

Open Science

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what do you know about Open Science?

Open Science Policy in Europe



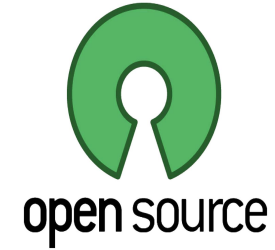
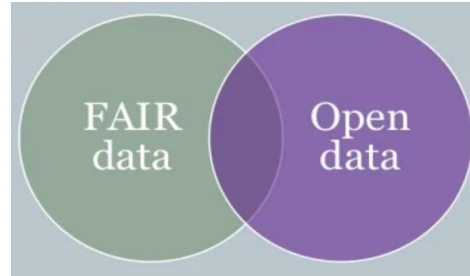
Open Innovation involve more stakeholders in innovation process

Open Science facilitate more open research via digital tools

Open to the World support more societal impact & collaboration

[European Commission \(2016\)](#)

Open Science Practices



OPEN LICENSING



[FOSTER Taxonomy of Open Science](#) | [Masuzzo & Martens \(2017\)](#)

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why should we open up research?

Why Open Science?



sharing is **car**ing

- opens access to research
- increases discoverability
- supports reproducibility
- increases (social) impact
- saves & shares resources
- aim is 'as open as possible'

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What's Wrong with Scholarly Publishing?



'Too greedy': mass walkout at global science journal over 'unethical' fees

Entire board resigns over actions of academic publisher whose profit margins outstrip even Google and Amazon



[Buranyi \(2017\)](#) | [Fazackerley \(2023\)](#)

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Key Issues in Open Access

PAYWALL
The Business of Scholarship

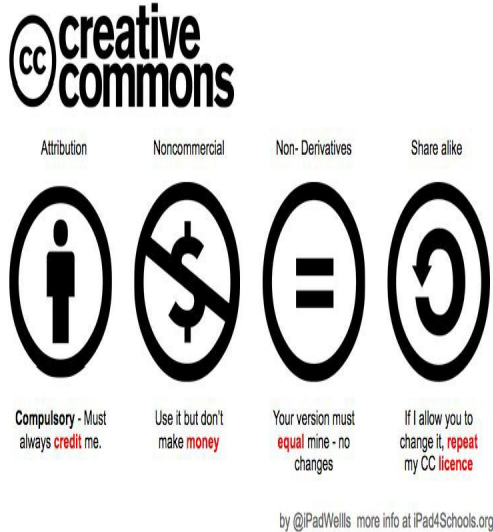


- open v closed access
- full v hybrid journals
- immediate v delayed
- copyright & licensing
- green v gold v diamond
- APCs & read/publish

[O'Neill \(2018\)](#) | [Paywall the Movie](#) | [Plan S](#)

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IPR and Open Licensing

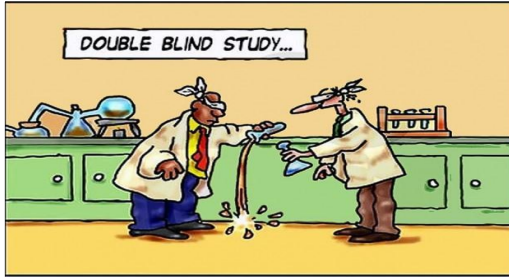


- IP stays with IP creator
- IP owner decides licence
- patenting remains closed
- creative commons licences
 - 0 | BY | NC | ND | SA
- metadata is typically CC-0

[Creative Commons](https://creativecommons.org/)

why should we not open up research?

Open Peer Review



- authors submit to editors
- authors/reviewers 'blind'
- versions/reviews closed
- authors submit to platform
- authors/reviewers public
- versions/reviews public

[Tennant \(2018\)](#) | [Ross-Hellauer \(2017\)](#)

Open Peer Review via F1000



F1000Research
Open for Science

Search

SUBMIT YOUR RESEARCH

BROWSEGATEWAYS & COLLECTIONSHOW TO PUBLISHABOUTBLOGMY RESEARCHSIGN IN

Check for updates

SYSTEMATIC REVIEW
REVISED What is open peer review? A systematic review [version 2; referees: 4 approved]
Tony Ross-Hellauer
Author details

This article is included in the Science Policy Research gateway.

Abstract

Background: "Open peer review" (OPR), despite being a major pillar of Open Science, has neither a standardized definition nor an agreed schema of its features and implementations. The literature reflects this, with numerous overlapping and contradictory definitions. While for some the term refers to peer review where the identities of both author and reviewer are disclosed to each other, for others it signifies systems where reviewer reports are published alongside articles. For others it signifies both of these conditions, and for yet others it describes systems where not only "invited experts" are able to comment. For still others, it includes a variety of combinations of these and other novel methods.

Methods: Recognising the absence of a consensus view on what open peer review is, this article undertakes a systematic review of definitions of "open peer review" or "open review", to create a corpus of 122 definitions. These definitions are systematically analysed to build a coherent typology of the various innovations in peer review signified by the term, and hence provide the precise technical definition currently lacking.

METRICS
8147 VIEWS
1702 DOWNLOADS
Get PDF
Get XML
Cite
Export
Track
Email
Share

Open Peer Review
Referee Status: ✓✓✓✓

Version(s)	1	2	3	4
REVISED Version 2 published 31 Aug 2017	✓ read report	✓ read report	✓ read report	✓ read report
Version 1 published 27 Apr 2017	✓ read report	? read report	? read report	? read report

- Richard Walker, Swiss Federal Institute of Technology in Lausanne, Switzerland
- Theodora Bloom, The BMJ, UK
- Bahar Mehmani, RELX Group, The Netherlands
- Emily Ford, Portland State University, USA

All reports (7), Responses and comments (4)

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what are pros and cons of Open Peer Review?

FAIR versus Open Data



- FAIR data $\neq$ open data
- FAIR principles for data:
 - > F = Findable
 - > A = Accessible
 - > I = Interoperable
 - > R = Reusable
- FAIR data can be open(ed)

[Open Data Examples](#) | [Go FAIR](#) | [Mons & O'Neill \(2019\)](#)

FAIR Data



Findable

- (Meta)data are assigned a globally unique and persistent identifier
- Data are described with rich metadata
- Metadata clearly and explicitly include in the identifier of the data it describes
- (Meta)data are registered or indexed in a searchable resource



Interoperable

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

GO FAIR



Accessible

- (Meta)data are retrievable by their identifier using a standardized protocol
- The protocol is open, free and universal
- The protocol allows for authentication and authorization, as needed
- Metadata are accessible, even when the data are no longer available



Reusable

- (Meta)data are richly described with a plurality of accurate and relevant attributes
- (Meta)data are released with a clear and accessible data usage licence
- (Meta)data are associated with a detailed provenance
- (Meta)data meet domain-relevant community standards

[Wilkinson & al \(2016\)](#) | [Hansen & al \(2018\)](#)

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European Open Science Cloud (EOSC)



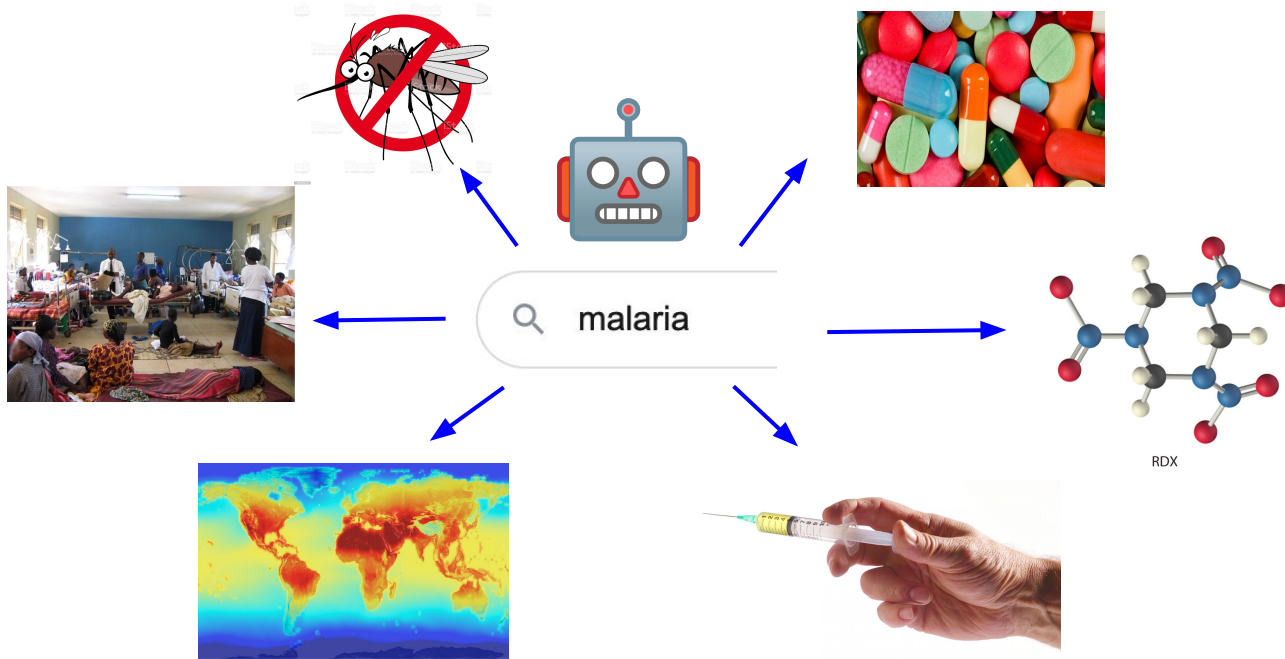
- virtual space for research
- support for Open Science
- web of FAIR & open data
- with services to use data
- cross-disciplinary research

[EOSC](#) | [EOSC Association](#) | [EOSC Future](#)

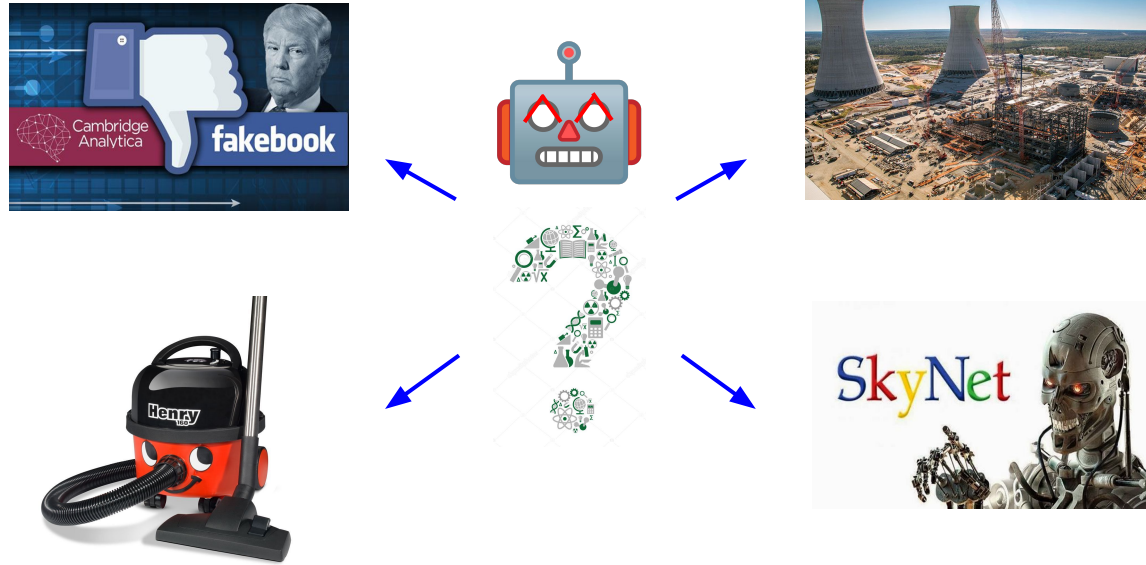
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what are pros and cons of FAIR/Open Data?

Preempting Future Discoveries



Preempting Future Issues



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why should researchers engage society?

Citizen Science



- reaching out to citizens
- citizens deciding research
- citizens helping research
- with services to use data
- citizens doing research

[EOSC](#) | [EOSC Association](#) | [EOSC Future](#)

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Citizen Science Initiatives



[Galaxy Zoo](#) | [Genographic Project](#) | [Bugs Count](#) | [Endangered Languages Project](#)

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thank you!