

elena.giglia@unito.it

 @egiglia

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10 questions and 3 points on Open Science

Elena Giglia



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Today in a nutshell

SOME ISSUES WILL BE
ADDRESSED TODAY BY
STEFANO BIANCO, OTHERS
TOMORROW IN THE
COURSE

MY HUSBAND
AND I ARE DOING
A WORKSHOP;
HE WORKS

...setting the scene for this 2 days of «Open» with 10 [critical] questions raising issues on your daily workflow...

... to see the reasons **why** Open Science is not the unptenth administrative burden...

...and **why** we should care, in the view of Horizon Europe, the EOSC and FAIR data

[point #1]



MY OWN QUESTION:
WHAT ELSE DO WE NEED
BUT COVID TO SEE THE
IMMEDIATE NEED FOR
OPEN SCIENCE?

The pandemic has illustrated the importance of openness – open access, open data, and open science more widely. The rapid and open sharing of the SARS-CoV-2 genomic sequencing data, along with opening up of the majority of the COVID-19 literature, are open science success stories of the pandemic. The experience of COVID-19 has further strengthened the case for more widespread adoption of open practices beyond the immediate crisis. Efforts to promote open science, particularly open access of published outputs and open sharing of data, need to be further intensified.

Contextualizing: COVID

BECAUSE
OPEN DATA
SAVES LIVES

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

 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

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Published online: 20 April 2022

QUESTION #1:
ARE YOUR DATA
AND PAPER
AVAILABLE? AND
WHEN?

WE NEED DATA, NOT ONLY
ARTICLES, AND WE NEED BOTH
NOW (NOT IN 3 YEARS)

 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

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

FAIR principles

QUESTION #2:
ARE YOU DATA FAIR?
DO YOU HAVE A DATA
MANAGEMENT PLAN?

To be Findable:

- F1. (meta)data are assigned a globally unique and eternally persistent identifier.
- F2. data are described with rich metadata.
- F3. (meta)data are registered or indexed in a searchable resource.
- F4. metadata specify the data identifier.

TO BE ACCESSIBLE:

- A1 (meta)data are retrievable by their identifier using a standardized communications protocol.
- A1.1 the protocol is open, free, and universally implementable.
- A1.2 the protocol allows for an authentication and authorization procedure, where necessary.
- A2 metadata are accessible, even when the data are no longer available.

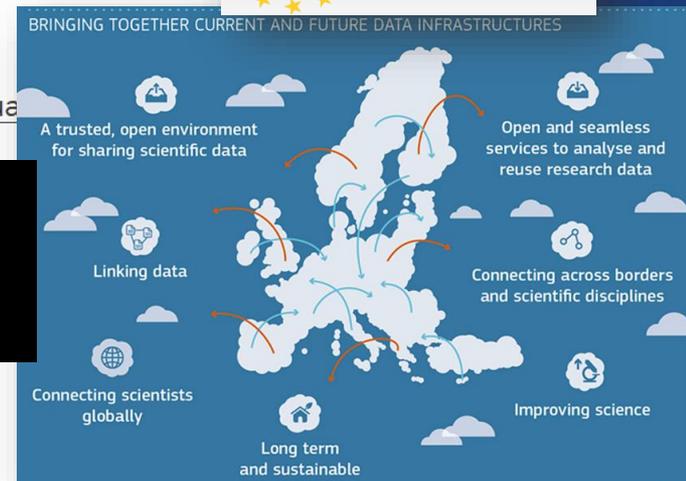
TO BE INTEROPERABLE:

- I1. (meta)data use a formal, accessible, shared, and broadly applicable language
- I2. (meta)data use vocabularies that follow FAIR principles
- I3. (meta)data include qualified references to other resources

TO BE RE-USABLE:

- R1. meta(data) have a plurality of accurate and rich metadata
- R1.1. (meta)data are released with a clear and accessible data usage license.
- R1.2. (meta)data are associated with their provenance.
- R1.3. (meta)data meet domain-relevant community standards.

**FAIR ARE THE
BUILDING BLOCKS
OF EOSC**



FAIR/Open

«ACCESSIBLE»
DOES NOT MEAN «OPEN».
YOU – AND MACHINES - KNOW
WHERE TO FIND THEM AND UNDER
WHAT ACCESS CONDITIONS

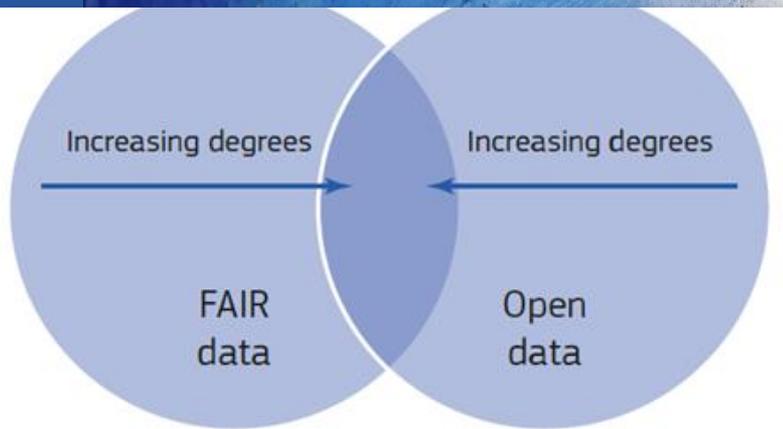


Figure 4. The relationship between FAIR and Open

QUESTION #3: [YOUR QUESTION]
«DO YOU WANT ME TO PUT ALL
MY DATA IN THE OPEN? IT'S OFF
THE TABLE. NO WAY»

«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
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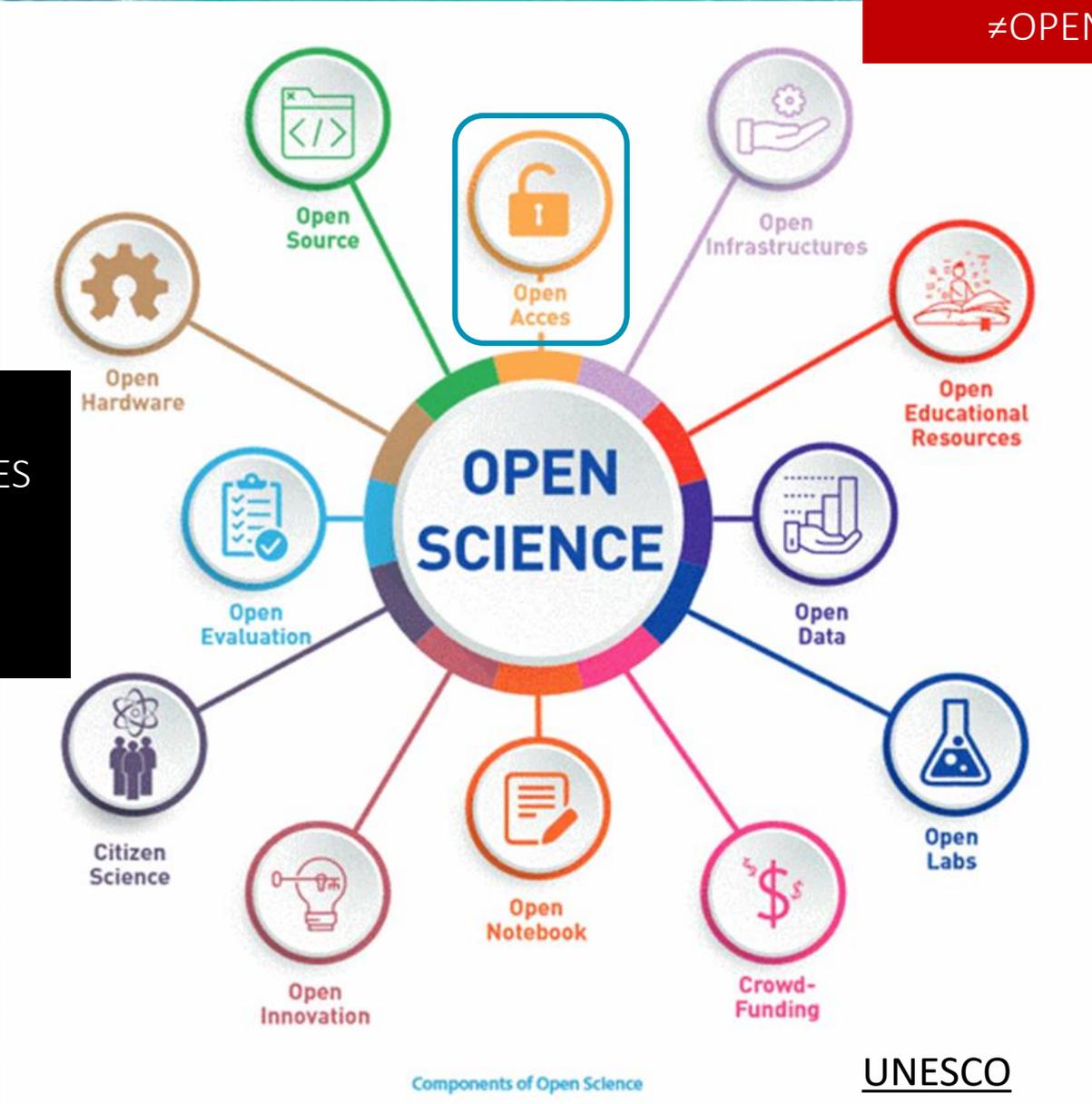


THERE WILL BE AN INCREASING DEGREE IN OVERLAPPING.
BUT WE'LL ALWAYS HAVE PERFECTLY FAIR CLOSED DATA

...Open Science

QUESTION #4: DO YOU KNOW THAT OPEN SCIENCE ≠ OPEN ACCESS?

THE SAME PRINCIPLE APPLIES TO ALL OPEN SCIENCE COMPONENTS



Green and Gold Open Access

Gold Open Access- publishing



QUESTION #5: DO I ALWAYS HAVE TO PAY WHEN I PUBLISH OPEN ACCESS?

AUTHORS PUBLISH IN AN OPEN ACCESS JOURNAL

30% ASK FOR APCs, ARTICLE PROCESSING CHARGES

...WE'LL DISCUSS ALSO «PREDATORY»

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

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

... scholarly communication today...

QUESTION #6: TODAY, READING IS FOR FREE, SO WHY SHOULD I PAY TO PUBLISH?



7.6 billion \$

[UNDERESTIMATED] AMOUNT OF MONEY SPENT IN SUBSCRIPTION IN 2016

READING IS NOT FOR FREE

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

WE PAY TO CLOSE

[point #2]



**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.”

”

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.

QUESTION #7:
DO WE STILL NEED
JOURNALS?

OLD FASHIONED, BIASED, NOT
EFFECTIVE... LIVING FOSSILS. GET
RID OF JOURNALS, USE
NOTEBOOKS INSTEAD

[point #3]

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.

The coalition will bring together research funding organisations, research performing organisations, national/regional assessment authorities or agencies, associations of research funders, of research performers, of researchers, as well as, learned societies and other relevant organisations, all willing and committed to implement reforms to the current research assessment system.

WORKSHOP: INITIATING THE PROCESS OF RESEARCH ASSESSMENT

Proposed commitments

THE EC INITIATIVE TOWARDS A REFORM OF RESEARCH ASSESSMENT IS GOING AT A SPEEDY PACE

- SEPT. 2022 SIGN THE AGREEMENT
- BY 2023 SHOW THE ROADMAP
- BY 5 YEARS SHOW THE RESULTS

ARE WE FINALLY GOING TO GET RID OF IMPACT FACTOR AND PRESTIGIOUS JOURNALS?

Call for interest - Towards an agreement on reforming research assessment

Call for interest

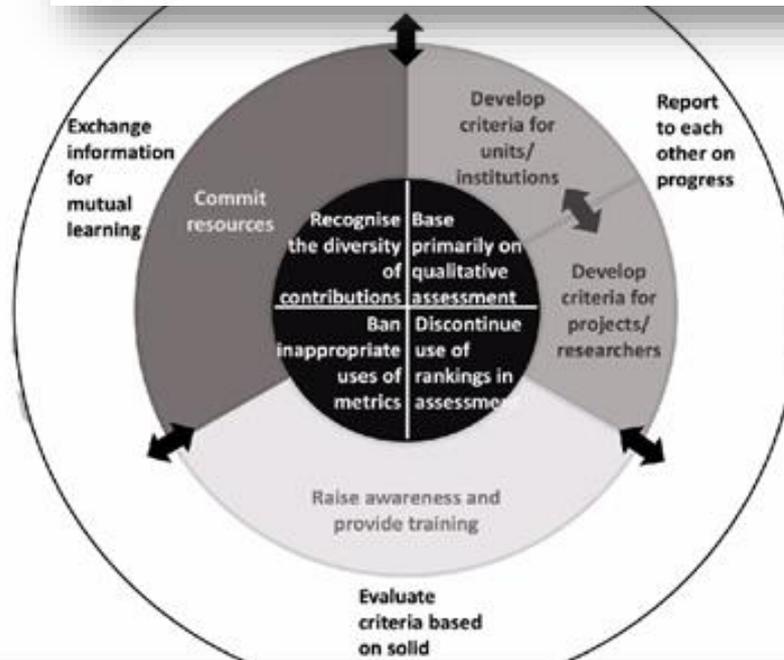
Fields marked with * are mandatory.

Introduction

This call aims at gathering expressions of interest to become part of a coalition of organisations on reforming research assessment, and to be involved in the process of drafting an agreement. The coalition will bring together organisations funding research, research performing organisations, national/regional assessment authorities or agencies, as well as associations of the above organisations and learned societies, all willing and committed to reform the current research assessment system.

For more information about this initiative and the proposed approach, please consult the European Commission scoping report "Towards an agreement on reforming research assessment": <https://data.europa.eu/doi/10.2777/707440>

Organisations having expressed interest will be contacted in view of being involved in the agreement drafting process, discussions on governance and other preparatory activities.



... your rights

QUESTION #9: ARE YOU AWARE OF YOUR RIGHTS AS AUTHORS?

YOUR INTELLECTUAL PRODUCTION IS **YOURS**. DON'T GIVE IT AWAY!!!



Plan S
Making full & immediate Open Access a reality

2022 Plan S Principles & Implementation cOAlition S News Resou

Resources

Go back

Rights Retention Strategy

Open Access benefits everyone. Retain your rights. It's good for you, for science, and for society

The author's rights quiz: How well do you know your rights as an author?



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

Let's find out! press Enter



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

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



#RetainYourRights

... calling [or: why should we care?]

QUESTION #10: ARE YOU AWARE THAT IN HORIZON EUROPE YOUR PROPOSAL WILL BE EVALUATED ALSO ON OPEN SCIENCE AND FAIR DATA MANAGEMENT?



Excellence – aspects to be taken into account.

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

Application template

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

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.

SEE YOU TOMORROW AT
14.00!