Facilitate the transition from science 'as is' to science 'as will be'.

Open Science Week



UNIVERSITY OF TWENTE.

DIGITAL COMPETENCE CENTRE (DCC)





Five misconceptions around Open Science

Markus Konkol, Open Science Officer



Agenda







REALISATION



ENTHUSIASM



REQUIREMENTS



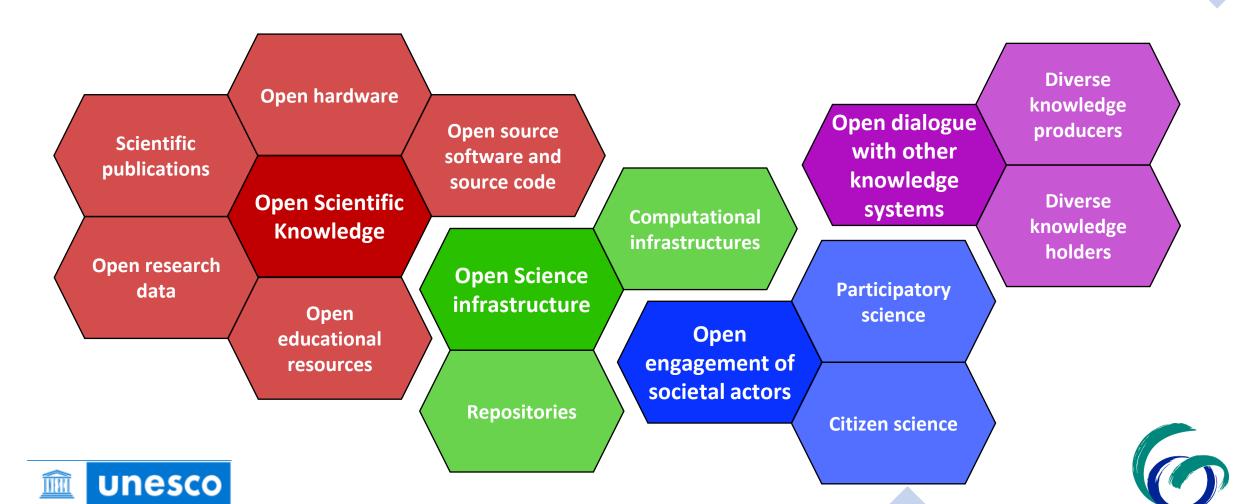
MOTIVATION





Misconception #1 Open Science is the same as Open Access

Open Science is the same as Open Access



Open Science is the same as Open Access

Transparency

Accountability

Collaborative

Verifiability

Reusability

Scientific Values

Honesty

Being critical

Fairness

Meticulousness

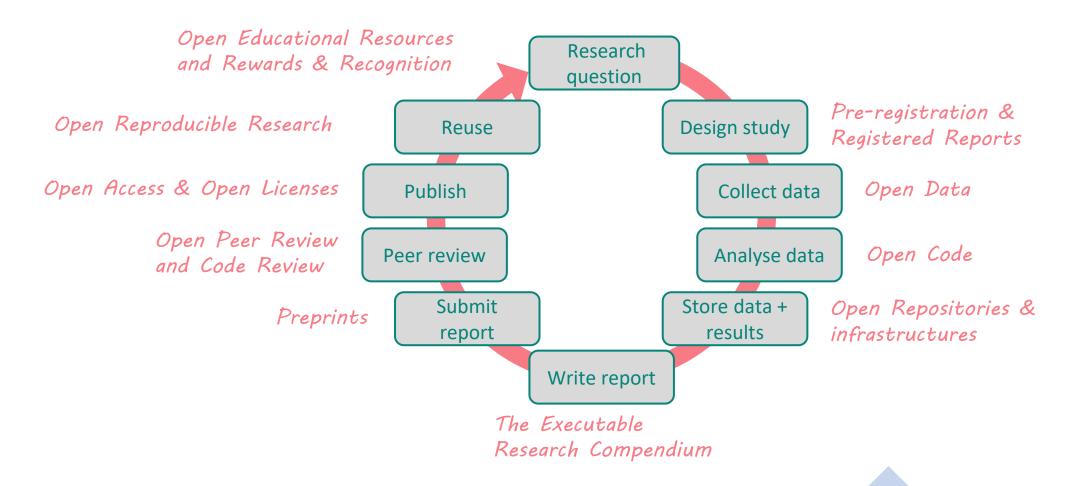
Curiosity

Objectivity

Courage



Open Science is the same as Open Access





Misconception #2 Open Science is about opening up EVERYTHING

Open Science is about opening up EVERYTHING

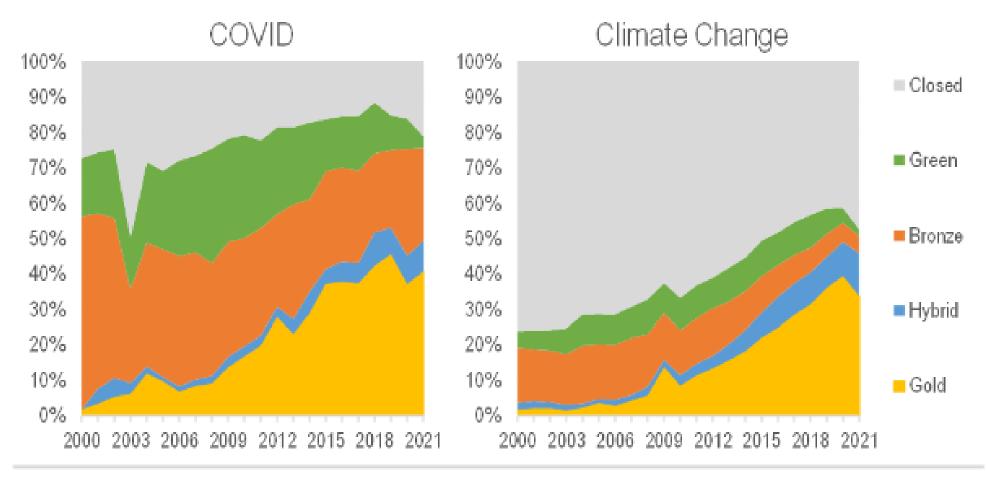


FIGURE 1. Percentage of open access (gold, hybrid, bronze and green) papers, for COVID-related and climate change research, 2000-2021



Open Science is about opening up EVERYTHING

"Publicly funded research should be publicly available"

But not publishing research data is ok to protect

- sensitive/personal information.
- rare, threatened, or endangered species.
- sacred and secret indigenous knowledge.

•



Open Science is about opening up EVERYTHING

Should all publicly funded research software become a public good?

Things to consider...

- Researcher would like to increase their visibility.
- Researchers might want to run a start-up.
- Research projects are often partially paid by companies.
- Releasing software might reveal security risks OR Not releasing software might hide security risks.
- Open questions:
 - When to release code?
 - Who should decide?

From "Closed by default, open when needed" to "Open by default, closed when necessary"



Misconception #3



Open Science: Just science done right

Open Reproducible Research

"Reproducible Research refers to achieving the same results (e.g., tables, figures, numbers) as reported in the paper by using the same source code and data.

In Open Reproducible Research these materials are publicly accessible."

Verification: Does the code generate the output it claims to create?

Validation: Does the code use the right algorithm to solve the research question?

Open Science: Just science done in a transparent, verifiable, and reusable way.



Misconception #4 Open Science is expensive

Open Science is expensive

JOURNAL OF SPATIAL INFORMATION SCIENCE

JOSIS is non-fee, non-commercial, free to authors and to readers. We have no article processing charges (APC), and all published articles are immediately and freely available to readers. (Link)















The FAIR Data Fund offers researchers a budget (up to €3.500) to cover the costs

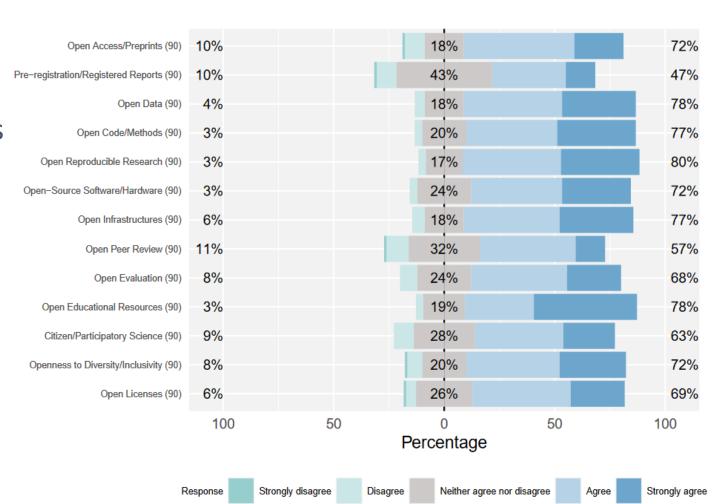




Misconception #5 It's hard to convince researchers to do Open Science

It's hard to convince researchers to do Open Science

Open Science practices ITC researchers would like to learn.





It's hard to convince researchers to do Open Science

Which obstacles prevent ITC researchers from doing Open Science?

Obstacles	All
1) It takes too much time and work	31
2) I work with sensitive data	26
3) I do not know how to license data and code	24
4) I use commercial software	23
5) The pressure to publish	22
6) Lack of funding	14
7) I do not know how	14
8) The company/institution I am working with does not allow sharing	13
9) My materials may be misinterpreted	11
10) It was not yet relevant	10
11) I do not want to lose my competitive advantage	10
12) I do not think that others will need the materials	9
13) Because of copyright concerns	8
14) I do not know where to publish my materials	8
15) My materials may be misused	7
16) The tools are missing	5

Competitive environment

Practical obstacles

Legitimate reasons for hiding

OS is not part of the work



Why the impact factor of journals should not be used for evaluating research

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BMI 1997:314:498-502

Evaluating scientific quality is a notoriously difficult problem which has no standard solution. Ideally, published scientific results should be scrutinised by true experts in the field and given scores for quality and quantity according to established rules. In practice, however, what is called peer review is usually performed by committees with general competence rather than with the specialist's insight that is needed to assess primary research data. Committees tend, therefore, to resort to secondary criteria like crude publication counts, journal prestige, the reputation of authors and institutions, and estimated importance and relevance of the research field, making peer

Summary points

- · Use of journal impact factors conceals the difference in article citation rates (articles in the most cited half of articles in a journal are cited 10 times as often as the least cited half)
- Journals' impact factors are determined by technicalities unrelated to the scientific quality
- Journal impact factors depend on the research field: high impact factors are likely in journals covering large areas of basic research

nature

Explore content > About the journal Y Publish with us Y

nature > editorials > article

Published: 27 July 2016

Time to remodel the journal impact factor

Nature **535**, 466 (2016) | Cite this article

478 Accesses | 22 Citations | 450 Altmetric | Metrics

frontiers in Human Neuroscience

Front Hum Neurosci. 2016; 10: 556.

Published online 2016 Nov 2, doi: 10.3389/fnhum.2016.00556

PMCID: PMC5089989

PMID: 27853429

The Slavery of the *h-index*—Measuring the Unmeasurable

Grzegorz Kreiner

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Introduction

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Last year we "celebrated" the 10th anniversary of the invention of the h-index (also known as the Hirsch factor; Hirsch, 2005), an indicator created by Jorge E. Hirsch, that attempts to measure the achievements of a research scientist. However, it not only appears that h-index has taken on a life of its own but also that the popularity of this formula currently surpasses the initial idea for its use envisioned by the inventor.

Suit-in-like internal and a second and a home to misself and the second of a second and (TTime b. 2005)

Nature and the Nature journals are diver on rates deta What's wrong with the h-index, according to its inventor

"Severe unintended negative consequences."

24 March 2020

expanding but short lived

Gemma Conroy







It's hard to convince researchers to do Open Science

What are alternative Rewards & Recognition approaches in the context of Open Science?

Join the session on Thursday 23rd June from 15-17 @ the campus (Vrijhof). Registrations are still possible!

Register:



