NIOS Europe

Conference on Open Research Data in Slovenia
Workshop on Open Peer Review
November 15, 2019, Maribor
Görögh Edit

CONTEXT

Do we need Peer Review 2.0 and, if yes, how should it differ from the current model? (2013)

Issues to discuss:

1. Defining Open peer review
2. Alternativ peer review tools
3. Peer review and data
4. Group discussion: transparency, training, data sharing

https://www.researchgate.net/post/Do_we_need_Peer_Review_20_and_if_yes_how_should_it_differ_from_the_current_model

SIGNIFICANCE OF OPEN SCIENCE

Answering to the current state of scholarly communication:

✓Slow, redundant, wasteful

✓Moved by commercial interest

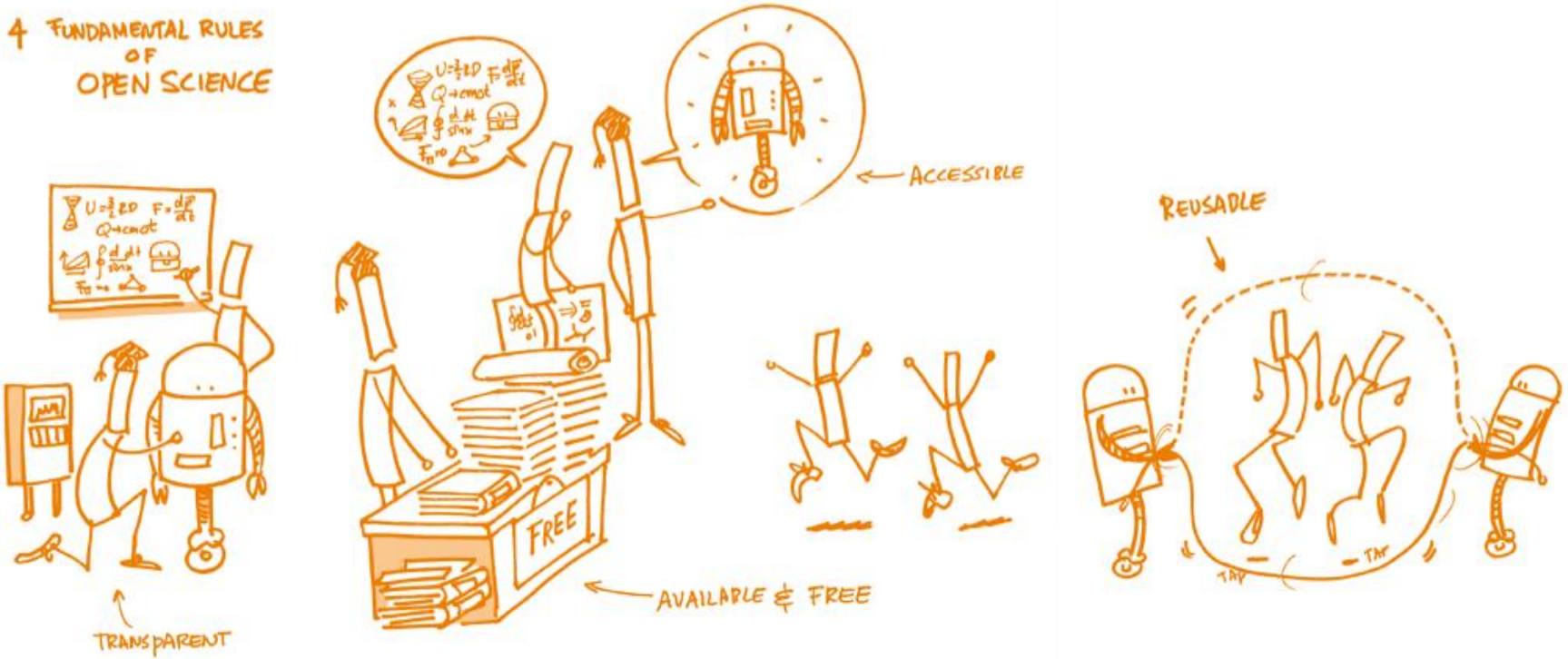
✓Chaotic state of copyright

✓Crisis of science:

✓Access, reproducibility, serial, evaluation

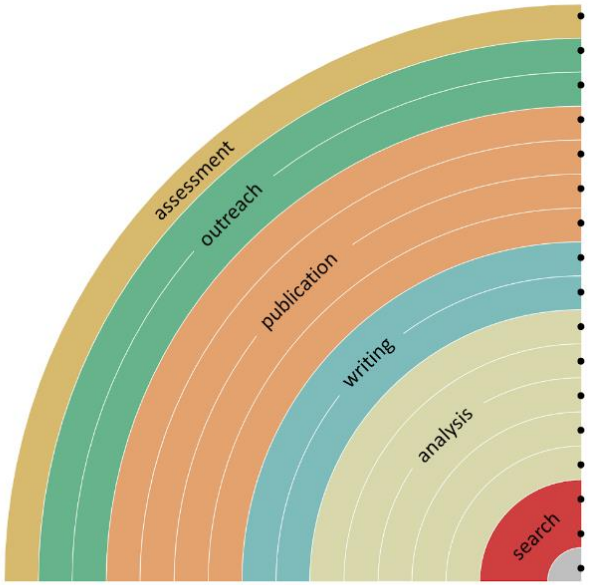
Melanie Imming, Jon Tennant. (2018). http://doi.org/10.5281/zenodo.128557

@melimming; quote from @chartgerink



Open Science Training Handbook. https://book.fosteropenscience.eu/

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. CC0 or CC-BY
- publishing open access, 'green' or 'gold'
- using open peer review, e.g. at journals or PubPeer
- sharing preprints, e.g. at OSF, arXiv or bioRxiv
- using actionable formats, e.g. with Jupyter or CoCalc
- open XML-drafting, e.g. at Overleaf or Authorea
- sharing protocols & workfl., e.g. at Protocols.io
- sharing notebooks, e.g. at OpenNotebookScience
- sharing code, e.g. at GitHub with GNU/MIT license
- sharing data, e.g. at Dryad, Zenodo or Dataverse
- pre-registering, e.g. at OSF or AsPredicted
- commenting openly, e.g. with Hypothes.is
- using shared reference libraries, e.g. with Zotero
- sharing (grant) proposals, e.g. at RIO

 Bianca Kramer & Jeroen Bosman https://101innovations.wordpress.com

DOI: 10.5281/zenodo.1147025

COS CENTER FOR OPEN SCIENCE

Discrete Analysis

eLIFE

F1000

OpenEdition Journals

PeerJ

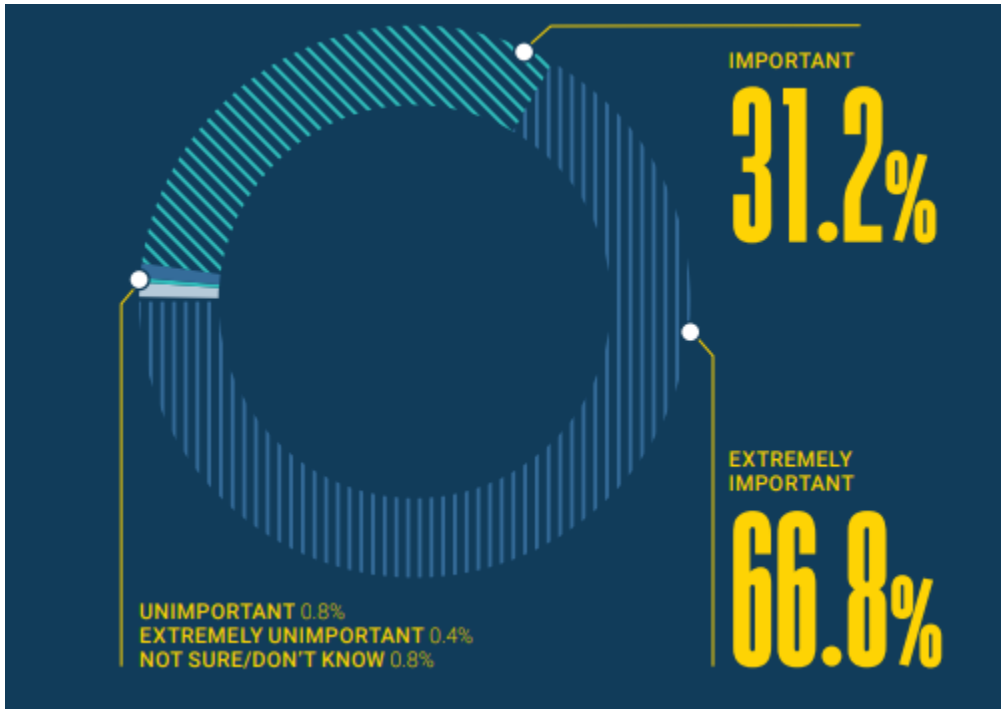
RESEARCH IDEAS AND OUTCOMES RIO The Open Science Journal

scienceOPEN.com research+publishing network

Webmed Central

SUCCESS OF AN OA PUBLISHING PLATFORM

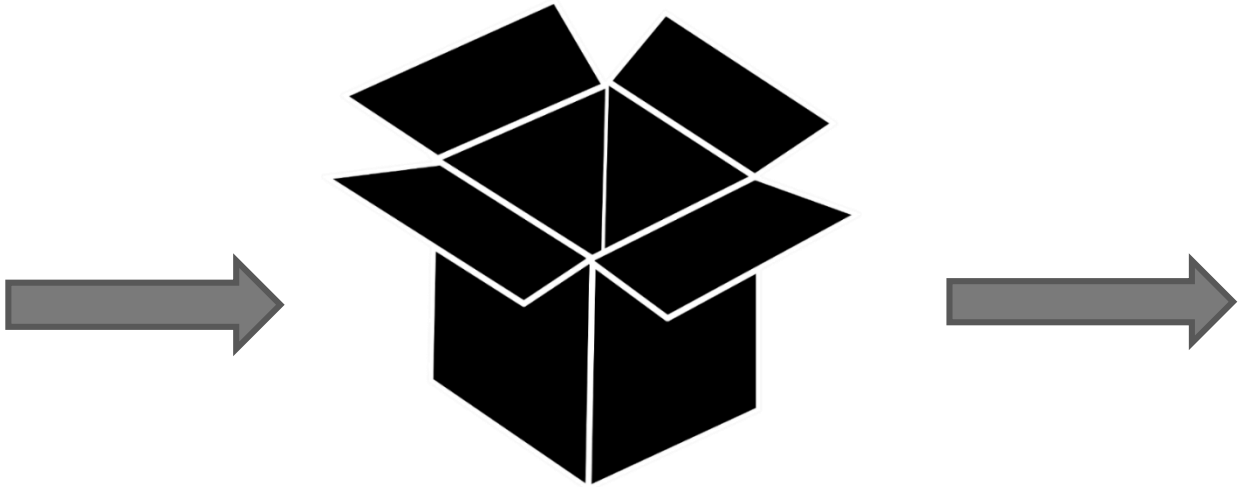
1. **Quality control and moderation**
2. **Certification and reputation**
3. **Motivation and engagement**



https://publons.com/static/Publons-Global-State-Of-Peer-Review-2018.pdf

Tennant, J. et al. Thinking outside the black box of peer review

PEER REVIEW REEVALUATED

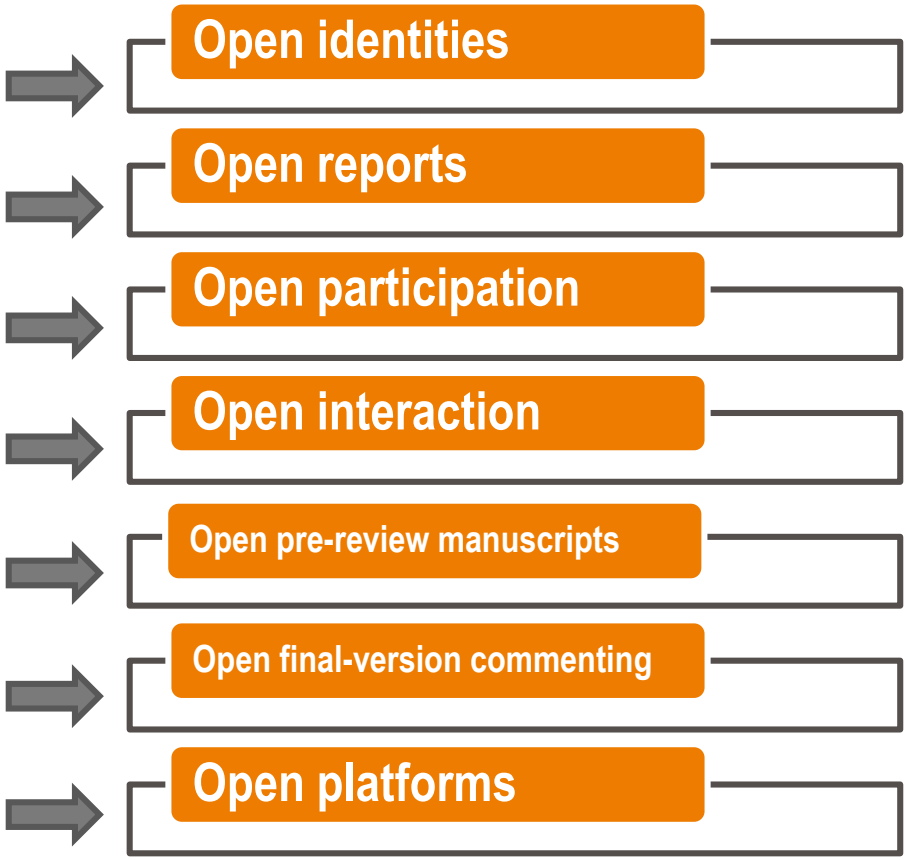


Anonymous
Closed/Opaque
Selective (participation)

- How different the principle of peer review from its practice?
- How do the web technologies change our expectations of scholarly communication (publishing, peer review)?
- Can these technologies change the critical state of peer review?
- Can the strong connection between peer review and journal publishing be broken?

Open peer review

Open peer review is an **umbrella term** for a number of overlapping ways that **peer review models** can be adapted **in line with the aims of Open Science.**



Ross-Hellauer, 2017, "What is open peer review? A systematic review", F1000Research.
DOI: 10.12688/f1000research.11369.2

Open identities

Authors and reviewers aware of each other's identity

Open reports

Review reports published alongside relevant article

Open participation

Wider community able to contribute to review process

Open interaction

Direct discussion between author(s)/reviewers, and/or between reviewers

Open pre-review manuscripts

Manuscripts/pre-prints available online in advance of peer review

Open final-version commenting

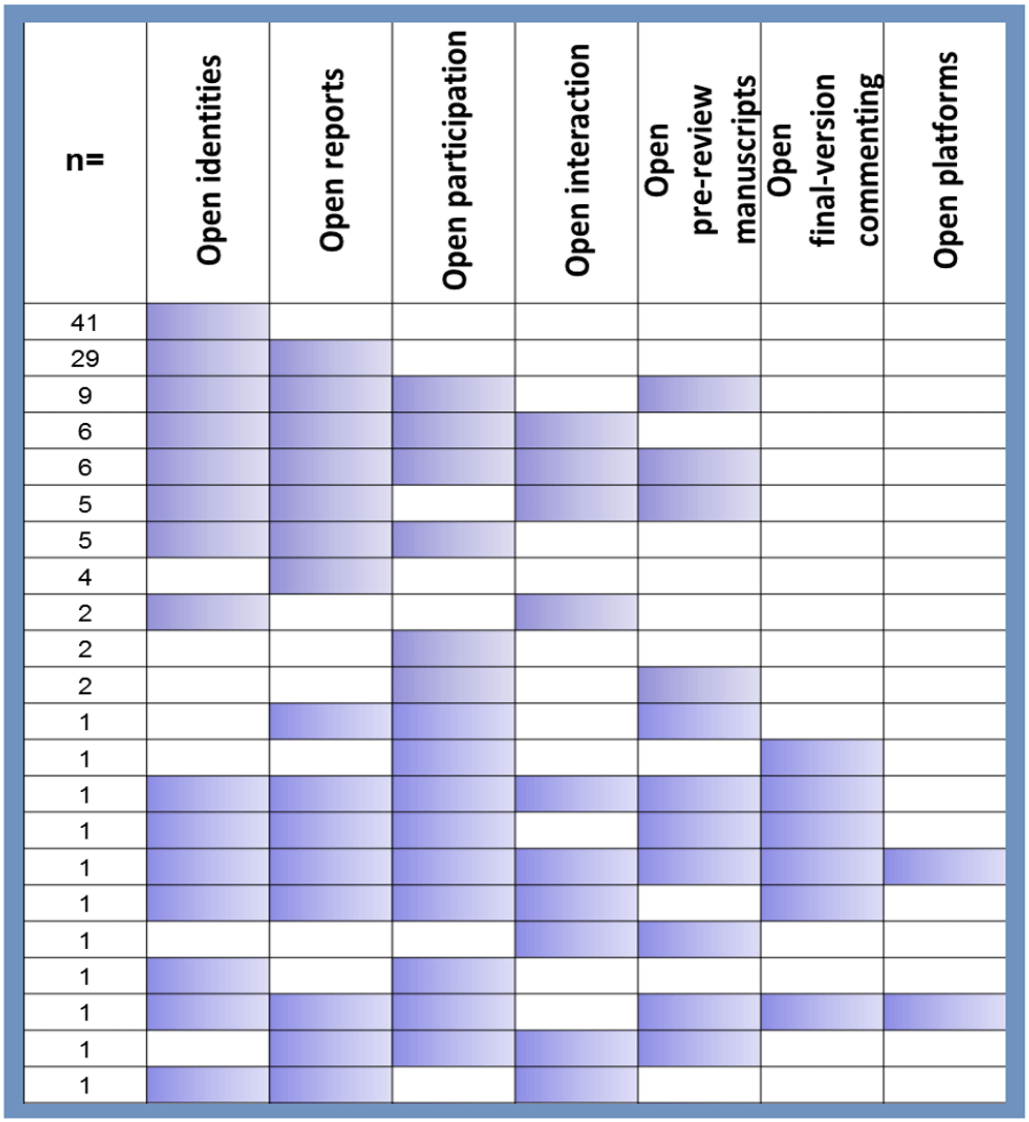
Review or commenting on final "version of record" publications.

Open platforms ("decoupled review")

Review is facilitated by a different organizational entity than the venue of publication

COMBINATIONS

122 definitions analyzed



n=	Open identities	Open reports	Open participation	Open interaction	Open pre-review manuscripts	Open final-version commenting	Open platforms
41	■						
29	■	■					
9	■	■	■		■		
6	■	■	■	■			
6	■	■	■	■	■		
5	■	■		■	■		
5	■	■	■				
4		■					
2	■			■			
2			■				
2			■		■		
1		■	■		■		
1			■			■	
1	■	■	■	■	■	■	
1	■	■	■		■	■	
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1	■		■				
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1	■	■		■			

OPEN IDENTITIES

Positives

- Increase quality of reports
- Foster transparency to avoid conflicts of interest
- More civil language (in review and response)

Negatives

- Difficulty in taking and giving critical feedbacks (reviewers might blunt their opinions for fear of reprisals esp. from senior peers)
- Labor-intensive process

OPEN REPORTS

Positives

- Feedback improves work and provide contextual information
- Giving better feedback - increase review quality
- Enable credit and reward for review work
- Help train young researchers in peer reviewing

Negatives

- Higher refusal rates amongst potential reviewers
- Time-consuming and more demanding process
- Fear of being exposed (esp. for early career researchers)

OPEN PARTICIPATION

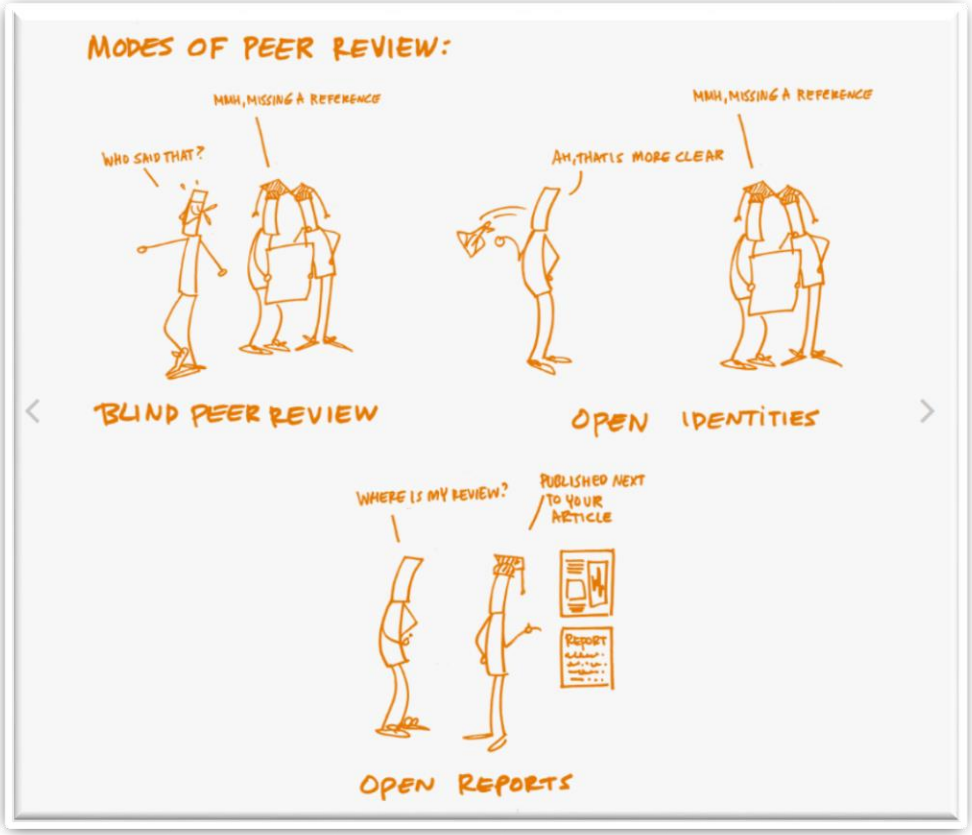
Positives

- Expanding the pool of reviewers (including to those non-traditional research actors)
- Support cross-disciplinary dialogue
- Increase number of reviewers
- Being part of the debate

Negatives

- Time issue: difficulties motivating commentators to take part and deliver useful critique
- Self-selecting reviewers tend to leave less “in-depth” responses
- Feedback from non-competent participants

T. Ross-Hellauer / OPR How & Why / PEERE Training School, Split, May 2018
And E. Görögh/OPR workshop results /DARIAH 2018, Paris, May 2018



Open Science Training Handbook. https://book.fosteropenscience.eu/

Decoupled peer review

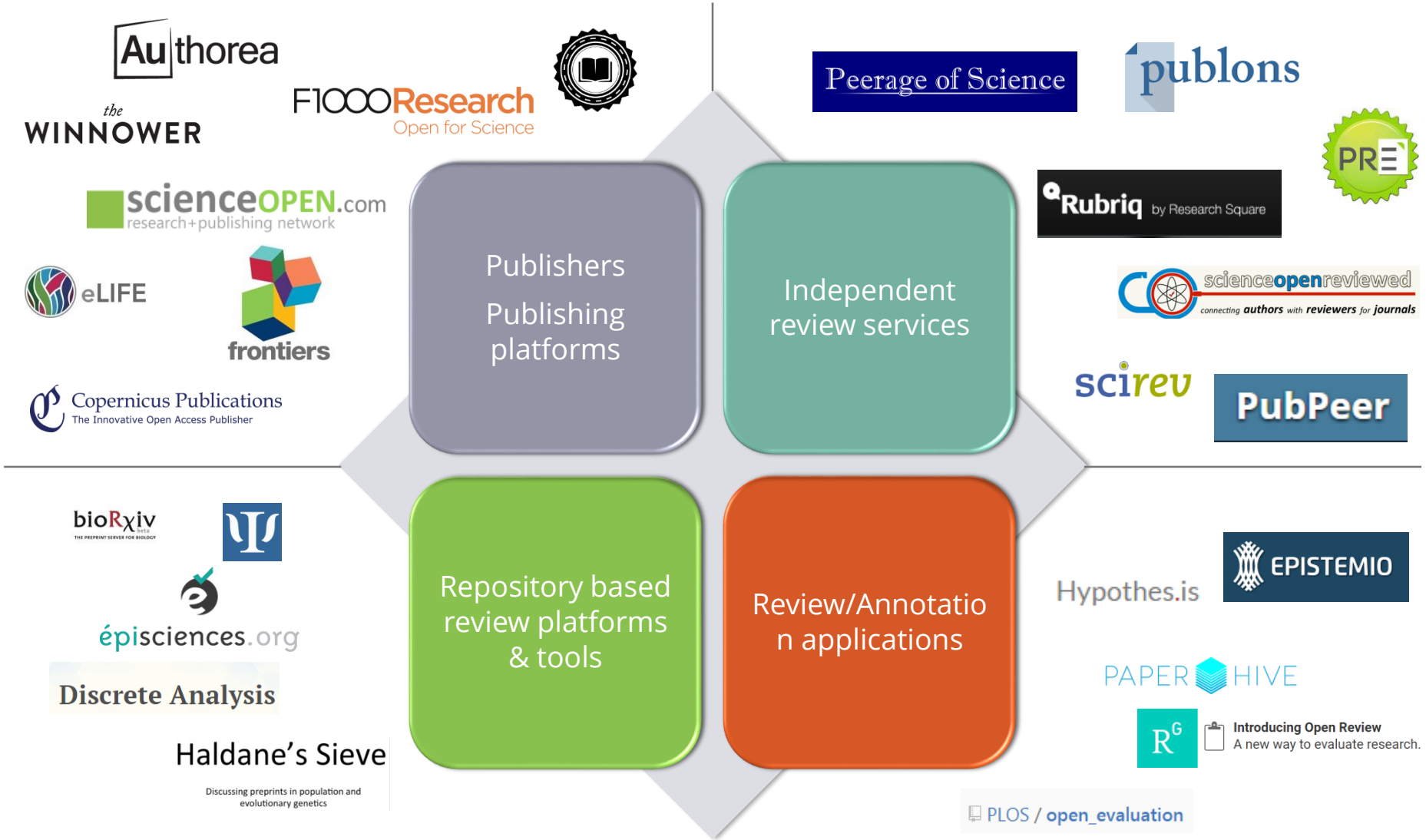
Pre-publication peer review and commenting

Post-publication peer review

Interactive peer review

Collaborative peer review

ALTERNATIV PEER REVIEW TOOLS AND SERVICES



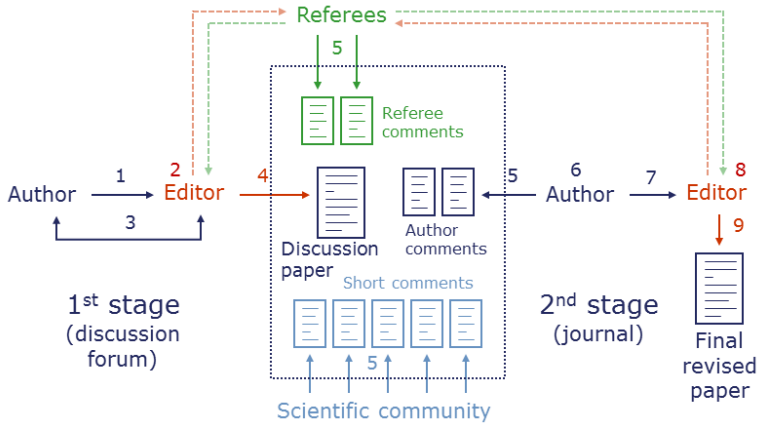
OpenUP. D3.1 Practices, evaluation and mapping: Methods, tools and user needs. http://openup-h2020.eu/wp-content/uploads/2017/01/OpenUP_D3.1_Peer-review-landscape-report-1.pdf

PUBLISHING PLATFORMS

frontiers

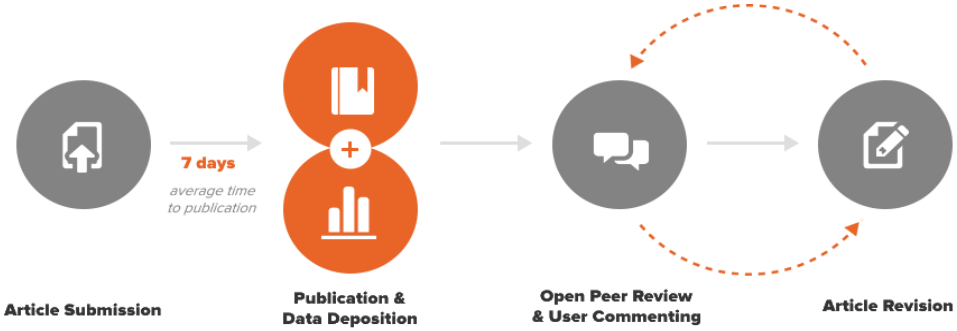
Collaborative peer review

Copernicus Publications
The Innovative Open Access Publisher



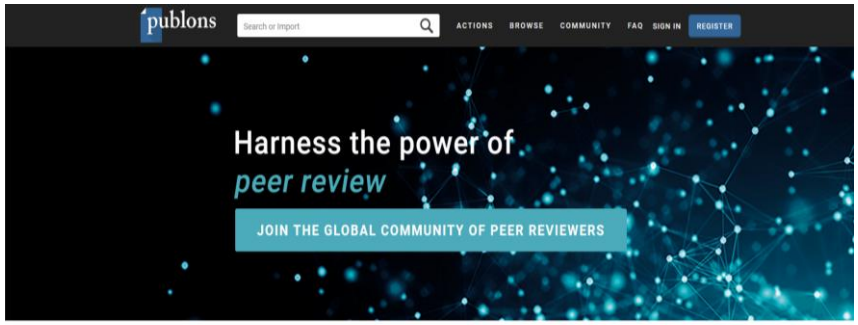
Interactive peer review

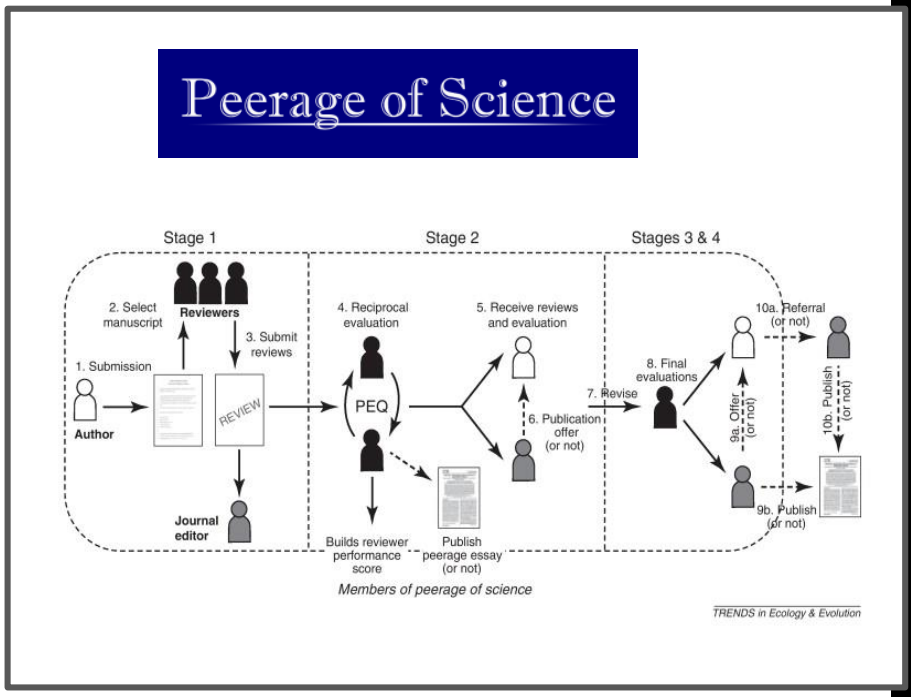
F1000Research
Open for Science



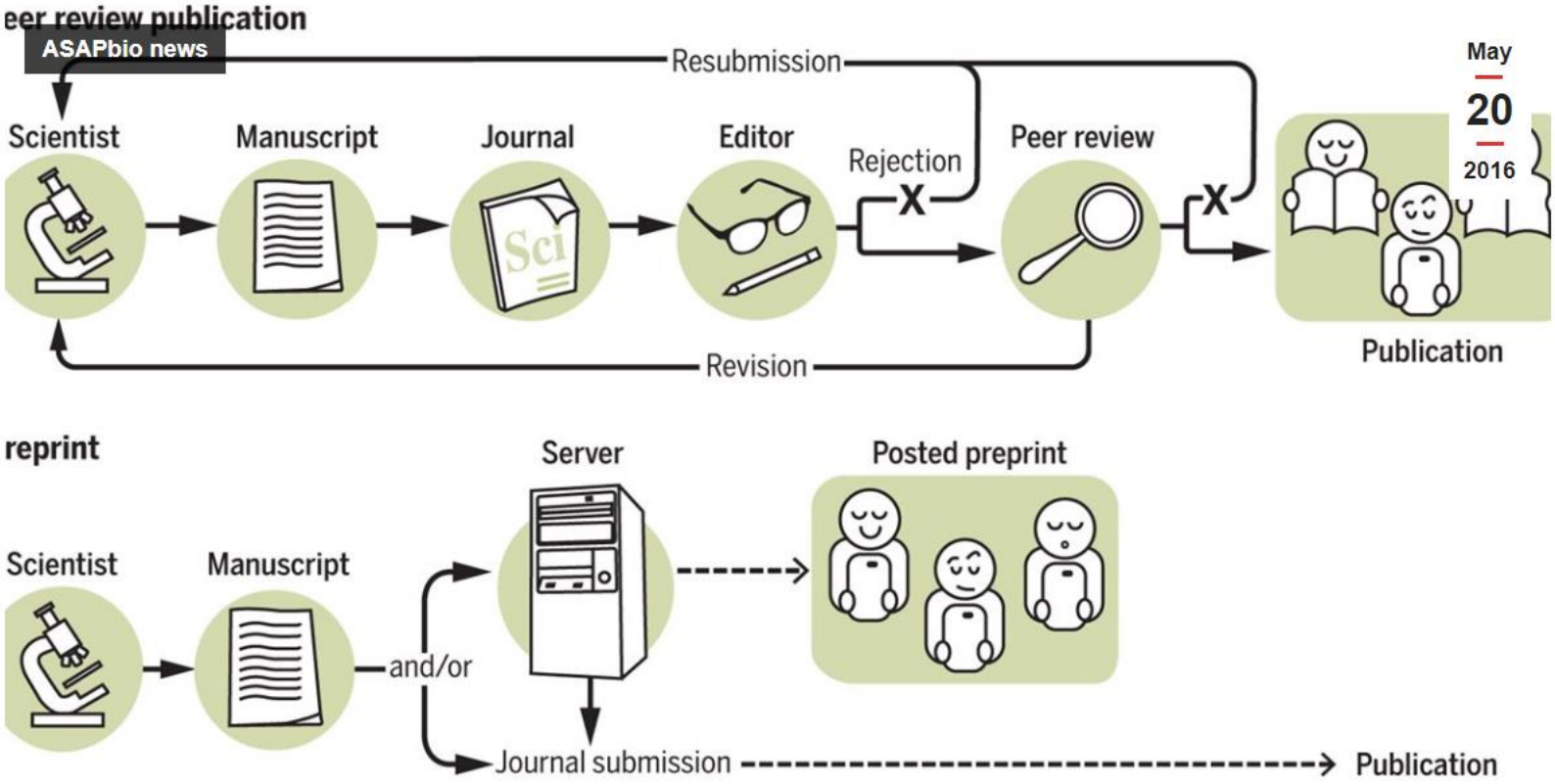
Post-publication peer review

DECOUPLED PEER REVIEW





PREPRINT BASED PUBLISHING



https://asapbio.org/asapbio-attendees-commentary-in-science

ANNOTATION/COMMENTING TOOLS

PAPER HIVE

Peer-review and community proofreading

Improve and evaluate articles and books together

PaperHive allows a convenient and transparent post-publication peer review of academic literature. The system is optimized for documents of any size and multiple reviewers. All discussions are securely stored.

EPISTEMIO

Any scientist can publish an assessment of the publications that she / he has read lately in less than one minute, by going to epistemio.com, searching the publication, and adding a rating. Ratings and reviews can be either anonymous or signed, according to authors' choice. Epistemio hosts freely these ratings and reviews and provides them under an open access licence.

hypothes.is

The Hypothesis Project is a new effort to implement an old idea: A conversation layer over the entire web that works everywhere, without needing implementation by any underlying site.

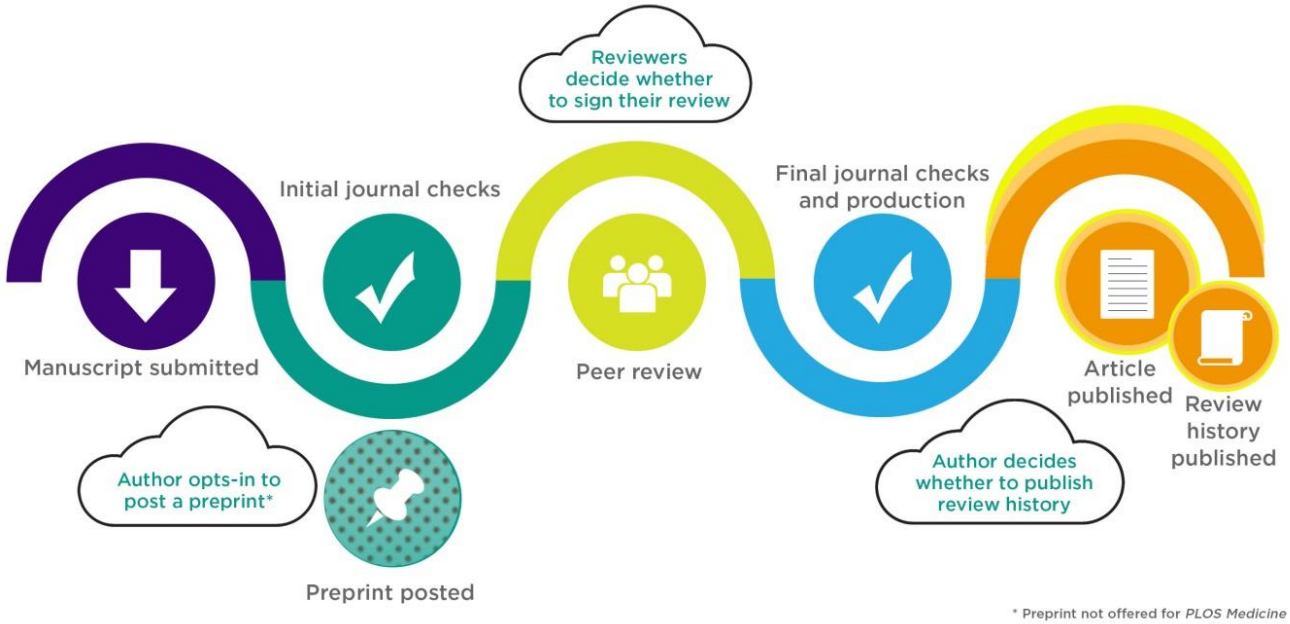
REDEFINING THE ROLES

- Gatekeeping function as a content filter
- Typically closed system with a secretive and selective process
- Organised around journals
- Non-accountable editor-controlled “black box of peer review”
- Structurally limited (2-3 people)

- Collaborative, constructive peer review: quality control is achieved by consensus
- Self-organised, open and unrestricted communities
- Unrestricted content types and formats
- Elected ‘moderators’ accountable to communities
- Semi-automated matching of content to reviewers

NEW OPTIONS

PLOS Journals Now OPEN for Published Peer Review



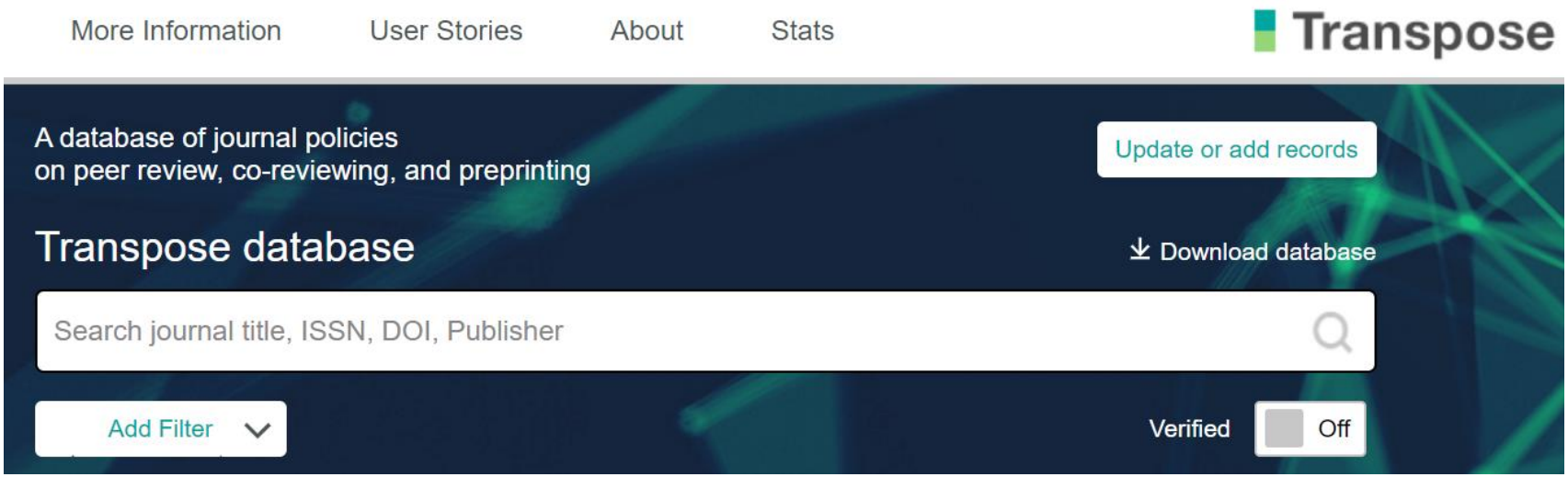
https://blogs.plos.org/plos/2019/05/plos-journals-now-open-for-published-peer-review/

- Including some form of open peer review: *BMC* (owned by *Springer Nature*), *BMJ*, *Copernicus*, *eLife*, *EMBO Press*, *F1000Research*, *Nature Communications*, *Royal Society Open Science* and *PeerJ*.

- An open letter was published in Nature calling for publishers to begin to publish peer review reports.

Polka JK, Kiley R, Konforti B, Stern B, Vale RD. Publish peer reviews. Nature. 2018;560(7720):545.

DATABASE FOR OPR



https://transpose-publishing.github.io/#/

DATA AND PEER REVIEW

Data on Peer Review

- ✓ PEERE: New Frontiers for Peer Review

Goal: to analyze peer review in different scientific areas and evaluate the implications of different models of peer review.

https://www.elsevier.com/connect/sharing-data-to-study-peer-review-as-part-of-peere-protocol

- ✓ Guidelines for OPR implementations

Ross-Hellauer, T., Görögh, E. Guidelines for open peer review implementation. *Res Integr Peer Rev* **4,** 4 (2019) doi:10.1186/s41073-019-0063-9

Data for Peer Review

- ✓ The peer review of shared data sets is expected to decrease instances of scientific misconduct.

DATA STORAGE AND SHARING

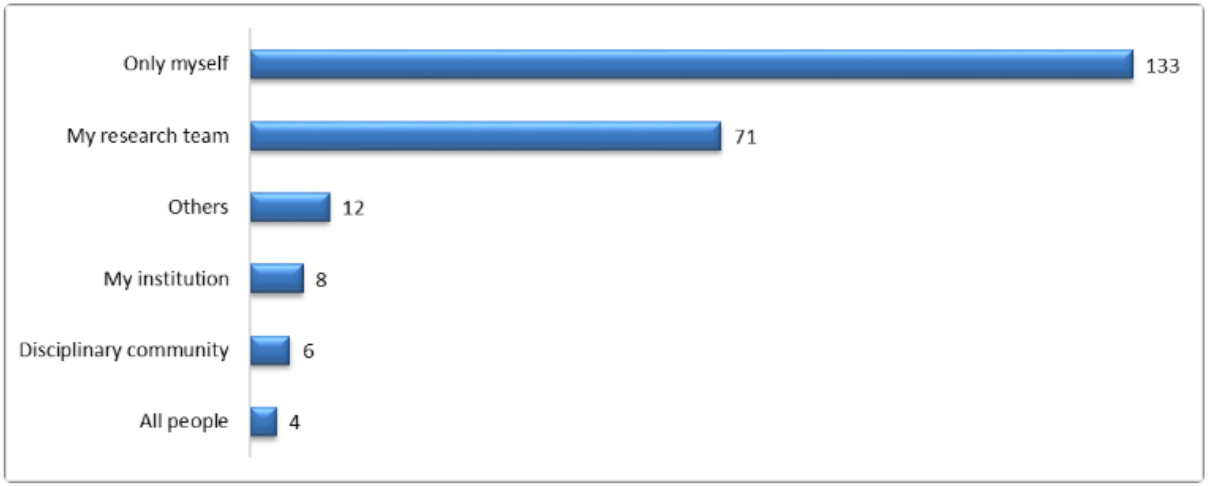
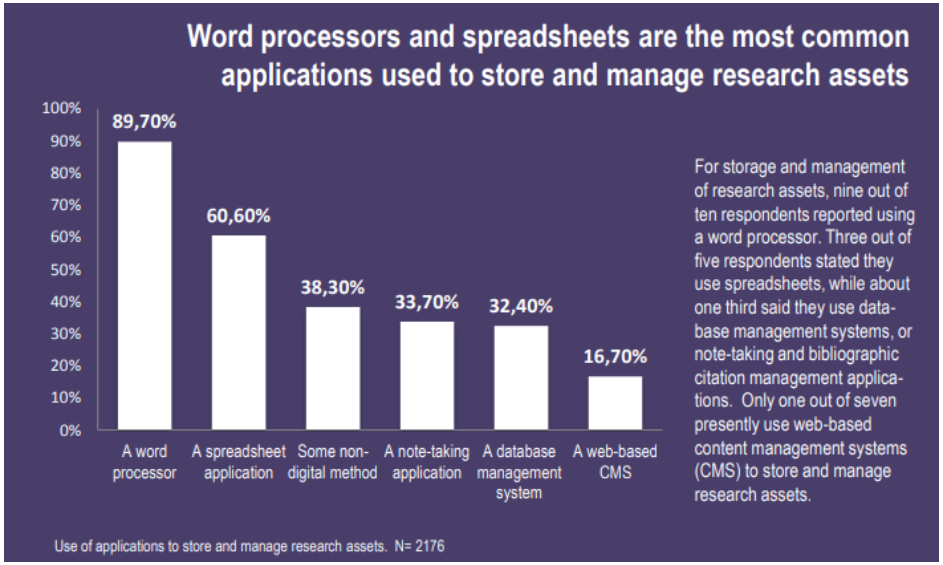


Figure 4: Access to research data (n=209)

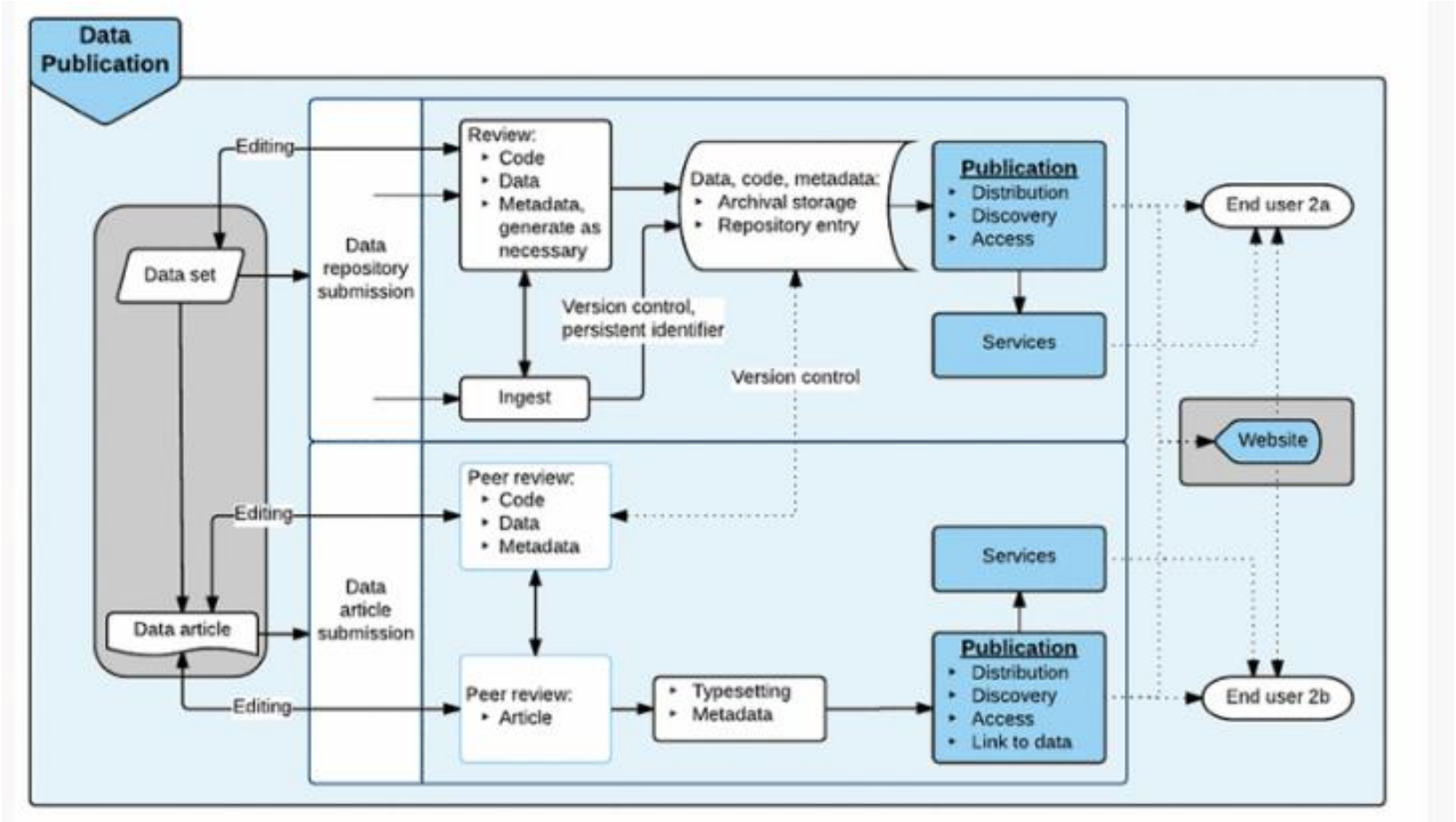
Schöpfel J. and Prost H. (2016). Research data management in social sciences and humanities: A survey at the University of Lille (France). Prost LIBREAS. Library Ideas, 29



https://zenodo.org/record/260101#.XEB7v1xKjcv

RESEARCH DATA PUBLICATION WORKFLOW

RDA-WDS Publishing Data Workflows Working Group (WG) has developed a data publication process:



Austin, C.C., Bloom, T., Dallmeier-Tiessen, S. et al. (2017). Int J Digit Libr 18: 77. https://doi.org/10.1007/s00799-016-0178-2

BENEFITS

- ✓ Visibility of research
- ✓ Acknowledgement of work (DOI)
- ✓ Linking data to published results
- ✓ Complying with H2020 data mandate
- ✓ Enhancing findability of data (metadata)
- ✓ Finding new collaborations and new research topics
- ✓ Adding to the researchers profile (ORCID, OpenID, VIAF)

DISCUSSION

Goals:

1. to discuss the challenges the participants might have encountered,
2. gather possible solutions for these problems
3. collect best practices and good examples how these aspects of the review process have been managed in different disciplines. Issues for discussion:

Topics:

1. Increasing reliability and incentives (how higher **transparency** can contribute to better reviews and more active participation in the review process)

2. Encouraging **data sharing** and data availability (how access to data improve the review process)

2. **Training** for reviewers (how training young researchers incentivize participation)

METHOD

1. **Write a statement on some/all three topics (post-it)**
2. **Form groups and choose a topic to discuss first.**
3. **Rotating groups to review comments on other topics.**

Points of discussion:

1. **Best practices, present solutions, present situation.**

2. **Barriers and challenges of implementation.**

3. **Solutions to move barriers.**

THANK YOU FOR YOUR PARTICIPATION!

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OpenAIRE