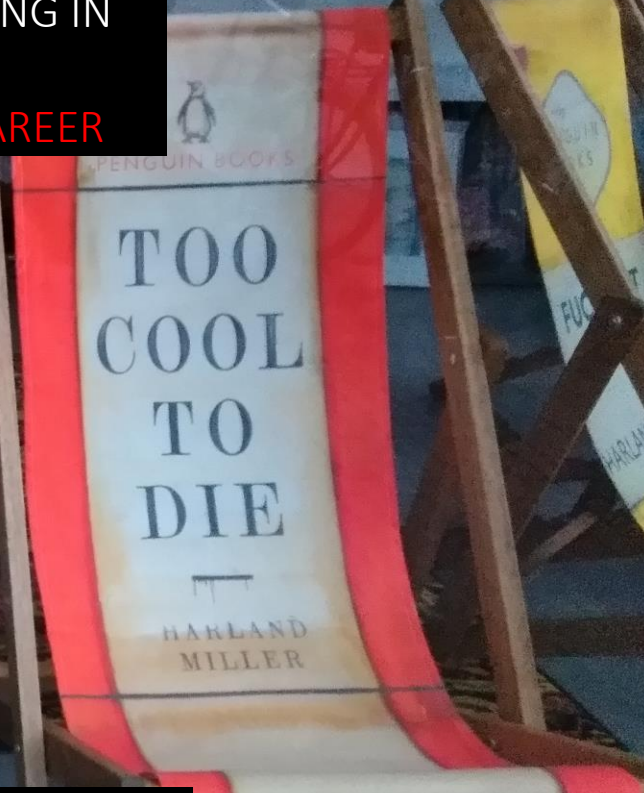
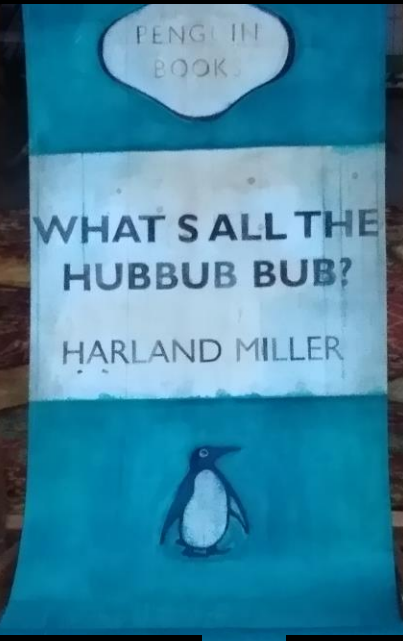


The Turing Way

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# ... being aware of your rights

**2023**

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Per the signature of their grant agreement, for peer reviewed scientific publications relating to their results, Horizon Eu...

**Is the "open access prior obligation" aligned with the cOAlition S Rights Retention Strategy?**  
It is. All cOAlition S organisations require that authors (or their organisations) retain sufficient intellectual property righ...

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**2022** Plan S Principles & Implementation

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Making full & immediate Open Access a reality

**The Author's Rights Quiz**  
How well do you know your rights as an author?

**Let's find out!** press Enter

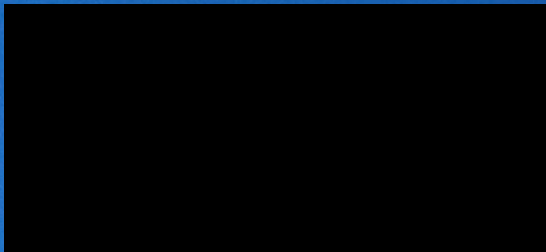
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# ... being aware of your rights



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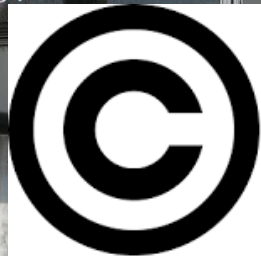


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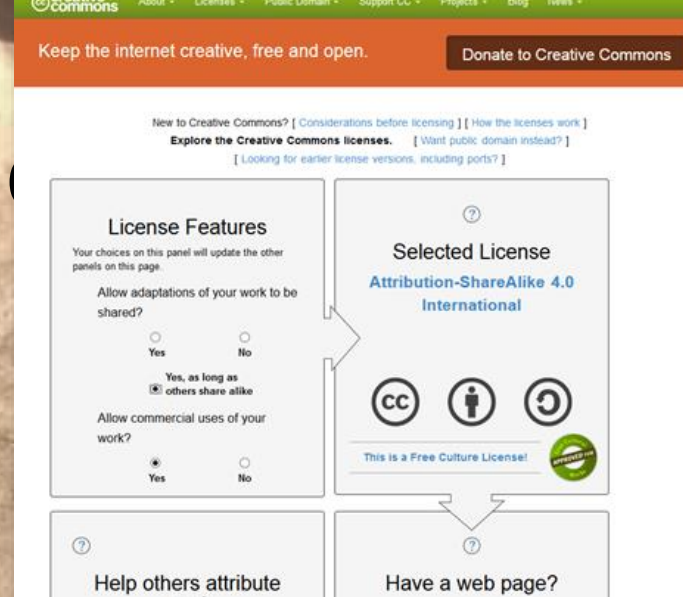
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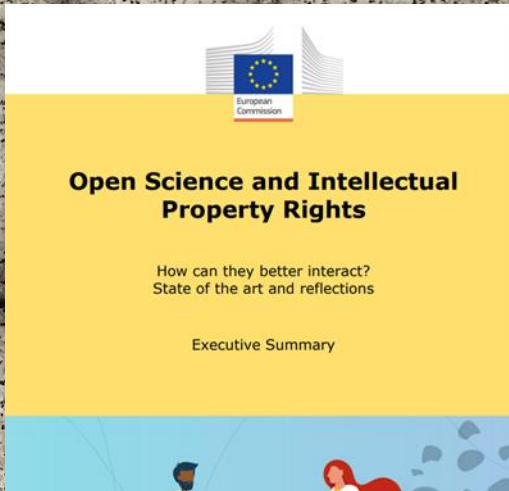
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# 915696614 Open Science and copyright



This report provides a critical analysis of the literature on the relation between OS and IPR protection and how they might live harmoniously, by scoping the statement 'as open as possible, as closed as necessary'. The starting point for the analysis about IPR and OS in Europe is the following hypothesis.

- There are no incompatibilities between IPR and OS. 'On the contrary the IPR framework, if correctly defined from the onset, becomes an essential tool to regulate open science' (Barbarossa et al., 2017, p. 2).

- Basic science opens unforeseen pathways. It is both essential and incalculable. Its value cannot be estimated because its results are unknown.

- The term 'IP' comprises two main areas: (1) literary and artistic property, which is mainly covered by copyright, and (2) industrial property, which mainly includes patents (as well as utility models and supplementary protection certificates), trademarks, industrial designs, geographical indications and trade secrets. Each one has a different impact on OS.

- Under the current copyright regime, works are closed by default. Therefore, to foster openness in science, consent must be given by the author or an exception/limitation must apply. Consent of the author must be proactive.

- Dynamic processes (such as science production) require IP licences that do not hinder changes or burden the process with unnecessary bureaucracy. A community's ability to sustain dynamic processes depends on this.

- Under international treaties and legislation, it is not possible to create an autonomous scientific author whose works would merit different IP conditions from the 'all rights reserved' default rule. Exceptions related to scientific IPR should be legally maximised, avoiding as far as possible the risk of legal proceedings.

IT IS URGENT TO ADDRESS NEW COPYRIGHT AND IPR REGIMES TO GUARANTEE BETTER IP PROTECTION RESPONSIVE TO THE NEEDS OF OPEN, TRANSPARENT AND COLLABORATIVE SCIENCE. THE INTERNATIONAL PRAGMATISM RESULTING FROM COVID-19 AND THE POSITIVE REACTIONS TO OS-OA PARADIGMS SHOULD BE TAKEN ADVANTAGE OF

# ...tearing down walls/enabling services

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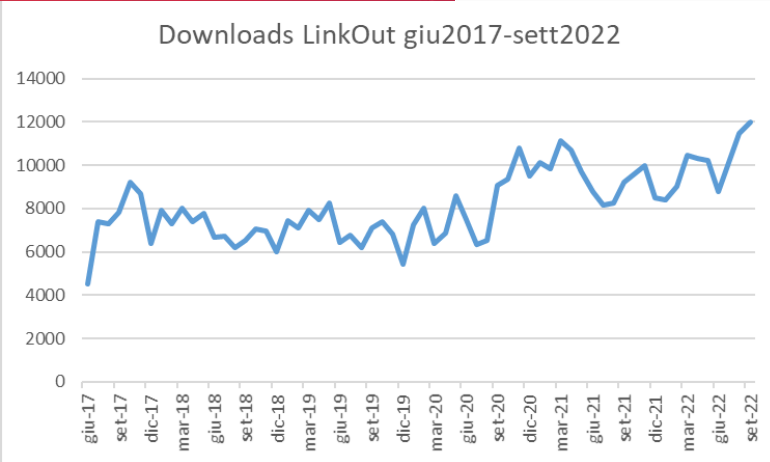
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**Paolo Manghi**

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Breast Cancer Res Treat, 1988 May;11(2):147-53.

**Distribution of Ha-RAS-1 proto-oncogene alleles in breast cancer patients and in a control population.**

Saglio G<sup>1</sup>, Camaschella C, Giai M, Serra A, Guerrasio A, Peirone B, Gasparini P, Mazza U, Ceppellini R, Biglia N, et al.

Author information

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In scientific practice, trial and error is a fundamental process of learning and discovery. Therefore, JOTE aims to make public the lessons of the struggles in research. JOTE is convinced about the productive role of errors, and so we aim to publish answers to the question "what went wrong?" in the form of short communications (empirical articles), and to problematize this question by reflection on those errors (reflection articles). JOTE also welcomes reports of methodological challenges, suggestions, or technical flaws that carry relevant information for the field to which they belong (meta-research articles). Finally, to further open up the black box of academia, we publish rejected grant applications and peer-reviews.

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The registry supports any workflow in its native repository.

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<https://workflowhub.eu/>

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[zimeon / signposting](https://github.com/zimeon/signposting) <https://github.com/>

2 branches 0 releases 1 contributor

Latest commit 4cb45b6 on 8 Mar

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15 September 2015 Dataset Open access

## Data set 1 for CARBON AND GENE FLOW MEDIATED BY VIRUS LIFE

Wilson, Willie; Martínez Martínez, Joaquin; Archer, Steve; Fields, David; Gilg, Ilana; Fløge, Sheri (show affiliations)

Experimental data sets used for manuscripts associated with coccolithovirus infection of *Emiliania huxleyi*. Flow cytometry data, expression data of genes associated with photophysiology, fatty acid metabolism and sulphur cycling. Please contact Willie Wilson (wilwil@sahfos.ac.uk) for further information.

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Publication date: 15 September 2015  
DOI: [10.5281/zenodo.31006](https://doi.org/10.5281/zenodo.31006)  
Keyword(s): Virus, *Emiliania huxleyi*, photophysiology, sulphur cycling, fatty acid metabolism  
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**A methodology for gathering and annotating the raw-data/characteristics of the documents citing a retracted article**

Ivan Heibi<sup>1</sup>, Silvio Peroni<sup>1</sup>  
<sup>1</sup>University of Bologna

Ivan Heibi  
Dec 09, 2020 • 217 • 83

Keyword appears in: authors

**Protocollo di Conformità di Riviste Scientifiche all Open Access**

Daniele Cavestri<sup>1</sup>, Francesca Mangialardo<sup>1</sup>, Sebastian Barzaghi<sup>1</sup>, Silvio Peroni<sup>1</sup>  
<sup>1</sup>University of Bologna

Sebastian Barzaghi  
Jul 15, 2019 • 243 • 72 • 1

YOU CAN DEPOSIT DATA, SOFTWARE, IMAGES, POSTER, PROTOCOLS, WORKFLOWS... THEY BECOME KNOWLEDGE «BLOCKS» TO BE REUSED



# ... not only articles

PREPRINTS

May 2017 PLOS COMPUTATIONAL BIOLOGY

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OPEN ACCESS EDITORIAL

Ten simple rules to consider regarding preprint submission

Philip E. Bourne, Jessica K. Polka, Ronald D. Vale, Robert Kiley

Published: May 4, 2017 • <https://doi.org/10.1371/journal.pcbi.1005473>

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- IMMEDIATE PUBLICATION
- SCIENTIFIC PRIORITY
- NO POST SUBMISSION
- «BLACK HOLE»
- FOCUS ON THE CONTENT (AND NOT ON THE BOX)

## How Science Beat the Virus

And what it lost in the process

Story by Ed Yong

Dec.14, 2020

papers, or “preprints,” to freely accessible websites, allowing others to immediately dissect and build upon their results. This practice had been slowly gaining popularity before 2020, but proved so vital for sharing information about COVID-19 that it will likely become a mainstay of modern biomedical research. Preprints accelerate science, and the pandemic accelerated the use of preprints. At

CRUCIAL DURING PANDEMICS

Rule 1: Preprints speed up dissemination

Rule 2: Preprints should be licensed and formatted to facilitate reuse

Rule 3: Preprints provide a record of priority

Rule 4: Preprints do not lead to being scooped

Rule 5: Preprints provide access to scholarly content that would otherwise be lost

Rule 6: Preprints do not imply low quality

Rule 7: Preprints support the rapid evaluation of controversial results

Rule 8: Preprints do not typically preclude publication

Rule 9: Preprints can further inform grant review and academic advancement

Rule 10: Preprints—one shoe does not fit all

# [preprints]



<b>Introduction</b>	3
What are preprints?	4
Pros and cons of preprints	6
What are the disciplinary aspects and recent developments around preprints?	7
<b>Practical guide</b>	9
Where to find a preprint server	9
What to consider before selecting a preprint server	10
How to post a preprint	10
How to prepare a preprint	11
How to upload a preprint	11
What licence to choose for a preprint	11
How to revise a preprint	12
How to withdraw a preprint	12
How to link a preprint to the published journal article	12
<b>For the public:</b>	
<b>How to interpret the information in a preprint?</b>	13
Recognising the differences between a preprint and a published article	13
How to recognise a preprint?	14
What to do if a preprint seems interesting?	14

### FOR RESEARCHERS

-  **Very short time-to-publish**
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-  **Increased visibility**
-  **Recognition of your work**
-  **Early feedback**
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-  **A few journals do not accept manuscripts previously published as preprints**

### FOR RESEARCHERS AND THE PUBLIC

-  **Free access to work**
-  **Accelerate science by rapidly building upon each other's work**
-  **Earlier development of potential collaborations**
-  **Everybody can comment**
-  **Risk of pseudoscience**
-  **Novelty and quality of research not validated: harder to distinguish between low- and high-quality research**

# [Preprint]

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## Directory of preprint server policies and practices

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Show 10 entries

Preprint server	Disciplinary scope	Ownership type	External content indexing	Permanence of content	Preprint content (commenting, etc)
↑ AAS Open Research	Multiple scientific fields, including health and wellbeing*	Funding organisation (funder)	Google Scholar, Prepubmed, Europe PMC, SciLit	Permanent with some removal options in extraneous circumstances	Preprints permanently archived in Portico Commenting (including annotation plug-ins), Onsite search, Link to Google Scholar citations, Blog and gateways
↑ AfricArxiv	All scientific fields	Academic community group; charity	Google Scholar, SHARE, Microsoft Academic, Unpaywall	Permanent with some removal options in extraneous circumstances	COS Preservation Fund to maintain read access for 50+ years Commenting (including annotation plug-ins), Onsite search
↑ AgriXiv	Relating to agriculture and allied sciences, including life sciences, medicine and health sciences, social and behavioural sciences	Academic community group	Google Scholar, SHARE, Microsoft Academic, Unpaywall	Permanent with some removal options in extraneous circumstances	COS Preservation Fund to maintain read access for 50+ years Commenting (including annotation plug-ins), Onsite search
↑ AMRC Open Research	Broad life & biomedical research, including basic scientific, translational, applied	Funding organisation (funder); Membership organisation	Google Scholar, Prepubmed, Europe PMC, SciLit		

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A growing team of groundbreaking scientists around the world are now sharing their lab notebooks online

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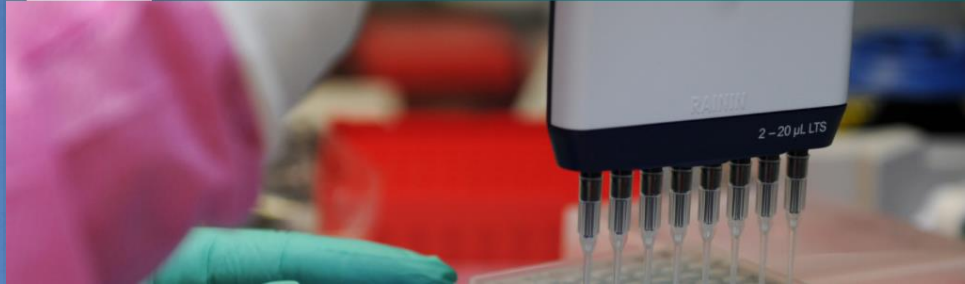
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MY RESEARCH IN 2 MIN



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OPINION ARTICLE Check for updates

**REVISED** Open laboratory notebooks: good for science, good for society, good for scientists [version 2; peer review: 2 approved, 1 approved with reservations]

✉ **Matthieu Schapira** <sup>1,2</sup>, The Open Lab Notebook Consortium, ✉ **Rachel J. Harding** <sup>1</sup>

# What is an Open Notebook?

Open Notebooks are documents that contain equations, visualisations, narrative text and live code that can be executed independently and interactively, with output visible immediately beneath the input.

They bring together analysis descriptions and results, which can be executed to perform the data analysis in real time.



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jupyter Lorenz Differential Equations

Exploring the Lorenz System

In this notebook we explore the Lorenz system of differential equations:

$$\begin{aligned} \dot{x} &= \rho y - x \\ \dot{y} &= \rho x - y - xz \\ \dot{z} &= x - \beta z \end{aligned}$$

This is one of the classic systems in non-linear differential equations. It exhibits a range of complex behaviors as the parameters  $\rho, \beta, \gamma$  are varied, including what are known as chaotic solutions. The system was originally developed as a simplified mathematical model for atmospheric convection in 1963.

In [17]: `interact(Lorenz, rho=slider(10, 30), omega=slider(0.2, 1), theta=slider(0, 30))`

rho: 30.0  
 max\_time: 10  
 beta: 2.6  
 gamma: 20

OPEN LAB NOTEBOOK CONTAIN EVERYTHING:  
 TEXTS, DATA, EXECUTABLE CODE...DO WE REALLY  
 STILL NEED JOURNALS?



# Living documents fossils

## The big idea: should we get rid of the scientific paper?

Apr. 11, 2022

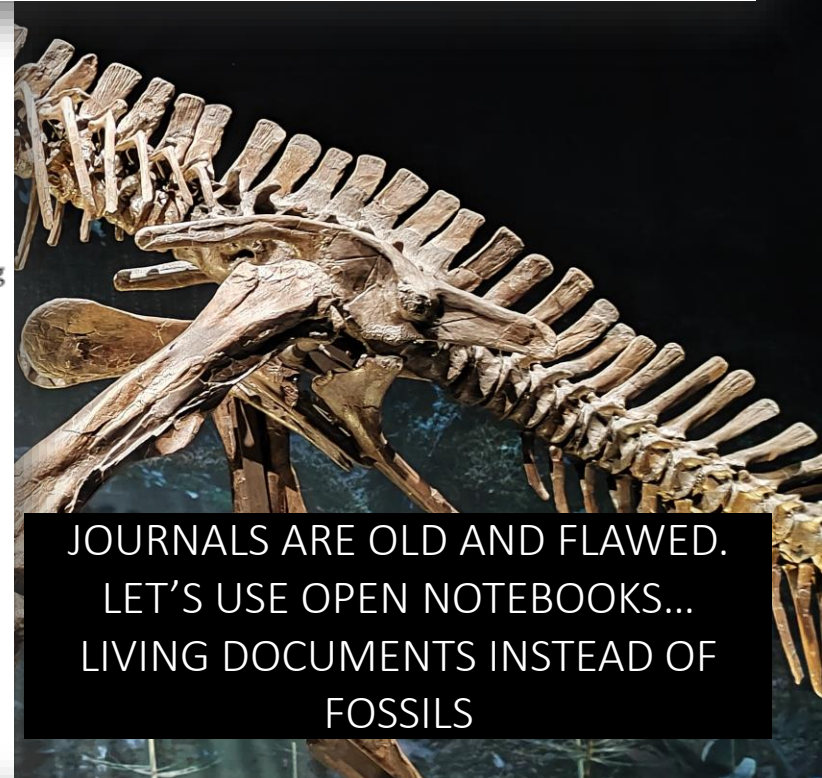
As a format it's slow, encourages hype, and is difficult to correct. A radical overhaul of publishing could make science better

Consider the messy reality of scientific research. Studies almost always throw up weird, unexpected numbers that complicate any simple interpretation. But a traditional paper - word count and all - pretty well forces you to dumb things down. If what you're working towards is a big, milestone goal of a published paper, the temptation is ever-present to file away a few of the jagged edges of your results, to help "tell a better story". Many scientists admit, in surveys, to doing just that - making their results into unambiguous, attractive-looking papers, but distorting the science along the way.

■ ■ Some fields of science are already using online notebooks instead of journals - living documents instead of living fossils

And consider corrections. We know that scientific papers regularly contain errors. One algorithm that ran through thousands of psychology papers found that, at worst, more than 50% had one specific statistical error, and more than 15% had an error serious enough to overturn the results. With papers, correcting this kind of mistake is a slog: you have to write in to the journal, get the attention of the busy editor, and get them to issue a new, short paper that formally details the correction. Many scientists who request corrections find themselves stonewalled or otherwise ignored by journals. Imagine the number of errors that litter the scientific literature that haven't been corrected because to do so is just too much hassle.

We've made astonishing progress in so many areas of science, and yet we're still stuck with the old, flawed model of publishing research. Indeed, even the name "paper" harkens back to a bygone age. Some fields of science are already moving in the direction I've described here, using online notebooks instead of journals - living documents instead of living fossils. It's time for the rest of science to follow suit.



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The FAIR Guiding Principles for scientific data management and stewardship

[Mark D. Wilkinson](#), [Michel Dumontier](#) [...] [Barend Mons](#)

**Abstract**

There is an urgent need to improve the infrastructure supporting the reuse of scholarly data. A diverse set of stakeholders—representing academia, industry, funding agencies, and scholarly publishers—have come together to design and jointly endorse a concise and measurable set of principles that we refer to as the FAIR Data Principles. The intent is that these may act as a guideline for those wishing to enhance the reusability of their data holdings. Distinct from peer initiatives that focus on the human scholar, the FAIR Principles put specific emphasis

Data Intelligence

2020

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Volume 2, Issue 1-2  
Winter-Spring 2020

January 01 2020

**FAIR Principles: Interpretations and Implementation Considerations**

[Annika Jacobsen](#), [Ricardo de Miranda Azevedo](#), [Nick Juty](#), [Dominique Batista](#), [Simon Coles](#), [Ronald Cornet](#), [Mélanie Courtot](#), [Meroë Crossas](#), [Michel Dumontier](#), [Chris T. Evelo](#), [Carole Goble](#), [Giancarlo Guzzardi](#), [Karsten Kryger Hansen](#), [Ali Hasnain](#), [Kristina Hettine](#), [Jaap Heringa](#), [Rob W.W. Hooft](#), [Melanie Imming](#), [Keith G. Jeffery](#), [Rajaram Kalyaperumal](#), [Marlijn G. Kerstoot](#), [Christine F. Kirkpatrick](#), [Tobias Kuhn](#), [Ignasi Labastida](#), [Barbara Magagna](#), [Peter McQuilton](#), [Natalie Meyers](#), [Annalisa Montesanti](#), [Mirjam van Reizen](#), [Philippe Rocca-Serra](#), [Robert Persig](#), [Susanna-Assunta Sansone](#), [Luiz Olavo Borino da Silva Santos](#), [Juliane Schneider](#), [George Strawn](#), [Mark Thompson](#), [Andra Waagmeester](#), [Tobias Weigel](#), [Mark D. Wilkinson](#), [Egon L. Willighagen](#), [Peter Wittenburg](#), [Marco Roos](#), [Barend Mons](#) [ORCID](#) [Erik Schultes](#)

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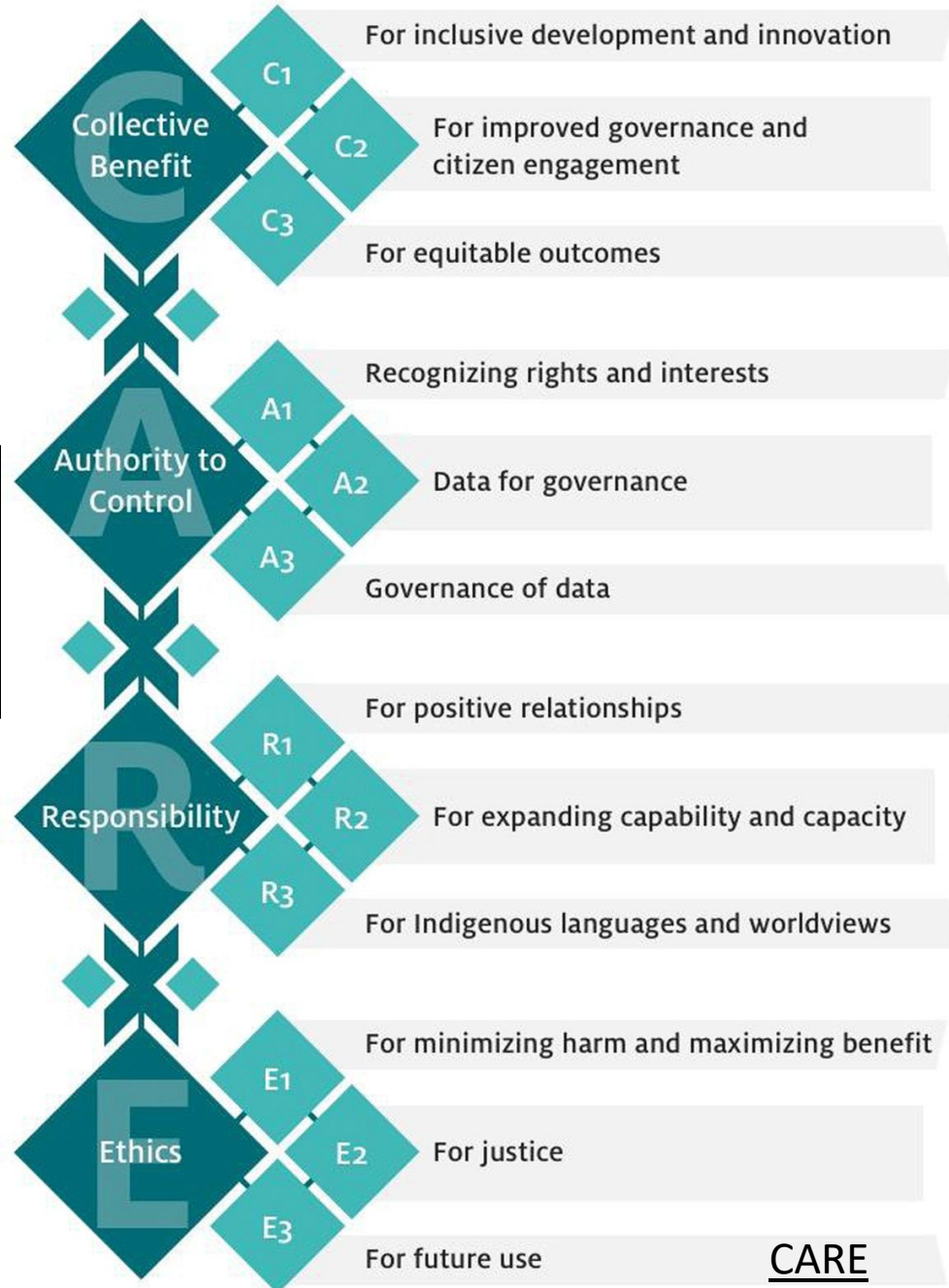
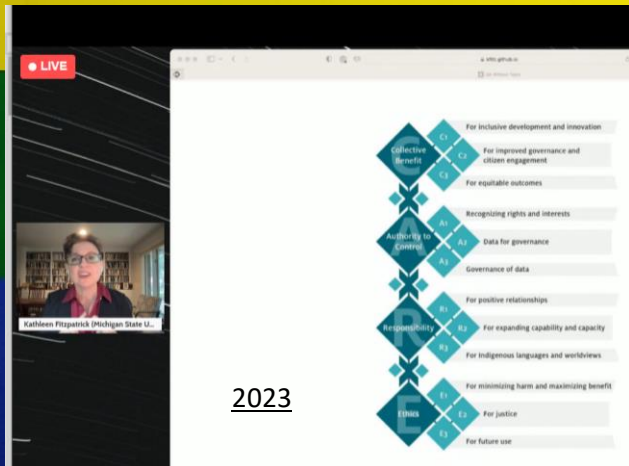


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the CARE principle

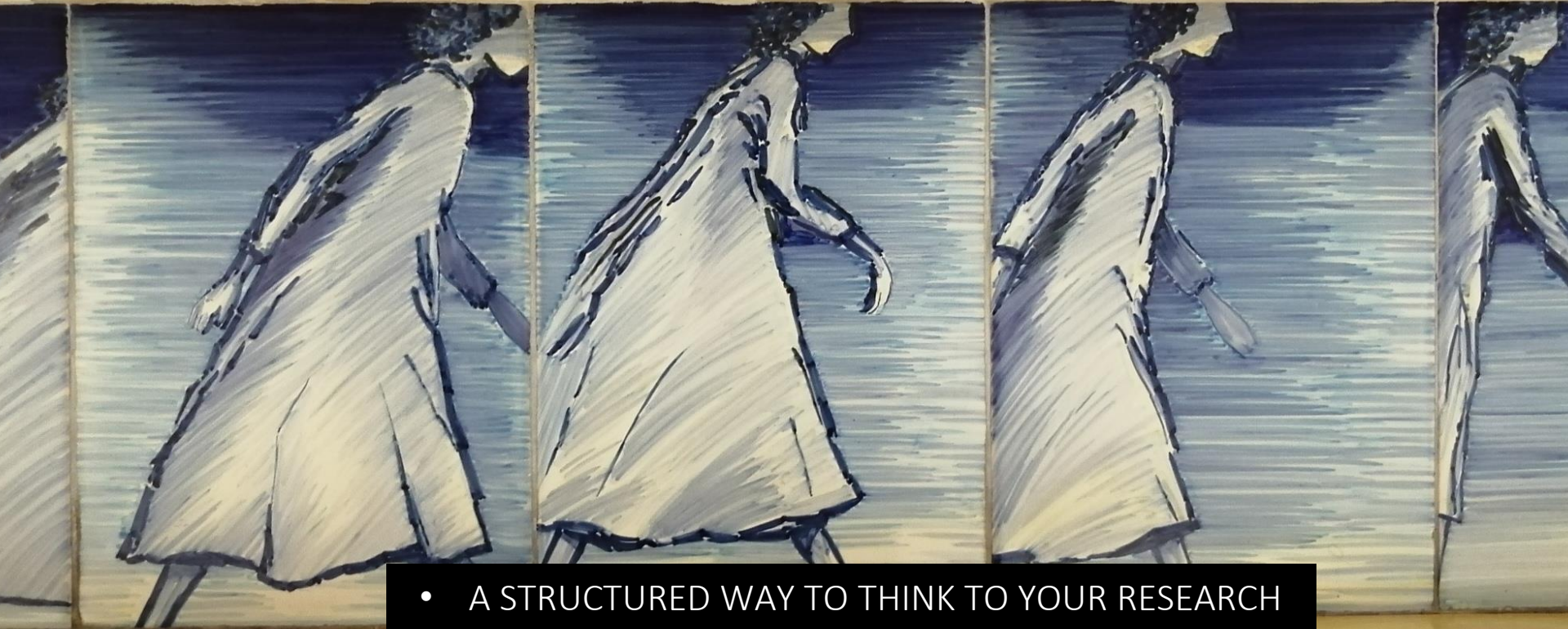
Ch  
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Sal

- COLLECTIVE BENEFIT
- AUTHORITY TO CONTROL
  - RESPONSIBILITY
  - ETHICS



# ...and a Data Management Plan



- A STRUCTURED WAY TO THINK TO YOUR RESEARCH FROM THE PERSPECTIVE OF YOUR DATA: collection, preservation, description, sharing
- COMMITMENT ON DATA MANAGEMENT
  - LIVING DOCUMENT TO BE UPDATED
  - ...AND THEN... ACT ACCORDINGLY...

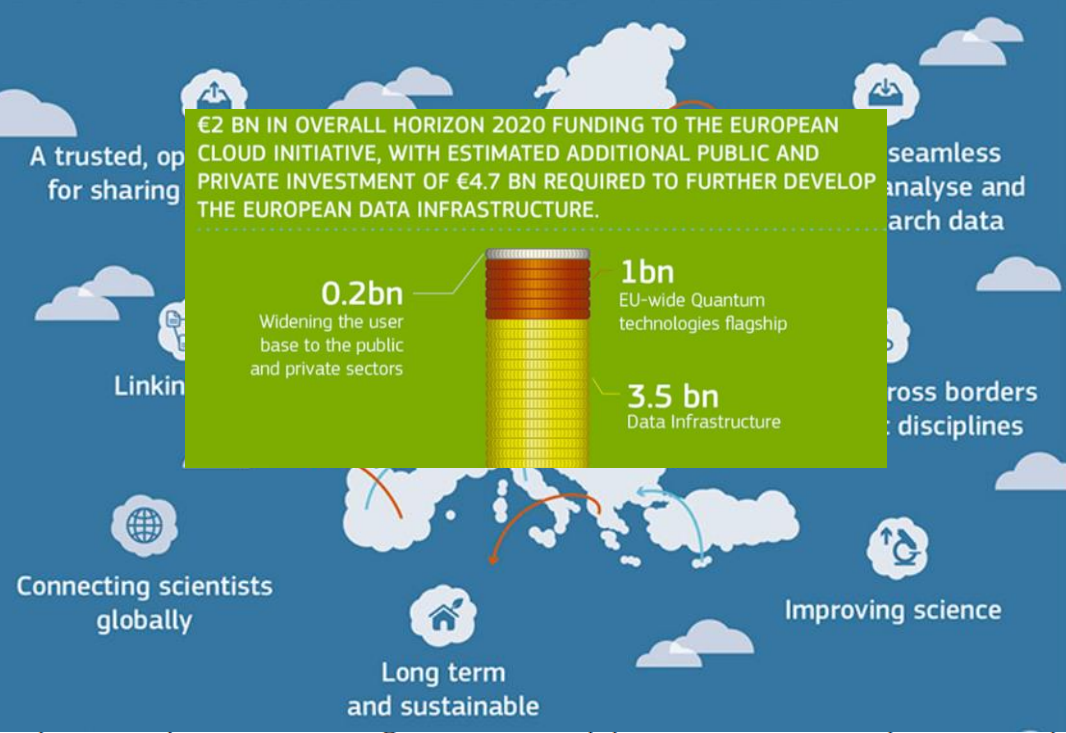


# [AS NOW WE HAVE THE EOSC!]

## The Vienna

Vienna, 23 Novem

BRINGING TOGETHER CURRENT AND FUTURE DATA INFRASTRUCTURES



## We, Ministers European Op

1. **Recall** the challenge of the European Open Science Cloud Declaration signed in Brussels on 10 July 2018.
2. **Reaffirm** the political commitment of the European Union and its Member States, sustainable and open to the world.
3. **Recognise** that the European Open Science Cloud, by its nature iterative and based on consensus among researchers, is a key enabler for the digital transformation of Europe. Confirm that disciplines and Member States should work together to build trust and ensure the application of cloud services for Science. Reaffirm the need to reach out over time to the wider community and open to the world, and to the roadmap and the federated
4. **Highlight** that the European Open Science Cloud should be based on the application of cloud services for Science. Reaffirm the need to reach out over time to the wider community and open to the world, and to the roadmap and the federated
5. **Recall** that the Council of Ministers of the European Union, in its Declaration of 10 July 2018, called for acceleration towards making the European Open Science Cloud a reality, hinting at the need to further strengthen the ongoing dialogue across institutions and with stakeholders, for a new governance framework to be launched in Vienna, on 23 November 2018.

SEAMLESS ACCESS TO OPEN BY DEFAULT FAIR DATA

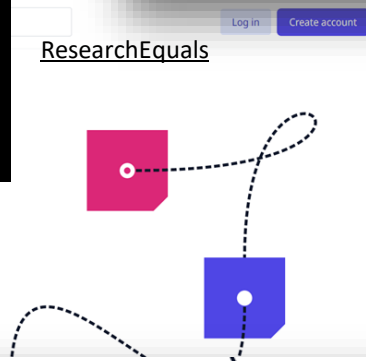
9. **Call** for the European Open Science Cloud to provide all researchers in Europe with seamless access to an open-by-default, efficient and cross-disciplinary environment for storing, accessing, reusing and processing research data supported by FAIR data principles.

9. **Note** that the 2018 EOSC Summit (held on 17 June 2018) called for acceleration towards making the European Open Science Cloud a reality, hinting at the need to further strengthen the ongoing dialogue across institutions and with stakeholders, for a new governance framework to be launched in Vienna, on 23 November 2018.

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# ...building new publication strategies

## my/our strategy:

My/my team's publishing goal is to establish priority on findings. That is why we intend to publish as early as possible in our workflow. We aim to use these platforms and venues to communicate and share our research.

This sheet can be used for discussing current ways of working and for discussing strategies, in groups as well as individual settings. Relevant options can vary for different projects or different strategy options chosen in the various columns make sense and do not contradict, although you can have multiple goals and parallel ways of working. You can try the tool here. For full interactive functionality, first download your own copy of the worksheet. Then start by ticking a goal, which will often trigger some suggestions in the other columns that you can make. Making selections your narrative will be built. The tool leads to general background information, useful to information in the Utrecht University context (when reusing outside Utrecht you can adapt to your own context). Note this tool should not be a straitjacket but rather facilitate discussion. Copy-paste and manually edit the narrative generated here. Read more on the [ABOUT](#) page.



Jeroen Bosman  
@jeroenbosman

Feb.13 2022 ...

Our new experimental tool helps rethink publishing strategies in an open science context. Based on your goals you can select what, when, how and where to publish. With suggestions & background links and an automatically generated

### Publication strategy: A reconsidered & coherent set of choices regarding the why, what, when, how and where of sharing/publishing research. What are your or your team's priorities for the next project coming up? What role for open science practices in your publishing?

[WHY]	[WHAT]	[WHEN]	[HOW]	[WHERE]
<b>As my/my team's publishing goal is to ...</b> <input checked="" type="checkbox"/> establish priority on findings <input type="checkbox"/> invite comments, feedback & scrutiny <input type="checkbox"/> archive evidence <input type="checkbox"/> promote my (team's) visibility <input type="checkbox"/> create material to use in education <input checked="" type="checkbox"/> communicate with societal stakeholders <input type="checkbox"/> meet formal funder requirements <input checked="" type="checkbox"/> foster careers of ECRs and temporary staff <input type="checkbox"/> get new funding <input type="checkbox"/> have work formally peer reviewed <input type="checkbox"/> provide information researchers can build on <input type="checkbox"/> provide information practitioners etc. can build on <input type="checkbox"/> make scholarly communication more equitable <input type="checkbox"/> make it easy for others to use the work <input checked="" type="checkbox"/> help improve reproducibility of science <input type="checkbox"/> contribute to knowledge curation <input type="checkbox"/> reach the largest possible audience <input type="checkbox"/> make it easy for others to assess the work	<b>... we intend to publish these ...</b> <input type="checkbox"/> research applications/proposals <input type="checkbox"/> preregistrations <input type="checkbox"/> registered reports <input checked="" type="checkbox"/> data <input type="checkbox"/> data papers <input checked="" type="checkbox"/> code & software <input type="checkbox"/> workflows and methods <input type="checkbox"/> presentation slides <input type="checkbox"/> conference posters <input checked="" type="checkbox"/> articles/books reporting research results <input type="checkbox"/> negative/null results <input checked="" type="checkbox"/> replication studies <input type="checkbox"/> review articles <input type="checkbox"/> systematic reviews <input type="checkbox"/> meta-analyses <input type="checkbox"/> popularising books <input type="checkbox"/> blogs etc. on project progress <input type="checkbox"/> blogs etc. aimed at discussion <input type="checkbox"/> opinion pieces (e.g. in newspapers)	<b>... at these moments ...</b> <input type="checkbox"/> upon creation (open drafting) <input checked="" type="checkbox"/> as early as possible in our workflow <input type="checkbox"/> also before review (e.g. as preprint) <input type="checkbox"/> after formal peer review	<b>... while trying to ...</b> <input type="checkbox"/> use double blind peer review <input type="checkbox"/> use single blind peer review <input type="checkbox"/> use open peer review (identifiers) <input type="checkbox"/> allow open peer review reports <input checked="" type="checkbox"/> discuss author order with all authors <input type="checkbox"/> indicate contributor roles (CREDIT) <input type="checkbox"/> credit all contributors to the research <input checked="" type="checkbox"/> add a plain language abstract <input type="checkbox"/> add a data availability statement <input type="checkbox"/> cite OA (versions of) literature <input type="checkbox"/> add multilingual abstracts <input type="checkbox"/> contribute to closed peer review <input type="checkbox"/> contribute to open peer review <input type="checkbox"/> contribute to open commenting <input type="checkbox"/> improve versions using public comments <input type="checkbox"/> add a visual abstract <input type="checkbox"/> provide formal data/software citations <input checked="" type="checkbox"/> provide researcher identifiers (ORCIDi) <input checked="" type="checkbox"/> attach a CC-BY or CC0 license	<b>... using these platforms/venues:</b> <input type="checkbox"/> fully open access journals <input checked="" type="checkbox"/> fully open access journals without APCs <input type="checkbox"/> open access books <input type="checkbox"/> institutional repositories <input type="checkbox"/> subject repositories <input type="checkbox"/> general repositories like Zenodo <input checked="" type="checkbox"/> our own project website <input type="checkbox"/> journals with a high impact factor <input type="checkbox"/> journals reaching the intended audience <input type="checkbox"/> learned society journals <input type="checkbox"/> journals of prestigious publishers <input type="checkbox"/> highly selective journals <input type="checkbox"/> journals only checking methodological rigour <input type="checkbox"/> journals with statistical review expertise <input type="checkbox"/> journals with the largest readership <input type="checkbox"/> specialised topical journals <input type="checkbox"/> broad multidisciplinary journals <input type="checkbox"/> journals explicitly aimed at interdisciplinarity <input type="checkbox"/> data archives

As my/my team's publishing goal is to ...	... we intend to publish these ...	... at these moments ...
<input checked="" type="checkbox"/> establish priority on findings	<input checked="" type="checkbox"/> research applications/proposals	<input type="checkbox"/> upon creation (open drafting)
<input type="checkbox"/> invite comments, feedback & scrutiny	<input type="checkbox"/> preregistrations	<input checked="" type="checkbox"/> as early as possible in our workflow
<input type="checkbox"/> archive evidence	<input type="checkbox"/> registered reports	<input type="checkbox"/> also before review (e.g. as preprint)
<input type="checkbox"/> promote my (team's) visibility	<input checked="" type="checkbox"/> data	<input type="checkbox"/> after formal peer review
<input type="checkbox"/> create material to use in education	<input type="checkbox"/> data papers	
<input type="checkbox"/> communicate with societal stakeholders	<input type="checkbox"/> code & software	
<input type="checkbox"/> meet formal funder requirements	<input type="checkbox"/> workflows and methods	
<input type="checkbox"/> foster careers of ECRs and temporary staff	<input type="checkbox"/> presentation slides	
<input type="checkbox"/> get new funding	<input type="checkbox"/> conference posters	
<input type="checkbox"/> have work formally peer reviewed	<input type="checkbox"/> articles/books reporting research results	
<input type="checkbox"/> provide information researchers can build on	<input type="checkbox"/> negative/null results	
<input type="checkbox"/> provide information practitioners etc. can build on	<input type="checkbox"/> replication studies	
<input type="checkbox"/> make scholarly communication more equitable	<input type="checkbox"/> review articles	

**BUILD A PUBLICATION STRATEGY ACCORDING TO YOUR NEEDS [USEFUL IN HORIZON EUROPE]**

# ...writing differently and annotating



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Digital Science	labguru	Overleaf Peerwith				
Holtzbrinck	Springer Link	Springer Nature				
Springer Nature	Scopus.com					

**BEWARE: NO LONGER OPEN**

## Pundit Web Annotation

8 iscritti

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[PundIT video](#)



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# ... reviewing openly

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SYSTEMATIC REVIEW  
**What is open peer review? A systematic review [version 1; referees: 1 approved, 3 approved with reservations]**  
Tony Ross-Hellauer  
Author details Grant information

METRICS  
4555 VIEWS  
1262 DOWNLOADS

Open Peer Review  
Referee Status: ✓✓✓✓  
Invited Referees  
Version(s) 1 2 3 4  
REVISÉ read report read report read report  
Version 2 published 31 ago 2017

This article is included in the Th...

**Abstract**  
Background: "Open peer review" (OPR), despite a standardized definition nor an agreed schema of OPR, reflects this, with a myriad of overlapping and of

F1000Research Open for Science  
https://f1000research.com/articles/6-1151/v3  
SEARCH SUBMIT YOUR RESEARCH  
BROWSE GATEWAYS HOW TO PUBLISH ABOUT BLOG MY RESEARCH SIGN IN

REVIEW  
**REVISÉ A multi-disciplinary perspective on emergent and future innovations in peer review [version 3; referees: 2 approved]**  
Jonathan P. Tennant, Jonathan M. Dugan, Daniel Graziotin, Damien C. Jacques, François Waldner, Daniel Mietchen, Yehia Elkhatib, Tom Crick, Paola Masuzzo, Kyle E. Niemeyer, Tony Ross-Hellauer, Daniel S. Katz, Nazeefa Fatima, Dasapta Erwin Irawan, Sébastien Renaut, Sarah Kearns, Manojkumar Selvaraju

METRICS  
9143 VIEWS  
2168 DOWNLOADS

Open Peer Review  
Referee Status: ✓✓  
Invited Referees  
Version(s) 1 2  
REVISÉ read report read report  
Version 3 published 29 nov 2017  
REVISÉ read report read report  
Version 2 published 01 nov 2017  
Version 1 published 20 lug 2017  
read report read report

- REVIEWS ARE «PIECES OF KNOWLEDGE»
- THEY GET A DOI
- THEY ARE CITABLE
- THEY SHOULD BE EVALUATED AS RESEARCH OUTPUTS

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1 David Moher, Ottawa Hospital Research Institute, Canada

# [Open PeerReview in practice]

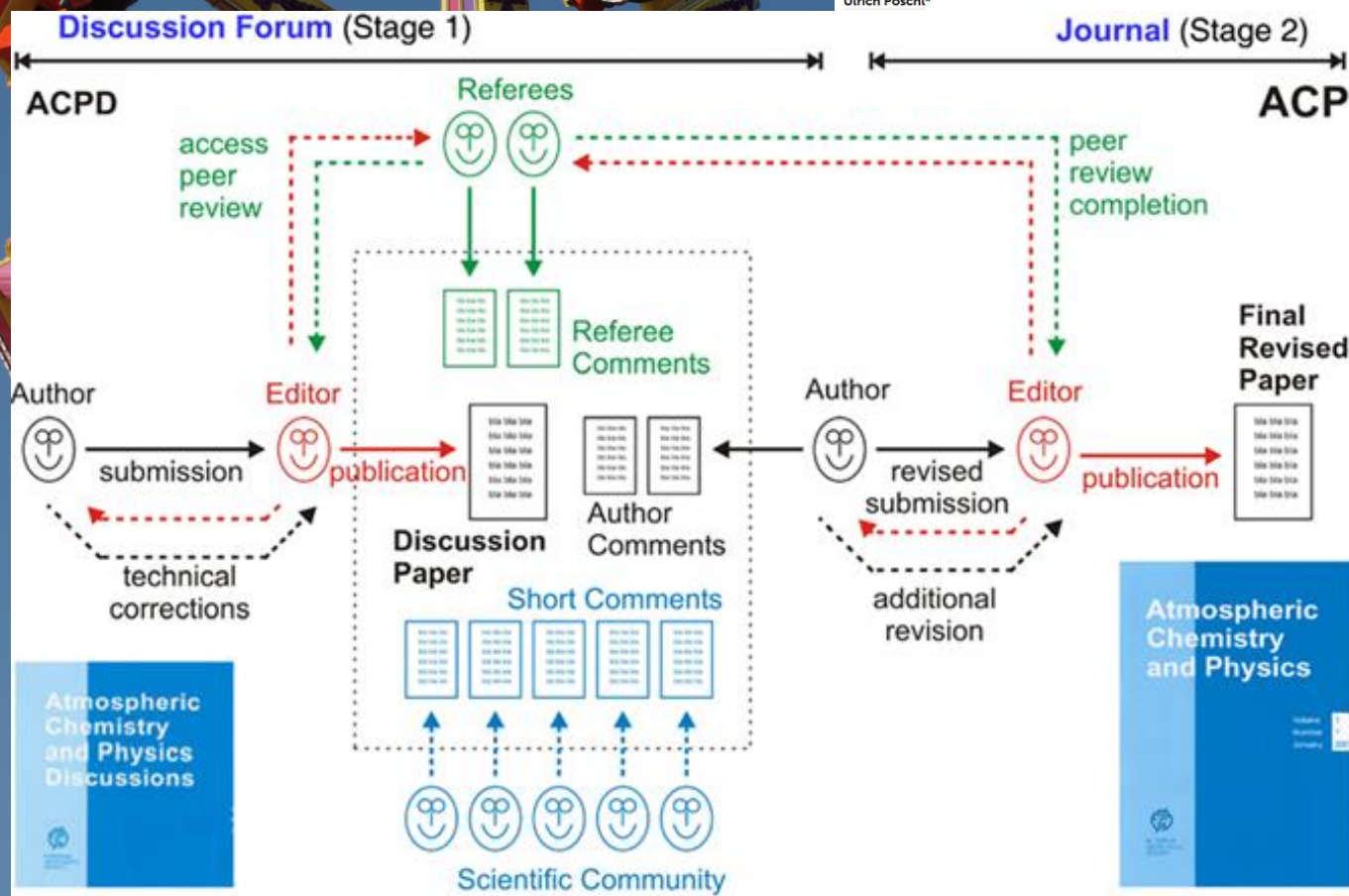
REVIEW ARTICLE

Poschl 2012

Front. Comput. Neurosci., 05 July 2012 | <https://doi.org/10.3389/fncom.2012.00053>

**Multi-stage open peer review: scientific evaluation integrating the strengths of traditional peer review with the virtues of transparency and self-regulation**

Ulrich Poschl\*



# ... or independent peer review

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## Catalyzing change in peer review through equity, openness, and collaboration

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PEER REVIEW ON PREPRINTS

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Search



April 21, 2021

ANDREY\_POPOV/SHUTTERSTOCK

## Fifteen journals to outsource peer-review decisions

By Cathleen O'Grady | Apr. 19, 2021, 5:10 AM

Peer Community In  
Registered Reports

Free and transparent pre- and post-study recommendations across research fields

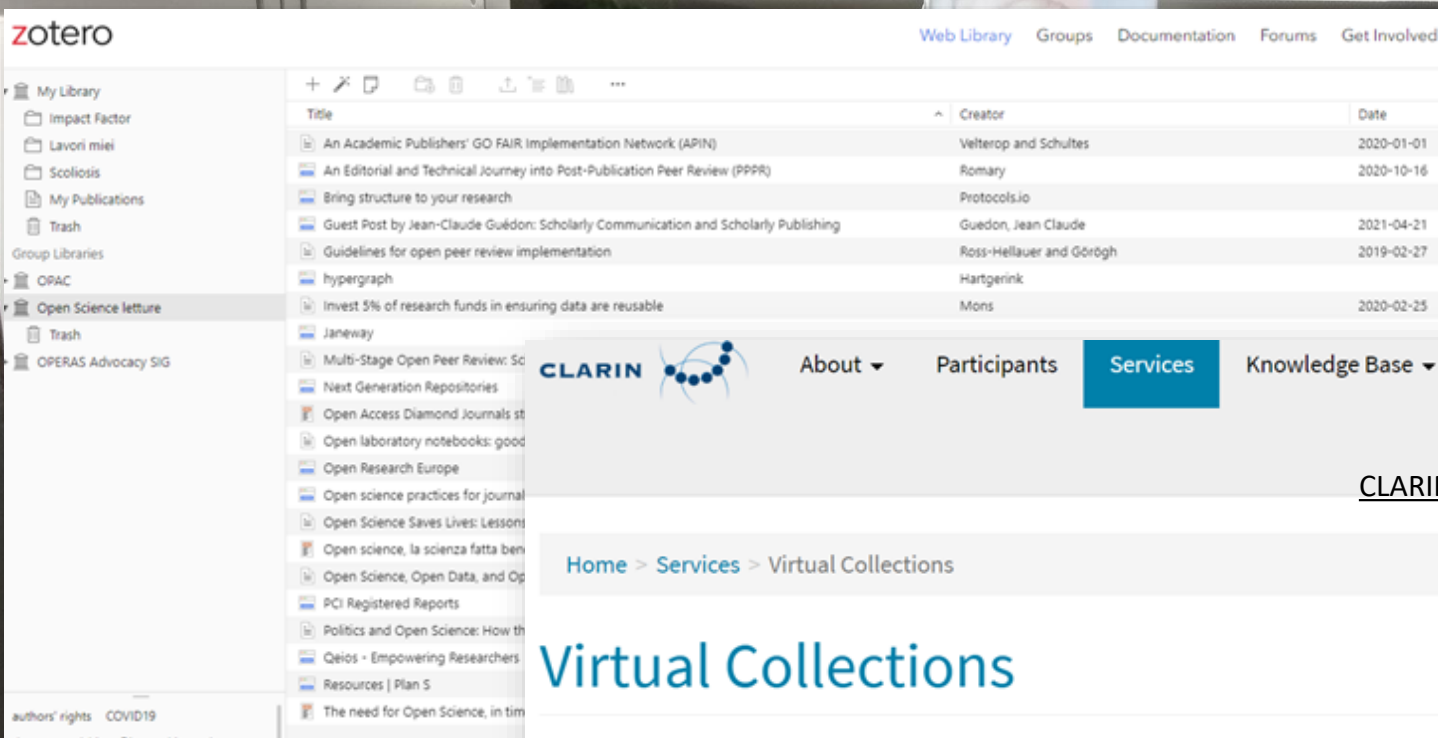
SUBMIT A REPORT LOG IN OR REGISTER

<https://rr.peercommunityin.org/>

PEER REVIEW: DONE. SO NOW PUBLISHERS SHOULD TELL US WHAT THEY CHARGE US FOR.

But with PCI RR performing all the steps involved in peer review, publishers will have to demonstrate their value, Hoyt says. He says publishers still operate platforms that draw readers, and they do important work to format articles so they can be aggregated by PubMed and other databases. "There's a role for publishers still to play," he says, "but I think they will have to start justifying the prices they charge."

# .....sharing bibliographies and



zotero

Web Library Groups Documentation Forums Get Involved

My Library

- Impact Factor
- Lavori miei
- Scoliosis
- My Publications
- Trash

Group Libraries

- OPAC
- Open Science lecture
- Trash
- OPERAS Advocacy SIG

Title	Creator	Date
An Academic Publishers' GO FAIR Implementation Network (APIN)	Velterop and Schultes	2020-01-01
An Editorial and Technical Journey into Post-Publication Peer Review (PPPR)	Romary	2020-10-16
Bring structure to your research	Protocols.io	
Guest Post by Jean-Claude Guédon: Scholarly Communication and Scholarly Publishing	Guedon, Jean Claude	2021-04-21
Guidelines for open peer review implementation	Ross-Hellauer and Görögh	2019-02-27
hypergraph	Hartgenik	
Invest 5% of research funds in ensuring data are reusable	Mons	2020-02-25
Janeway		
Multi-Stage Open Peer Review: Sc		
Next Generation Repositories		
Open Access Diamond Journals st		
Open laboratory notebooks: good		
Open Research Europe		
Open science practices for journal		
Open Science Saves Lives: Lessons		
Open science, la scienza fatta ben		
Open Science, Open Data, and Op		
PCI Registered Reports		
Politics and Open Science: How th		
Qeios - Empowering Researchers		
Resources   Plan 5		
The need for Open Science, in tim		

authors' rights COVID19

CLARIN

- About
- Participants
- Services
- Knowledge Base
- Funding
- Events
- New

[CLARIN virtual collections](#)

Home > Services > Virtual Collections

## Virtual Collections

A virtual collection is a coherent set of links to digital objects (e.g. annotated text, video) that can be easily created, accessed and cited. The links can originate from different archives, hence the term *virtual*. A virtual collection is suitable for manual access (using a web-browser) as well as automated processing (e.g. by a webservice).

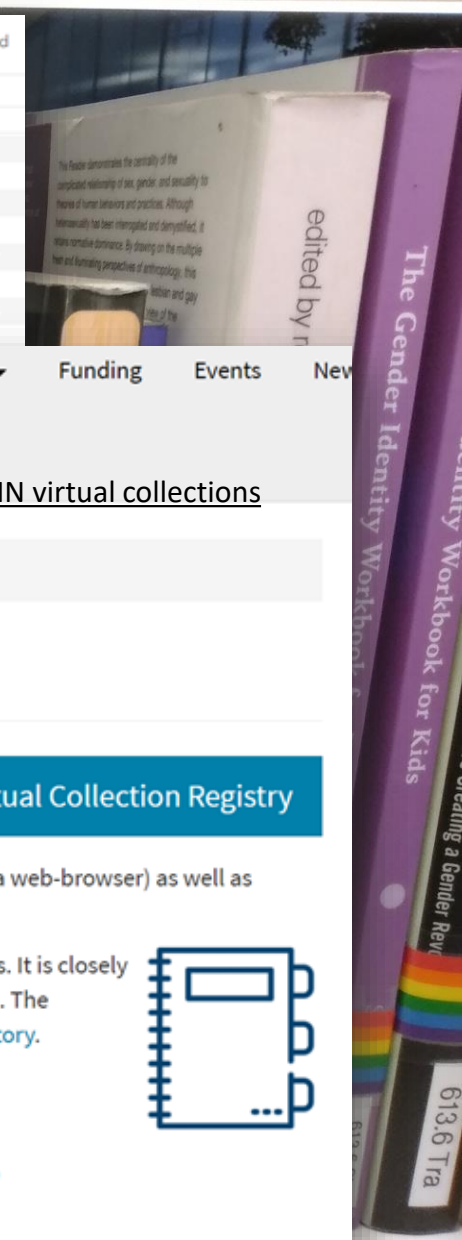
[Go to the Virtual Collection Registry](#)

CLARIN provides a registry where scholars can create and publish their virtual collections. It is closely integrated with the infrastructure and provides persistent identifiers and federated login. The collection metadata is openly available and accessible via the Virtual Language Observatory.

Some examples:

- data as mentioned in an article's footnotes gathered in a single virtual collection
- a virtual collection with links to data illustrating a book (video and sound recordings)

More information is available in the [Virtual Collections shortguide](#)





# Go Open: A beginners guide to open education

## Four Reasons to Go Open

- 1 Save money for your students
- 2 Bring real world examples into your teaching
- 3 Save time by reusing existing resources
- 4 Contribute to broadening access to education

 Forrell, O., Breen, E., Brunton, J., Cox, R., Costello, E., Delaney, L., Gallagher, E., Smyth, V. (2021). Go Open: A beginners Guide to Open Education. Dublin: DCU. Doi: 10.5281/zenodo.4593103

## Go Open: a beginner's guide to open education

A guide to engaging with open education practices in your teaching, research and support activities

- Introduction
- What is open education?
- What are open teaching & learning practices?
- What are OER?
- How do I find and use open resources?
- Why Go Open?
- Downloadable resources
- References



The Go Open project is a collaborative project based in Dublin City University (DCU) and comp Digital Learning Design Unit. The project aims to support the DCU Community to engage with c activities. The Go Open Project is funded by the National Forum for the Enhancement of Teach Enhancement Unit through the SATLE 19 fund.

The Go Open logo was designed by Aleksandra Shornikova from the DCU Digital Learning Des



# Go Open: A beginners guide to open education

## Four Ways to Go Open

- 1 Share your open practice
- 2 Deposit your work in open repositories
- 3 Use Creative Commons licensing
- 4 Use open educational resources

 Forrell, O., Breen, E., Brunton, J., Cox, R., Costello, E., Delaney, L., Gallagher, E., Smyth, V. (2021). Go Open: A beginners Guide to Open Education. Dublin: DCU. Doi: 10.5281/zenodo.4593103

# Beginners education



 Forrell, O., Breen, E., Brunton, J., Cox, R., Costello, E., Delaney, L., Gallagher, E., Smyth, V. (2021). Go Open: A beginners Guide to Open Education. Dublin: DCU. Doi: 10.5281/zenodo.4593103



# ...disseminating in a different way

## Ten steps to innovative dissemination

### 1. Get the basics right

Define your objectives, map your audience(s), target and frame your messages and bring this together into a dissemination plan of what you'll release and when.

### 2. Keep the right profile

Use personal websites, social media accounts, researcher identifiers and academic social networks to make you and your research visible.

### 3. Encourage participation

In the age of Open Science, don't just broadcast, go for multi-directional dissemination. Invite & engage with others to participate & collaborate.

### 4. Open science for impact

Open Access publications and preprints mean more citations. In addition, publishing datasets, software and peer reviews increase your number of citable research outputs.

### 5. Remix traditional outputs

Give traditional outputs like research articles and books an impact-boost with accompanying lay-summaries, press-releases, blogs, and visual/video abstracts.

### 6. Go live

In person dissemination doesn't just have to be at stuffy conferences – hit the road and take part in science festivals, science slams, TEDx talks, science festivals, or roadshows.

### 7. Think visual

Disseminate findings through art or multimedia interpretations. Let your artistic side loose or use new visualisation techniques to produce intuitive, attractive data displays.

### 8. Respect diversity

Research should reach all who might benefit. Respect inclusion in scientific dissemination by creating messages which reflect gender, demography and ability diversity.

### 9. Find the right tools

Choose media, format and dissemination strategy based on your communication objectives. Find tools via, e.g., the OpenUP Hub: [openuphub.eu/disseminate/services](https://openuphub.eu/disseminate/services)

### 10. Evaluate, evaluate, evaluate

Assess your dissemination activities. Are they having the right impact? If not, why not?

PLOS COMPUTATIONAL BIOLOGY

Apr. 2020

OPEN ACCESS

EDITORIAL

### Ten simple rules for innovative dissemination of research

Tony Ross-Hellauer, Jonathan P. Tennant, Vítě Baneřlyte, Edit Gorogh, Daniela Luzzi, Peter Kraker, Lucio Pisacane, Roberta Ruggieri, Electra Sifacaki, Michela Vignoli

Published April 16, 2020 • <https://doi.org/10.1371/journal.pcbi.1007704>

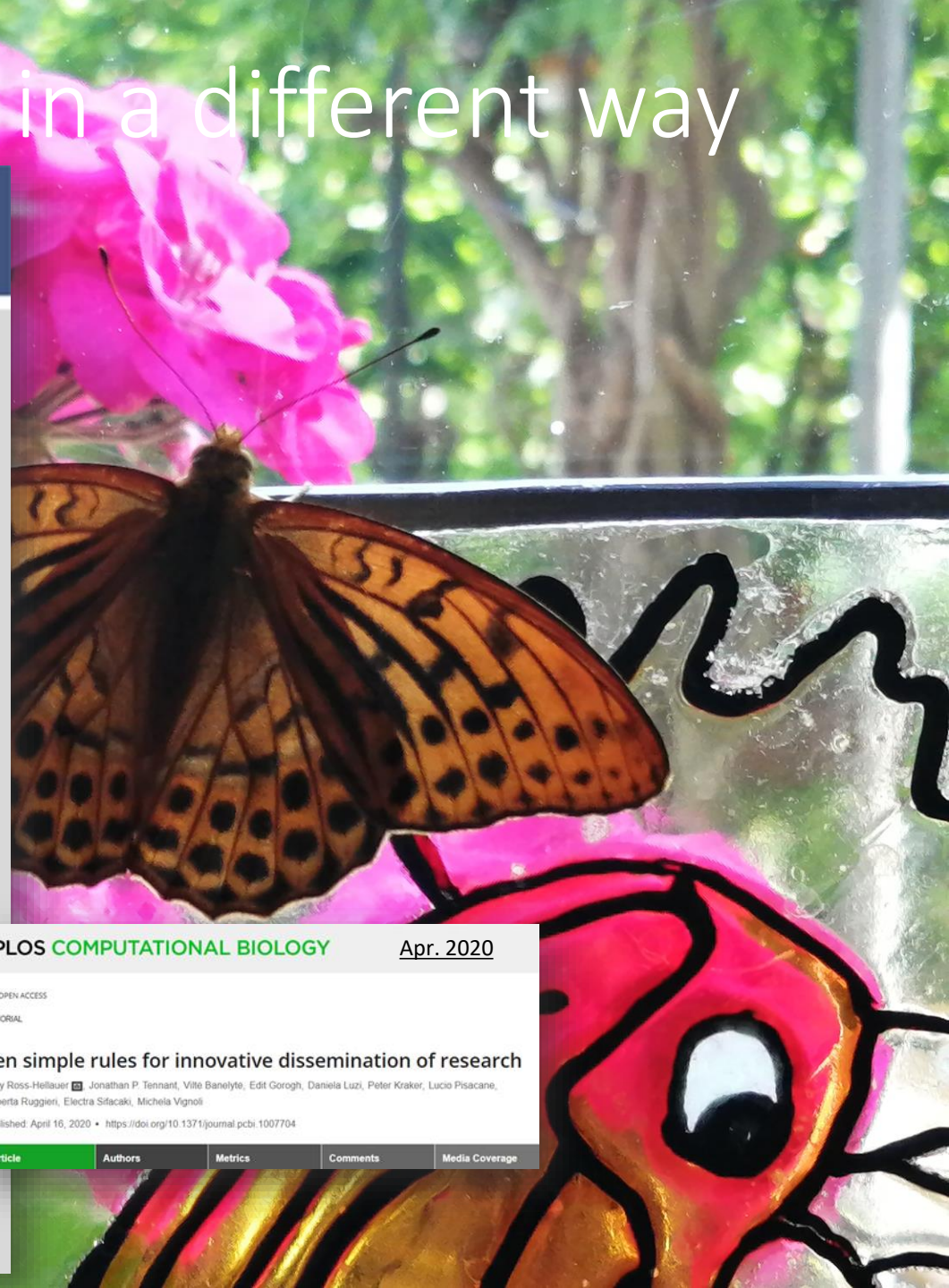
Article

Authors

Metrics

Comments

Media Coverage



# ...communicating in different ways



The Turing Way

## Guide for Communication

- Overview of Guide for Communication
- Open Scholarship
- Blogs for Research Communication
- Lay Summaries
- Podcasts for Research Communication
- Presenting Posters and Conference Talks
- Social Media for Research Communications
- Research Objects in Action
- Making Research Objects Citable
- Publishing Different Article Types
- Communications in Open Source Projects
- Authorship and Contributions on Academic Articles
- Peer Review
- Binder



Turing way / communication

## Guide for Communication

*This guide covers topics related to effective communication in research.*

Data and

quest

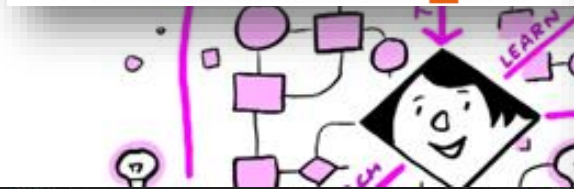
### Quest toolkit

### Toolkits



Working together with journalists, museums, scientists and social media content managers, we have created a range of tools and resources to help science communicators improve the effectiveness of their communication activities. Read more about the toolkits [here](#).

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helping to make available to and his process. Therefore, data techniques but also develop skills



Checklist for scientists: communicating science to the public



Presentation: Toolkit for science communicators and trainers



Explainers and suggestions for journalists



JECT.AI – digital support tool for science journalism



Presentation: Toolkit for journalists reporting on science



Guidelines for quality science communication in journalism

...having a different «social impact»

REGISTRAZIONE EVENTO 4 NOV COME  
SCRIVERE UNA VOCE IN WIKIPEDIA  
[IN ITALIAN]

CREATING WIKIPEDIA  
ENTRIES ON YOUR  
RESEARCH TOPICS

Donne nella scienza in  
Wikipedia  
(Donne in STEM Torino)

Camelia Boban, fondatrice progetto "WikiDonne" in Wikipedia,  
Università di Torino, 4 novembre 2022

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What links here

Article Talk

## Open science

From Wikipedia, the free encyclopedia

**Open science** is the movement to make scientific research (including publications, data, physical samples, and software) and its dissemination **accessible** to all levels of an inquiring society, amateur or professional.<sup>[2]</sup> Open science is transparent and accessible knowledge that is shared and developed through collaborative networks.<sup>[3]</sup> It encompasses practices such as publishing **open research**, campaigning for **open access**, encouraging scientists to practice **open notebook science**, and generally making it easier to publish and communicate scientific knowledge.

Open Science can be seen as a continuation of, rather than a revolution in, practices begun in the 17th century with the advent of the **academic journal**, when the societal demand for access to scientific knowledge reached a point at which it became necessary for groups of scientists to share resources<sup>[4]</sup> with each other so that they could collectively do their work.<sup>[5]</sup> In modern times there is debate about the extent to which scientific information should be shared.<sup>[6]</sup> The conflict that led to the Open Science movement is between the desire of scientists to have access to shared resources versus the desire of individual entities to profit when other entities partake of their resources.<sup>[7]</sup> Additionally, the status of **open access** and resources that are available for its promotion are likely to differ from one field of academic inquiry to another<sup>[8]</sup>

Open Science

- Open Data
- Open Source
- Open Methodology
- Open Peer Review
- Open Access
- Open Educational Resources

The six principles of open science<sup>[1]</sup>

# ...being a community

YOU ARE NOT ALONE



INOSC Starter Kit

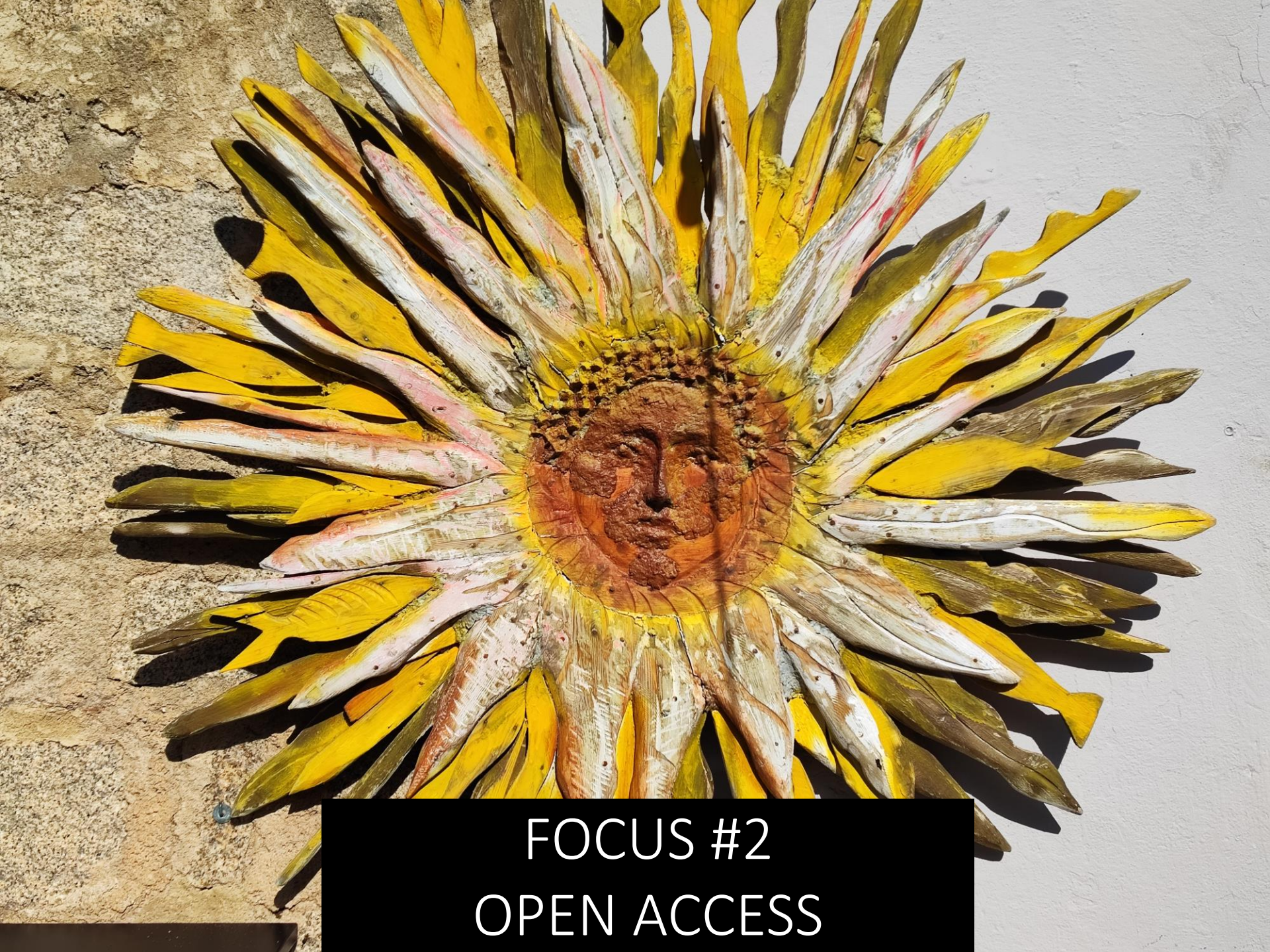
## Open Science Community Starter Kit

Set up and foster a local Open Science Community

[Get Started](#)

[Start your OS community](#)





FOCUS #2  
OPEN ACCESS



- 1) OPEN ACCESS DOES **NOT ONLY** MEAN «PUBLISHING IN AN OPEN ACCESS JOURNAL»
- 2) DISTINGUISH **FULL OPEN ACCESS** FROM HYBRID OPEN ACCESS

# Green and Gold Open Access

## Gold Open Access- publishing



DOAJ DIRECTORY OF OPEN ACCESS JOURNALS

AUTHORS PUBLISH IN AN OPEN ACCESS JOURNAL  
32% ASK FOR APCs, ARTICLE PROCESSING CHARGES

- IMMEDIATE, ZERO COSTS
- CHECK THE COPYRIGHT POLICY ON SHERPA ROMEO
- YOU KEEP PUBLISHING ON THE «PRESTIGIUOS» JOURNALS BUT YOU MAKE YOUR PAPER FREE

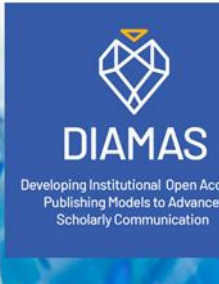
## Green road – deposit/self archiving



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

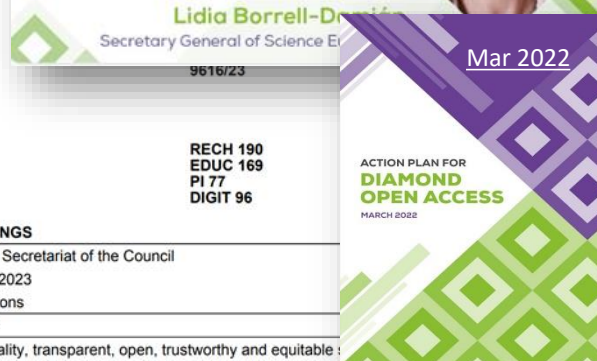
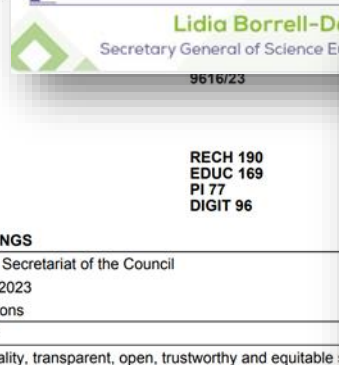


# Diamond Open Access



## OUTCOME OF PROCEEDINGS

From: General Secretariat of the Council  
 On: 23 May 2023  
 To: Delegations  
 No. prev. doc.: 8827/23  
 Subject: High-quality, transparent, open, trustworthy and equitable



- SUBSCRIPTIONS AND APCs DO NOT WORK
- NO PROFIT (PUBLIC FUNDS=OPEN)
- RESPONSIBILITY IN FUNDING OPEN INFRASTRUCTURES TO DISSEMINATE RESULTS

Council of the EU Press release 23  
**Council calls for the end of paywalls and access to scholarly publishing**

Today the Council has adopted conclusions on the 'high quality, transparent, open, trustworthy and equitable scholarly publishing', in which it calls for immediate and unrestricted open access in publishing research involving public funds.



If we really believe in open science, we need to make scientific findings available and re-usable and that high-quality science is accessible to anyone that needs to read them. This should be particularly true when the benefits from public funding: what has been paid by all taxpayers.

— Mats Persson, Swedish Minister for Education, Ministry of Education and Youth Affairs

## The hazards of scholarly publishing

Scientific articles and other forms of scholarly publishing continue to be the primary means of disseminating research results and scientific findings. However, far from every article is available to other researchers or other interested readers.

The costs of paywalls to access and publish articles are becoming unsustainable and the publication channels for



GLOBAL SUMMIT

Global Summit on #DiamondOpenAccess

A dialogue to strengthen #NonCommercialOpenAccess. October 23-27, 2023, venue @UAEM\_mx, Toluca, Mexico. In-person/virtual. Save the date and participate!

[ameica.org/index.php/en/2...](https://www.ameica.org/index.php/en/2...)

#DiamondSummit #Act4DiamondOA

El Acceso Abierto vía Diamante, entendido como la publicación sin cuotas por leer ni por publicar creada y mantenida por organismos académicos y científicos; así como el Acceso Abierto vía verde, son referentes de **modelos no comerciales compatibles con el paradigma de los bienes públicos**, y son inclusivos por definición.

# Diamond Open Access

**CUMBRE MUNDIAL SOBRE ACCESO ABIERTO DIAMANTE** Oct. 27, 2023  
GLOBAL SUMMIT ON DIAMOND OPEN ACCESS  
SOMMET MONDIAL SUR ACCÈS OUVERT DIAMANT  
CIMEIRA GLOBAL SOBRE ACESSO ABERTO DIAMANTE

EQUIDADE SOSTENIBILIDAD USABILITY QUALITÉ

23-27 OCT 2023  
UNIVERSIDAD AUTÓNOMA DEL ESTADO DE MÉXICO  
TOLUCA, MÉXICO

UAEMex amelica unesco CLACSO UOR anr cOAlition S OPERAS

## Conclusions and Way Forward

Knowledge is our most valuable asset and a public good that must be shared widely to ensure the sustainability of our planet and future. The digital revolution provides unprecedented means to spread scientific results and ideas around the world in instant, to the benefit of all.

## Manifiesto sobre la Ciencia como Bien Público Global: Acceso Abierto No Comercial

Oct. 27, 2023

NON COMMERCIAL OPEN ACCESS, INCLUSIVE BY DEFINITION, IS THE ONLY WAY FORWARD IF WE BELIEVE THAT KNOWLEDGE IS A COMMON GOOD

- 1** Derecho universal  
La ciencia es un bien público global y el acceso a ella es un derecho universal
- 2** Equidad, diversidad y multilingüismo  
La ciencia es inclusiva, multilingüe, accesible, reutilizable y colaborativa.
- 3** Propiedad de la academia y patrimonio de la humanidad  
La producción científica es propiedad de la academia y se debe al desarrollo y progreso de la sociedad como patrimonio de la humanidad
- 4** Reconocimiento y valoración  
Las entidades de acreditación, investigación y financiación deben reconocer, evaluar e incentivar los medios no comerciales de producción y circulación del conocimiento científico.
- 5** Colaboración  
La interacción y colaboración entre los agentes no comerciales, publicaciones científicas e infraestructuras abiertas es necesaria para la construcción de ecosistemas de bienes públicos.

# [colori e altre amenità

...DO NOT FORGET ABOUT «GREEN OPEN ACCESS» (DEPOSIT) – ALWAYS FOR FREE (PUBLISH WHEREVER, THEN CHECK THE COPYRIGHT POLICY ON SHERPA AND DEPOSIT THE ALLOWED VERSION)

TRADITIONAL  
COMMERCIAL  
JOURNALS  
(SUBSCRIPTION)

- 10 BILLION/YEAR
- WE ALL PAY FOR THE SAME CONTENT
- WE PAY TO CLOSE

HYBRID JOURNALS

NOT REFUNDABLE  
IN HORIZON  
EUROPE

- 100% CHARGES APCs
- RANGE: 3.000\$ - 11.000 (NATURE)
- YOU PAY TO MAKE 1 ARTICLE OPEN, THE JOURNAL IS STILL BY SUBSCRIPTION (DOUBLE DIPPING)

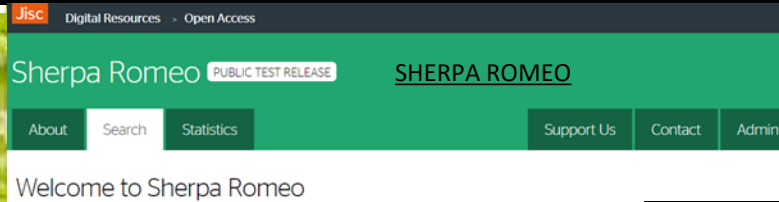
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# Arsenate toxicity on the apices of *Pisum sativum* L. seedling roots: Effects on mitotic activity, chromatin integrity and microtubules

Stefania Dho, Wanda Camusso, Marco Mucciarelli, Anna Fusconi



UNIVERSITÀ DEGLI STUDI DI TORINO

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## Abstract

Arsenic (As) is one of the most toxic pollutants in the environment, where it severely affects both animal and plant growth. Despite the growing literature data on As effects on plant development, alterations induced by this element on meristem activity of the apical cells were also analyzed. Mitotic aberrations, DNA fragmentation and microtubule organization of the apical cells were also analyzed. The results have shown that arsenate, at the lowest concentration (0.25 μM), slightly increases root growth and some related parameters, whilst the other concentrations have a dose-dependent negative effect on root growth, on the mitotic and labelling index (after bromo-deoxyuridine administration), and on the mitotic arrays of microtubule (through immunofluorescence). The main effects on mitosis occurred for 25 μM As. The percentage of metaphases increased, as did the irregular metaphases and c-mitoses. This was related to alterations in the mitotic spindles, which closely resemble those induced by colchicine. Chromosome breaks and ana/telophase bridges were virtually absent, whilst DNA fragmentation only increased from 25 μM arsenate onwards. These data point to a poor clastogenetic activity of As and implicate that microtubules are one of the main targets of As.

## Keywords

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

## 1. Introduction

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

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

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

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

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TUNEL test

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

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# Green road –self archiving

A photograph showing four elderly men sitting on a wooden bench in front of a shop. The shop has a sign that says 'AU SOLIDA' and displays various items like bags and books. The men are dressed in winter clothing, including jackets and hats. The scene is brightly lit, suggesting a sunny day.

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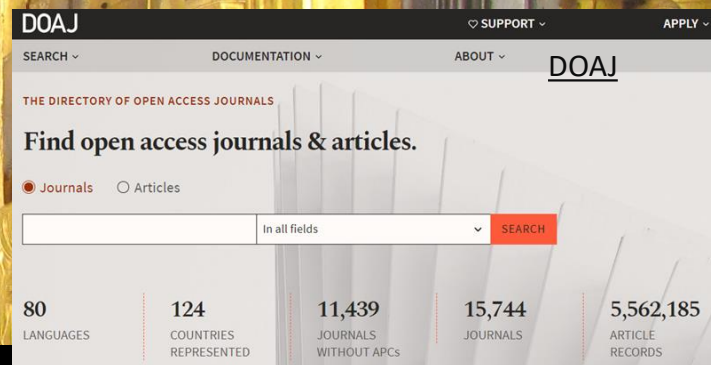


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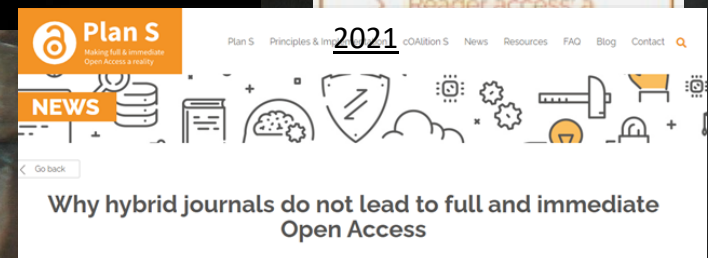
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WHAT'S GOING ON IN EUROPE

**SUSTAINABLE DEVELOPMENT GOALS**  
17 GOALS TO TRANSFORM OUR WORLD



Enhanced Access to Publicly Funded Data for Science, Technology and Innovation

Feb.4, 2021

eua EUROPEAN UNIVERSITY ASSOCIATION

Universities without walls  
A vision for 2030

OECD data

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, CEDR

International Science Council

ABOUT US WHAT WE DO OUR MEMBERS

ISC

UNLEASHING SCIENCE

THE WHITE HOUSE

BRIEFING ROOM

US FEDERAL RESEARCH OPEN BY DEFAULT

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."

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

- President Joe Biden #OAintheUSA  
September 12, 2022 Sent 12 2022

# Integrated advice of the Open Science Policy Platform on 8 prioritised Open Science ambitions 2018

- Rewards and Incentives
- Research Indicators and Next-Generation Metrics
- Future of Scholarly Communication
- European Open Science Cloud
- FAIR Data
- Research Integrity
- Skills and Education
- Citizen Science

Open Science for its own sake has never been the goal. While a focus on Open Science as a mechanism must be emphasised in any transition, Open Science must ultimately be embedded as part of a larger more systemic effort to foster all practices and processes that enable the creation, contribution, discovery and reuse of research knowledge more reliably, effectively and equitably. Research cannot be 'excellent' without such attributes at its core.

2019

## Future of Scholarly Publishing and Scholarly Communication

Report of the Expert Group to the European Commission

Amsterdam Call for Action on Open Science

2016

### Removing barriers to open science

1. Change assessment, evaluation and reward systems in science
2. Facilitate text and data mining of content . . . . .
3. Improve insight into IPR and issues such as privacy . . . . .
4. Create transparency on the costs and conditions of academic communication 4

### Developing research infrastructures

5. Introduce FAIR and secure data principles . . . . . 16
6. Set up common e-infrastructures . . . . . 18

### Fostering and creating incentives for open science

7. Adopt open access principles. . . . . 22
8. Stimulate new publishing models for knowledge transfer. . . . . 23
9. Stimulate evidence-based research on innovations in open science. . . . . 26

### Mainstreaming and further promoting open science policies

10. Develop, implement, monitor and refine open access plans . . . . . 30

### Stimulating and embedding open science in science and society

11. Involve researchers and new users in open science . . . . . 32
12. Encourage stakeholders to share expertise and information on open science 34

2020

## Reproducibility of scientific results in the EU

Scoping Report

December 2020

## Providing researchers with the skills and competencies they need to practise Open Science

Open Science Skills Working Group Report

2017

June 2020

## Progress on Open Science: Towards a Shared Research Knowledge System

Final Report of the Open Science Policy Platform

## Evaluation of Research Careers fully acknowledging Open Science Practices

Rewards, incentives and/or recognition for researchers practicing Open Science

2017

# Towards Open Science



NATIONAL POLICIES FOR TEXTS AND DATA (RECOMMENDATION 790/2018)

Council of the European Union

Brussels, 27 May 2016 (OR, en)

9526/16

RECH 208 TELECOM 100

**OUTCOME OF PROCEEDINGS**

From: General Secretariat of the Council  
To: Delegations  
No. prev. doc.: 8791/16 RECH 133 TELECOM 74  
Subject: The transition towards an Open Science system - Council conclusions (adopted on 27/05/2016)

OPEN ACCESS BY DEFAULT IN 2020 (COMPETITIVENESS COUNCIL 2016)

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

26.6.2019 IT Gazzetta ufficiale dell'Unione europea L 172/56

**DIRETTIVA (UE) 2019/1024 DEL PARLAMENTO EUROPEO E DEL CONSIGLIO del 20 giugno 2019**

apertura dei dati e al riutilizzo dell'informazione del settore pubblico

RESEARCH DATA=PUBLIC SECTOR INFORMATION (DIRECTIVE 1024/2019) + D.Lgs 200/2021

NEED TO REFORM RESEARCH ASSESSMENT (COUNCIL CONCLUSIONS ON THE FUTURE GOVERNANCE OF THE ERA – COM 14308/21)

14308/21

Dec. 2021

RECH 538 COMPET 865

**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)

EUROPEAN STRATEGY FOR DATA (COMMUNICATION 66/2020)

EUROPEAN COMMISSION

Brussels, 19.2.2020 COM(2020) 66 final

COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT, THE COUNCIL, THE EUROPEAN ECONOMIC AND SOCIAL COMMITTEE AND THE COMMITTEE OF THE REGIONS

A European strategy for data

# net Towards Open Science (and EOOSC)

POLICY PATH TOWARDS  
EOOSC AND OPEN SCIENCE  
(INTERTWINED)

# EOOSC

SCIE

eoosc EOOSC relevant policies and regulations

Karel Luyben 2023

## European Data Strategy

- Commission Staff Working Document on Common European Data Spaces (SWD(2022)45).
- European Data Governance Act

## **Open Science Policies**

- 2016: [Council Conclusions on the 'Transition Towards an Open Science System'](#)
- 2018: [EC Recommendation on 'Access to and Preservation of Scientific Information'](#)
- 2020: [EC Communication on the 'New ERA'](#)
- 2021: [Council Recommendation on a 'Pact for R&I in Europe'](#)
- 2021: [Council Conclusions on the 'Future Governance of the ERA' including the 'ERA Policy Agenda'](#)
- 2022: [Council Conclusions on 'Research Assessment and Implementation of Open Science'](#)

## Other ERA Policy Agenda priority actions (2022 – 2024)

- Data legislative framework for research
- Reform of Research Assessment
- Research Infrastructures
- International cooperation
- Green/digital transition
- etc.

## EU Missions in Horizon Europe

- [Adaptation to Climate Change: support at least 150 European regions and communities to become climate resilient by 2030](#)
- [Cancer: working with Europe's Beating Cancer Plan to improve the lives of more than 3 million people by 2030 through prevention, cure and solutions to live longer and better](#)
- [Restore our Ocean and Waters by 2030](#)

NFRA  
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## Council calls for transparent, equitable, and open access to scholarly publications

Today the Council has adopted conclusions on the 'high quality, transparent, open, trustworthy and equitable scholarly publishing', in which it calls for immediate and unrestricted open access in publishing research involving public funds.



If we really believe in open science, we need to make sure that researchers can make their findings available and re-usable and that high-quality scientific articles are openly accessible to anyone that needs to read them. This should be particularly the case for research that benefits from public funding: what has been paid by all should be accessible to all.

— Mats Persson, Swedish Minister for Education, Ministry of Education and Research

### The hazards of scholarly publishing

Scientific articles and other forms of scholarly publishing continue to be the primary means of disseminating research results and scientific findings. However, far from every article is available to other researchers or other interested readers. The costs of paywalls to access and publish articles are becoming unsustainable and the publication channels for

# Conclusions on equitable scholarly publishing

Council of the European Union  
 Brussels, 23 May 2023  
 May 23, 2023  
 (OR. en)  
 9616/23  
 RECH 190  
 EDUC 169  
 PI 77  
 DIGIT 96

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**OUTCOME OF PROCEEDINGS**

From: General Secretariat of the Council  
 On: 23 May 2023  
 To: Delegations  
 No. prev. doc.: 8827/23  
 Subject: High-quality, transparent, open, trustworthy and equitable scholarly publishing  
 - Council conclusions (approved on 23 May 2023)

5. NOTES that the current system of scholarly publishing is operated by various for-profit and not-for-profit organisations and **RECOGNISES with concern that the increasing costs of paywalls for access to scientific publications and for scholarly publishing cause inequalities and are becoming unsustainable for public research funders and institutions accountable for the spending of public funds, decreasing funding available for research;**

RECOGNISES WITH CONCERN THAT SUBSCRIPTION AND PAYWALLS ARE BECOMING UNSTAINABLE AND DECREASE PUBLIC FUNDS FOR RESEARCH)

**BOTH SUBSCRIPTION AND APCs ARE NOT SUSTAINABLE**

7. **STRESSES that it is essential to avoid situations where researchers are limited in their choice of publication channels due to financial capacities rather than quality criteria, and where access to research publications is restricted by paywalls;** WELCOMES coordination within the EU and with global partners to support equity in scholarly publishing, taking account of the UNESCO Recommendation on Open Science<sup>6</sup>;

APCs LIMIT THE CHOICE OF PUBLICATION / PAYWALLS RESTRICT ACCESS



# Council Conclusions (May 2023)

May 2023

## OUTCOME OF PROCEEDINGS

From: General Secretariat of the Council  
On: 23 May 2023  
To: Delegations  
No. prev. doc.: 8827/23  
Subject: High-quality, transparent, open, trustworthy and equitable scholarly publishing  
- Council conclusions (approved on 23 May 2023)

## Towards an open, equitable and sustainable scholarly publishing system

1. RECALLS that scholarly publishing, through journals, is currently the primary academic means of disseminating research results and new scientific knowledge; REITERATES the importance of accelerating the transition to open science to improve research quality, efficiency and impact by promoting transparency, accessibility, diversity, reusability, reproducibility and trustworthiness of research results, that open access to scholarly publications, including their reuse, is one of the core elements of an open science system, and that action is needed to ensure that scholarly publishing supports these aims;

ACADEMIC FREEDOM  
+ INTEGRITY

EMPHASISES that scholarly publishing should support essential principles of academic freedom, research integrity and scientific excellence, as well as maximum accessibility and reusability of research results, while also supporting research communities and their transdisciplinary collaboration, and UNDERLINES that the scientific practices for ensuring reproducibility, transparency, sharing, rigour and collaboration are important means of achieving a publishing system responsive to the challenges of democratic, modern and digitalised societies; HIGHLIGHTS that immediate and unrestricted open access should be the norm in publishing research involving public funds, with transparent pricing commensurate with the publication services and where costs are not covered by individual authors or readers;

OPEN SCIENCE IS  
CRUCIAL FOR QUALITY  
AND EFFICIENCY,  
PROMOTING  
TRANSPARENCY AND  
REPRODUCIBILITY

OPEN ACCESS SHOULD BE  
THE NORM FOR PUBLICLY  
FUNDED RESEARCH +  
PRICES COMMENSURATE  
TO SERVICES

# Council Conclusions (May 2023)

...RESEARCH OUTPUTS DISSEMINATION SHOULD BE A PRECISE RESPONSIBILITY OF RESEARCH INSTITUTIONS

	Council of the European Union
Brussels, 23 May 2023 (OR. en)	
<u>May 2023</u>	
9616/23	
RECH 190 EDUC 169 PI 77 DIGIT 96	
<b>OUTCOME OF PROCEEDINGS</b>	
From:	General Secretariat of the Council
On:	23 May 2023
To:	Delegations
No. prev. doc.:	8827/23
Subject:	High-quality, transparent, open, trustworthy and equitable scholarly publishing - Council conclusions (approved on 23 May 2023)

6. HIGHLIGHTS the importance of not-for-profit, scholarly open access publishing models that do not charge fees to authors or readers and where authors can publish their work without funding/institutional eligibility criteria; NOTES the variety of models that do not depend on article processing charges or similar per-unit charges and STRESSES the importance of supporting the development of such models led by public research organisations;

NON FOR PROFIT  
MODELS TO BE  
SUSTAINED

16. ENCOURAGES Member States and the Commission to invest in and foster interoperable, not-for-profit infrastructures for publishing based on open source software and open standards, in order to avoid the lock-in of services as well as proprietary systems, and to connect these infrastructures to the EOSC;

ENCOURAGES MEMBER STATES AND THE COMMISSION TO INVEST IN  
NON FOR PROFIT INFRASTRUCTURES BASE DON OPEN STANDARDS  
TO AVOID VENDOR LOCK-IN AND TO CONNECT TO **EOSC**

# «make science fit for the 21th century»

Transition to open science is a multidimensional and multistage process. There is value and risk of being a first mover, but there is higher risk of being a follower. The European Commission has taken

THERE IS A HIGHER RISK OF BEING A FOLLOWER

PRE-ARTICLE Provisionally accepted The full-text will be published soon. Notify me

Front: Big Data | doi: 10.3389/fdata.2019.00043

## Open science, open data and open scholarship: European policies to make science fit for the 21st century

[Nov.2019]

Jean-Claude Burgelman<sup>1\*</sup>, Corina Pascu<sup>1\*</sup>, Katarzyna Szkuta<sup>1</sup>, Rene Von Schomberg<sup>1</sup>, Athanasios Karalopoulos<sup>1</sup>, Konstantinos Repanas<sup>1</sup> and Michel Schouppe<sup>1</sup>

Open science will make science more efficient, reliable, and responsive to societal challenges. The European Commission

Open science (or in fact, open scholarship) has shifted the prime focus of researchers away from publishing toward knowledge sharing.

and access will be maximized. In Horizon Europe, research data will be open by default while taking into account the need to balance openness and protection of scientific information, commercialization and Intellectual Property Rights, privacy concerns and security, following the principle “as open as possible, as closed as necessary.” Data management plans (DMP) will become mandatory, even if not making research data open. The requirement for responsible data management will be separated from the requirement for providing open access to research data. Emphasis will be placed on supporting as much as possible the proliferation of data that are findable, accessible, interoperable, and re-usable (FAIR). Finally, the use of trusted or certified repositories and infrastructures like the European Open Science Cloud (EOSC) will be required for research data in some Horizon Europe work programs.

## OVERVIEW OF THE EU POLICIES TOWARDS OPENNESS

Changing the reward and incentive system for researchers is a key open science challenge and a broader issue for which primarily the responsibility lies in the scientific community (universities and funders). This includes making open science practices rewardable and fundable as well as the employment of specific indicators for researchers' engagement with open science. A change of the reward and incentive system can only be stakeholders-driven, and it has to be bottom-up. This change also includes changing mind-sets of researchers to open up and share data and “seduction” to make open science easy, useful, and affordable<sup>3</sup>.

The European Open Science agenda contain the ambition to make FAIR data sharing the default for scientific research by 2020. To

...in the end...

1. Change starts with us but cannot be achieved alone
2. Think about why you love your job
3. Inspire others about the impact
4. Seek to work together
5. Don't build silos, think about long term insurance and sustainability
6. Remember we have a common mission

ONE DAY OR  
DAY ONE  
you decide.

THANK YOU!