

New Developments in Preprinting and Preprint Review

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Open Science Festival, Amsterdam, 1 September 2022

DOI: <https://doi.org/10.5281/zenodo.7040997>
Slide deck (also) available at: <https://tinyurl.com/OSF2022Preprints>
NB most images in this slidedeck are clickable!



**Utrecht
University**

**Sesame Open
Science**



CWTS
Meaningful metrics

Programme

Welcome and introduction (5 min.)

Part 1 - Preprinting

- Presentation
- Interactive discussion (breakout groups; 20 min.)

Part 2 - Preprint peer review

- Presentation
- Interactive discussion (breakout groups; 25 min.)

Part 3 - Publish Your Reviews

- Presentation

Interactive discussion (plenary; 25 min.)

Wrap up (5 min.)

Part 1 - Preprinting

Part 1: Preprints - Main characteristics

- Early version of paper, chapter or other publication
- Before formal peer review
- AKA “early version”, “submitted version/manuscript”, “working paper”
- Shared publicly either before or on submission for more formal publication with peer review
- Can have updated/corrected versions, e.g. based on comments
- Manuscripts shared as preprint now accepted by almost all journals/publishers

Part 1: Preprinting - why?

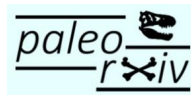
Dissemination and access reasons:

- Speeding up discovery of (preliminary) research results
- Generating early feedback, also before journal submission
- Providing free access to research outcomes

Registration reasons:

- Establishing evidence on researchers' most recent activity
- Establishing priority of discoveries
- Early registration of who is working on what, facilitating new collaborations

Part 1: Preprinting - where?



Part 1: Preprinting - where?



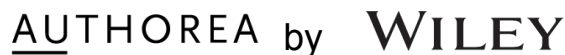
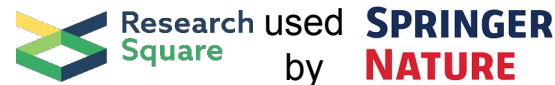
disciplinary



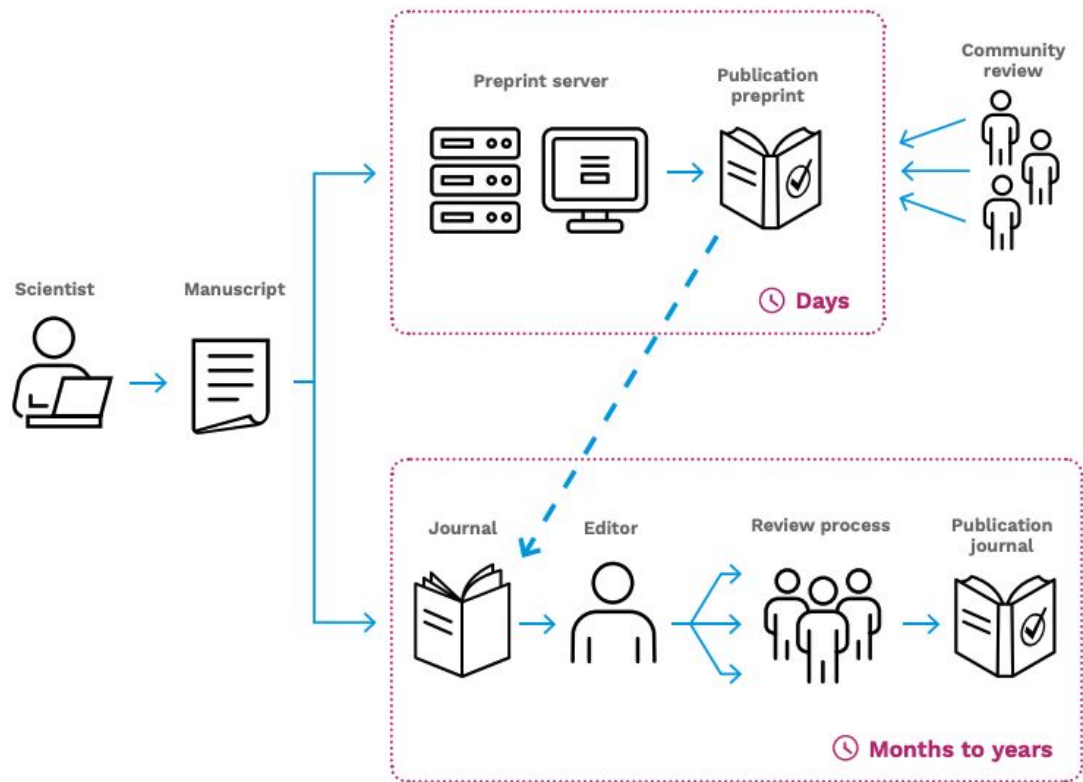
regional



linked to publisher



Part 1: Preprinting - how?



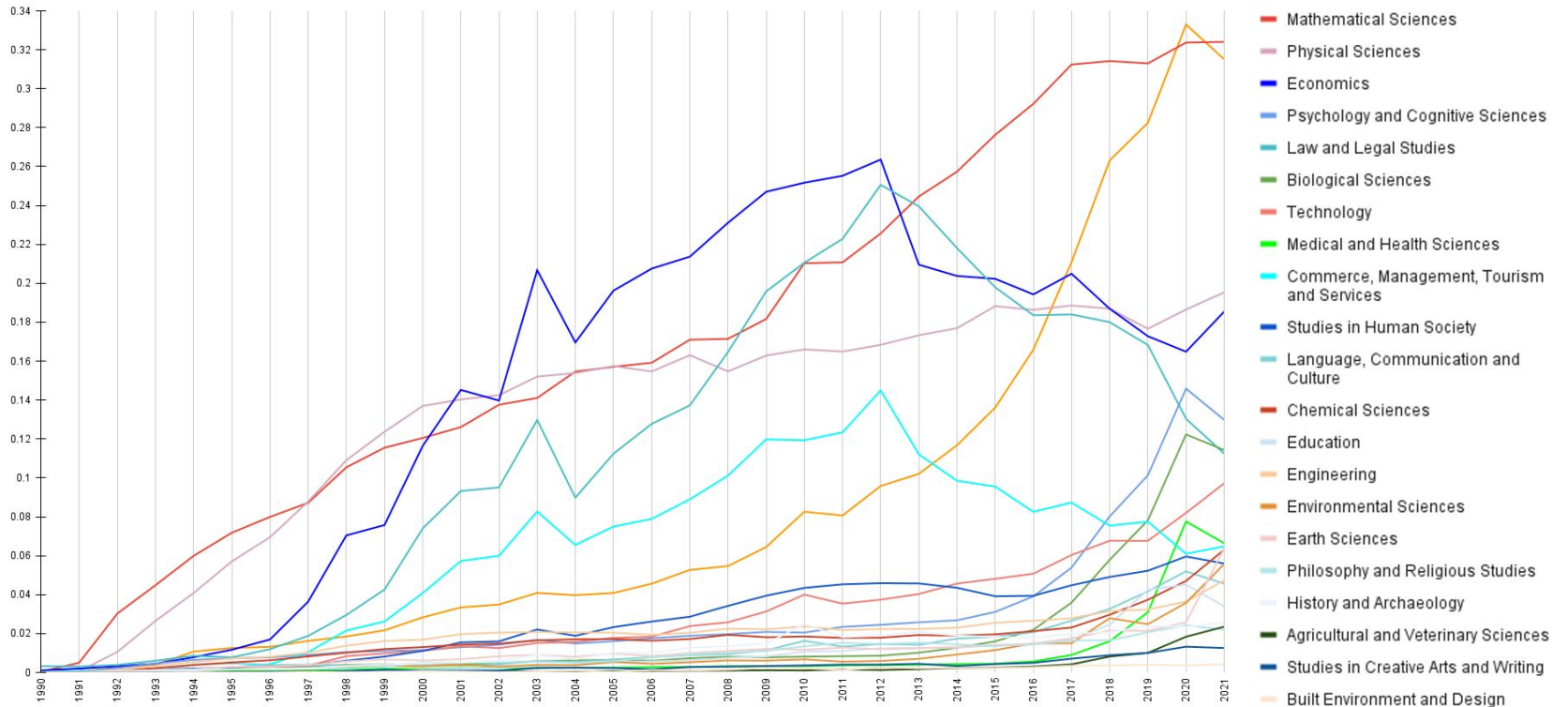
- Fast
- Free for author
- Free for reader
- Citable, with DOI
- Linked to article

Source: A Practical Guide to Preprints: Accelerating Scholarly Communication (1.0). Zenodo.
<https://doi.org/10.5281/zenodo.5600535>

Part 1: Preprinting - uptake

Preprint sharing relative to total article output, 1990-2021, by field

source: Dimensions; check date: 20210206, year 2021 updated 20220831



Part 1: Preprinting - uptake

astronomy, mathematics:

- take off in 1990s, currently at 20-35% of article output

physics, economics

- take off in 1990s, currently at ~20% of article output

technology

- take off in 2007, currently at ~10% of article output

psychology, biological sciences

- take off in 2016, currently at 15-20% of article output

medicine

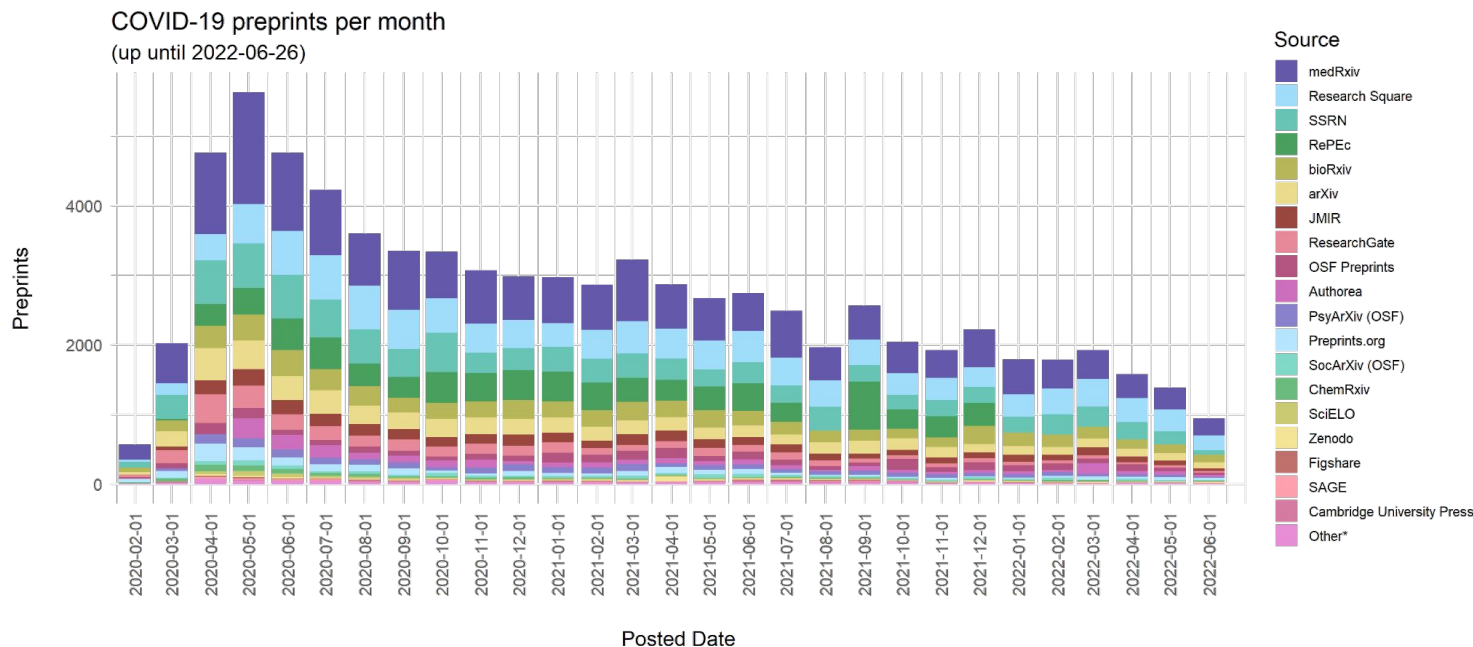
- take off in 2018, currently at ~10% of article output

most other fields

- slow take off after 2017 and mostly still (way) below 10% of article output

based on Dimensions data, checked 20210206 for 1990-2020 and 20220830 for 2021

Part 1: Preprints and COVID-19



* 'Other' refers to preprint repositories containing <150 total relevant preprints. These include: AfricArXiv (OSF), AgriXiv (OSF), BioHackrXiv (OSF), Copernicus GmbH, EcoEvoRxiv (OSF), EdArXiv (OSF), engrXiv (OSF), ESSOAR, Frenxiv (OSF), INA-Rxiv (OSF), IndiaRxiv (OSF), LawArXiv (OSF), MediArXiv (OSF), MetaArXiv (OSF), NutriXiv (OSF), ScienceOpen, SportRxiv (OSF), Techrxiv (IEEE), WHO.

Source: https://github.com/nicholasmfraser/covid19_preprints



Part 1: Preprinting - issues

- **Not yet mainstream** in most fields, despite 'Corona-boost'
- **Uncertainty over status** of preprints vis-à-vis peer reviewed articles
- **Sustainability and funding** of preprint archives
- **Lack of fostering** of preprinting by institutions and societies
- **Risk of dissemination of pseudoscience** despite sanity checks

Practical Preprint Guide

FOR RESEARCHERS



Very short
time-to-
publish



Open Licences



Increased
visibility



Recognition of
your work



Early feedback



Can be cited,
if DOI available



Very low costs



A few journals do not accept
manuscripts previously
published as preprints

FOR RESEARCHERS AND THE PUBLIC



Free access to
work



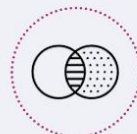
Accelerate
science
by rapidly
building upon
each other's
work



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

A Practical Guide to Preprints

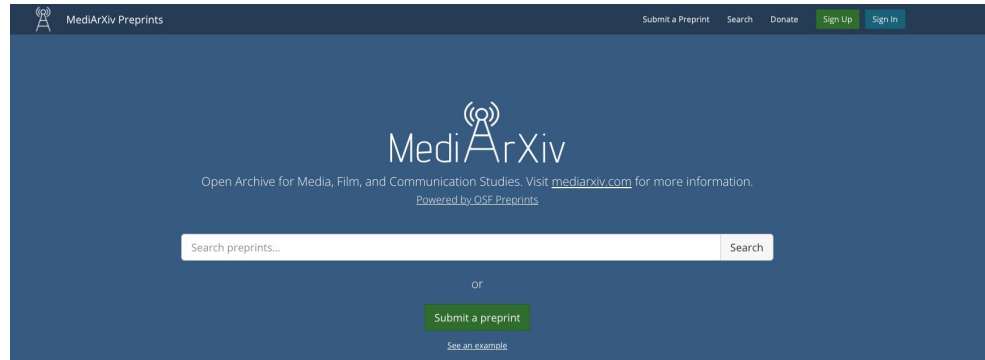
Accelerating Scholarly Communication



KB | nationale
bibliotheek



<https://zenodo.org/record/5600535>



Practice



MediArXiv Moderation Policy

Purpose

MediArXiv accepts scholarly work from across the fields of media, communication and film studies, broadly defined, that is plausibly categorized and for which authors are correctly identified, and which authors have the legal right to share. We do not assess the quality or perceived merit of the work. The appearance of work is an invitation to the public and scholarly community to share, review, discuss, and evaluate it (and its linked or associated research materials); acceptance is not a statement about research quality. MediArXiv thus empowers individuals, communities, and institutions to develop their own criteria, announcements, journals, lists, and analyses of scholarly work.

Policy

MediArXiv accepts papers, books, book chapters, and other scholarly works at any stage of the publication process. We moderate papers before they appear publicly, which is called "pre-moderation" on the Open Science Framework platform. To learn more about how this moderation works on our system, visit this page from our hosts. Subject to volume demands, we expect to post papers and others works submitted for moderation within 1-3 business days.

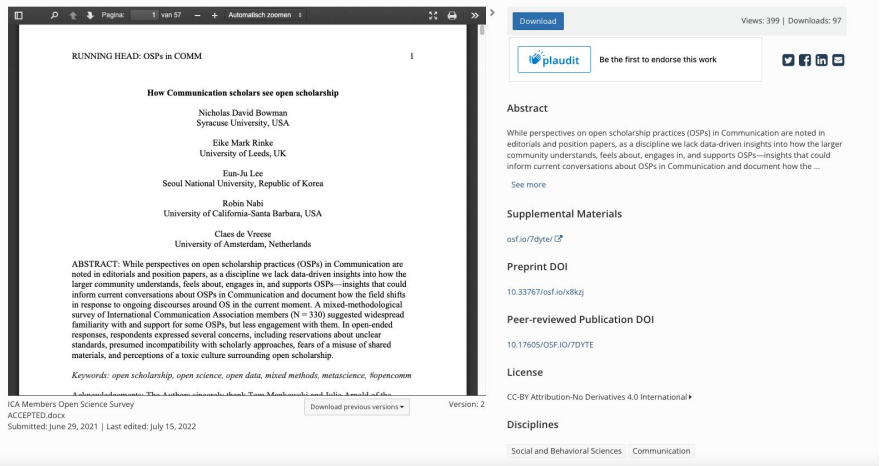
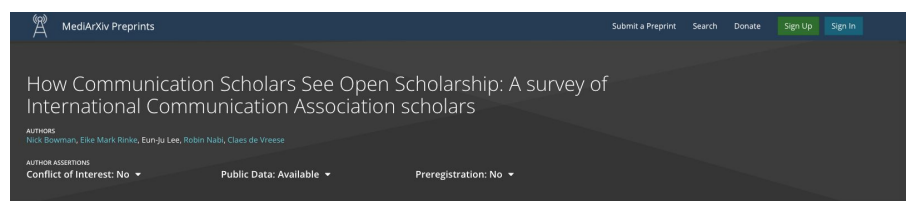
The MediArXiv moderation process accepts papers and other works that:

- 1. Are scholarly content.** This includes original research, reviews, essays, critiques and comments on other work, systematic reviews, hypotheses, 'negative' results, and data and methods papers. Work on MediArXiv is either research or engages with research. Over time, we are committed to accepting scholarly works produced in a variety of non-traditional media formats.
- 2. Are in a research area that we support.** We accept work from across all domains of media, film, and communication studies, along with cognate fields like information science and science & technology studies.
- 3. Are plausibly categorized.** We allow authors to select their own categories from our subject taxonomy, but check whether there are obvious errors or categorizations that lack plausibility.
- 4. Are correctly attributed.**
 - We do a simple internet search to see if someone else has publicly claimed authorship of the work.
 - All authors listed on the work must be included as contributors, and all contributors must be listed on the first page or title page of the work, in the same order.
 - The title of the paper must match the metadata entry provided.
 - Extraneous information in the title (such as journal name or other metadata) is not permitted.

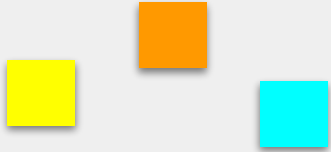
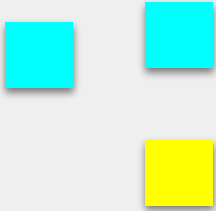
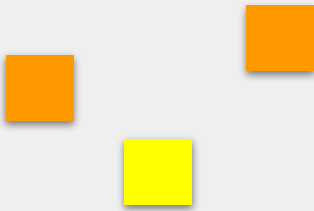
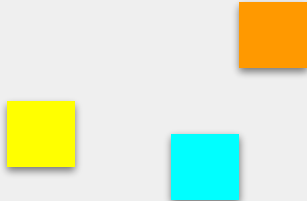
5.

Are in languages that we can moderate. We welcome work submitted in any language, provided we have a moderator that can review it adequately according to our policy. Papers submitted in non-English languages will be held in the moderation queue until we can get them verified. The languages we currently support are:

- Chinese (Traditional & Simplified)
- Dutch
- Filipino
- Finnish
- French
- German
- Irish
- Portuguese
- Spanish
- Turkish



Breakout groups - interactive discussion

<p><i>Pros and cons</i></p> 	<p><i>Ways to advance</i></p> 
<p><i>Disciplinary differences</i></p> 	<p><i>Other topic(s)</i></p> 

 *Physical Sciences /
 Life Sciences*

 *Social Sciences*

 *Humanities*

Breakouts - 20 minutes

Part 2 - Preprint Peer Review

Making Reviewers Visible

Openness, Accountability, and Credit

Fiona Godlee

THE SYSTEM OF PREPUBLICATION peer review in biomedical science, which seems as Judson¹ described in *THE JOURNAL* in 1994 “so monolithic and unchangeable,” has existed only since World War II. One feature that is seen by many as an essential part of the monolith is anonymity for peer reviewers. Intermittent calls for reviewers to sign their reviews, either voluntarily or as a requirement,²⁻⁴ have met with little result. While anonymity has disappeared from most walks of life and certainly most areas of publishing, and

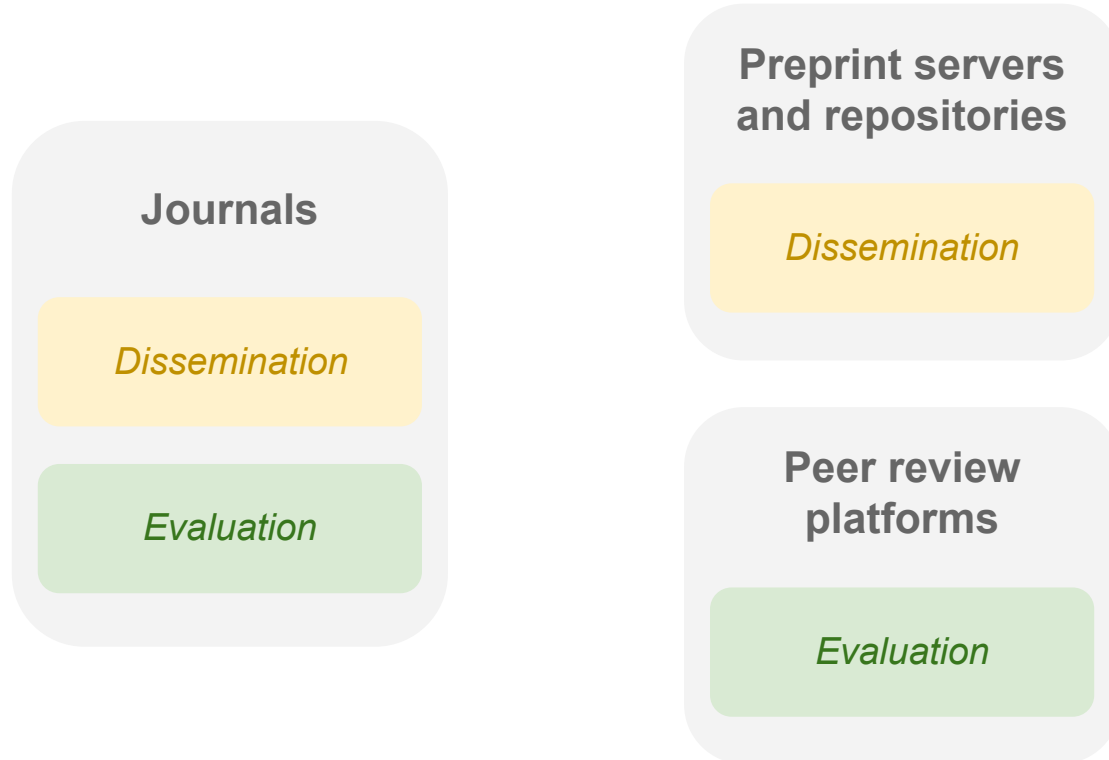
Anonymity for peer reviewers remains the overwhelming norm within biomedical journals. While acknowledging that open review is not without challenges, this article presents 4 key arguments in its favor: (1) ethical superiority, (2) lack of important adverse effects, (3) feasibility in practice, and (4) potential to balance greater accountability for reviewers with credit for the work they do. Barriers to more widespread use of open review include conservatism within the research community and the fact that openness makes editors publicly responsible for their choice of reviewers and their interpretation of reviewers' comments. Forces for change include the growing use of preprint servers combined with open commentary. I look forward to a time when open commentary and review replace the current, flawed system of closed prepublication peer review and its false reassurances about the reliability of what is published.

JAMA. 2002;287:2762-2765

www.jama.com

Journals, preprint servers, and peer review platforms

Different ways of organizing dissemination and evaluation of scientific knowledge



Peer review platforms



Leiden Madrics

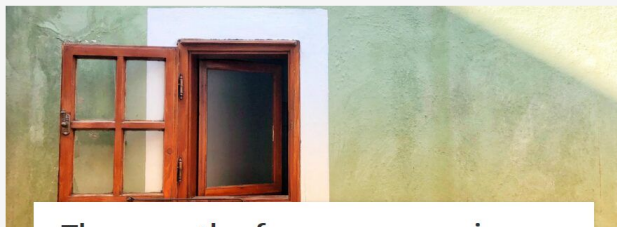
HOME CONTRIBUTORS ABOUT



Ludo Waltman
Professor of Quantitative
Science Studies



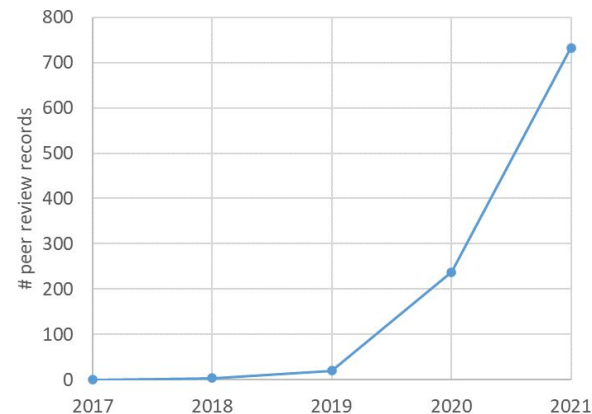
Nees Jan van Eck
Senior Researcher &
Head of ICT



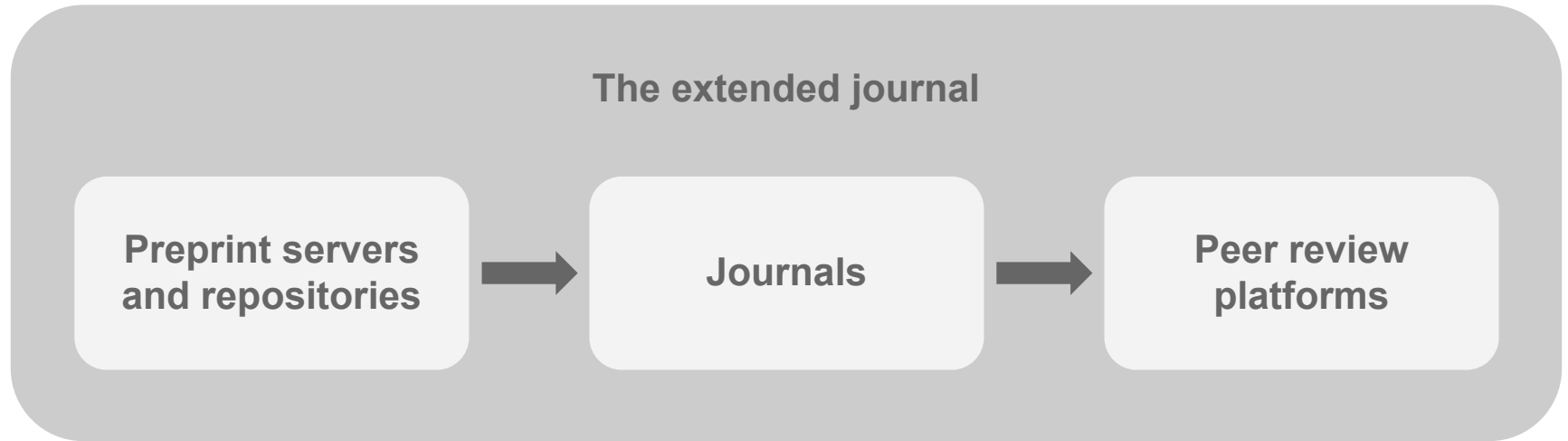
The growth of open peer review

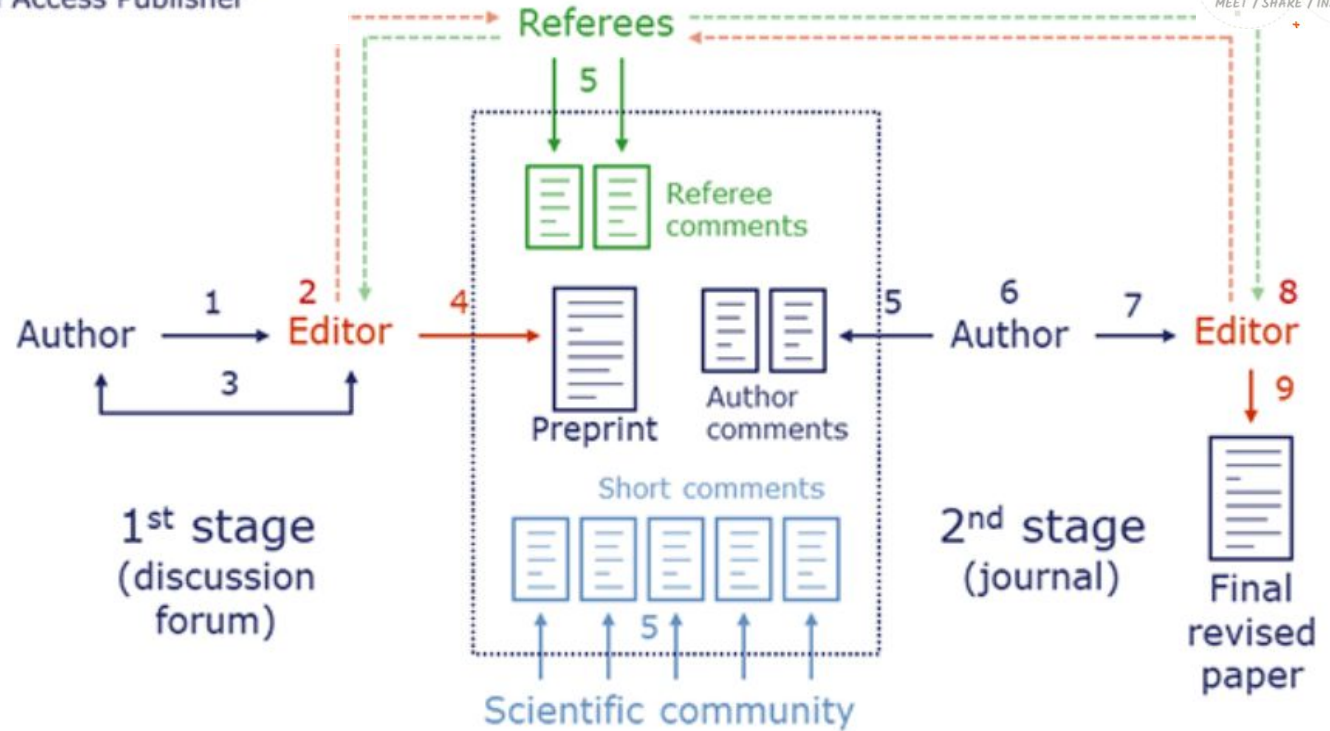
July 06, 2022 · Science & Society and Long read · 7 min read

The closed nature of the traditional journal peer review system is often criticized. Over the past two decades, significant efforts have been made to make peer review more open. Ludo Waltman and Nees Jan van Eck use data from Crossref to analyze the growth of open peer review.



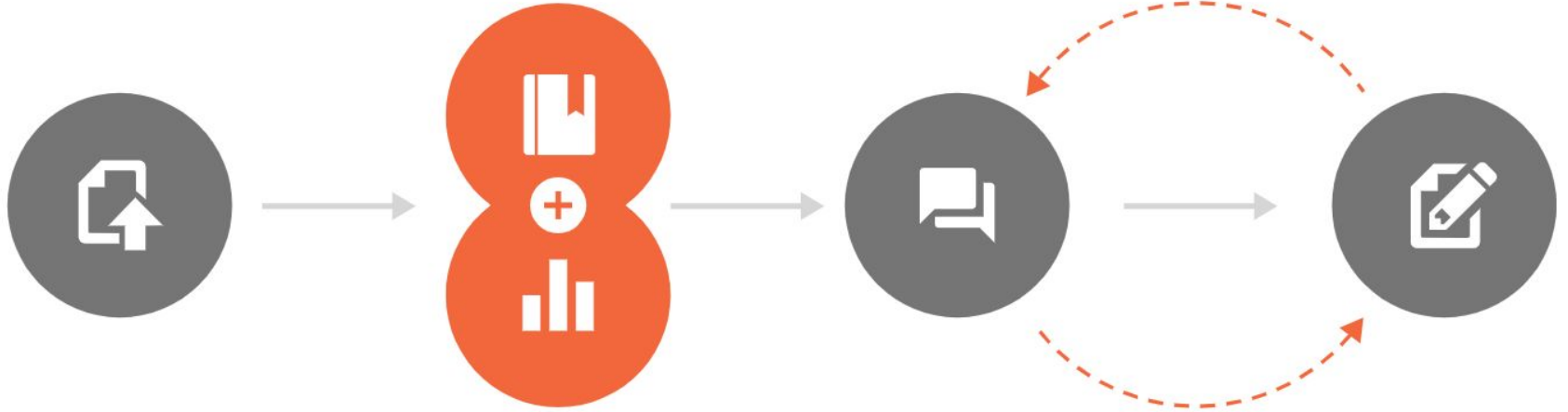
Scenario: The extended journal





1. Submission | 2. Access review | 3. Technical corrections | 4. Preprint posting | 5. Comments
6. Revision | 7. Revised submission | 8. Peer-review completion | 9. Final revised publication

F1000Research



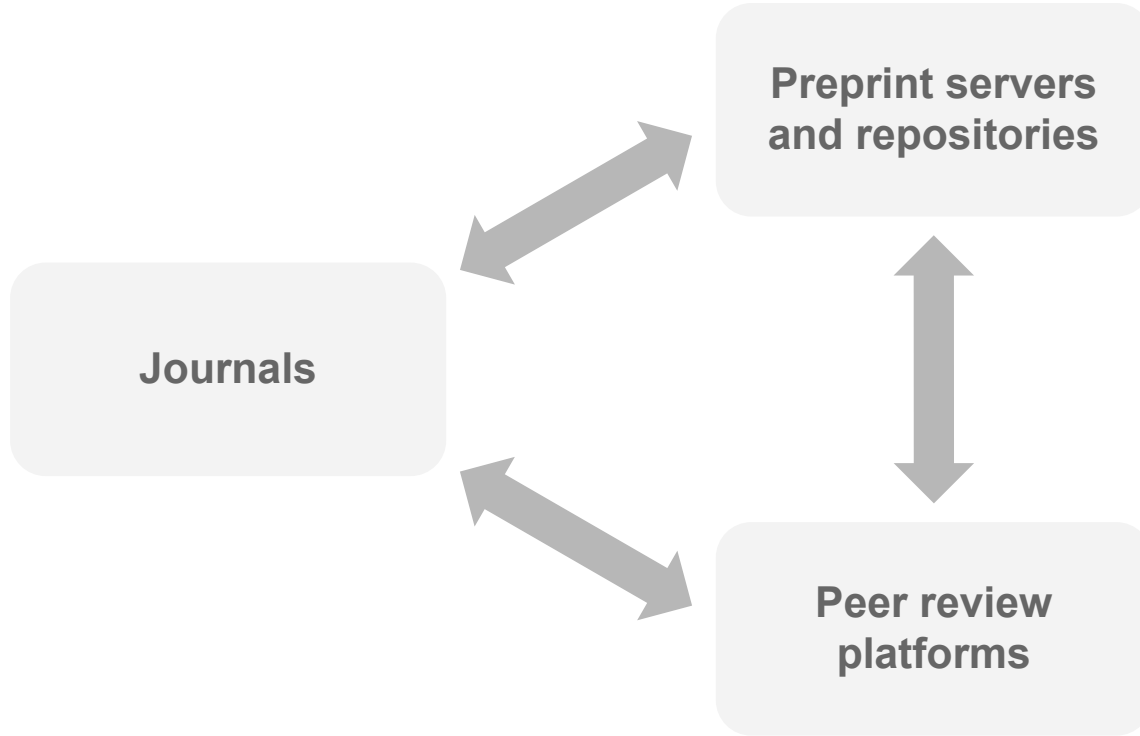
Article Submission

Publication &
Data Deposition

Open Peer Review
& User Commenting

Article Revision

Scenario: Mixed system





Authors spend less time re-submitting their paper to multiple journals.



Reviewers focus objectively on the science, not specific journal fit.




















Readers can see peer reviews and author responses alongside preprints.



Journals can make informed decisions without having to start the process from scratch.

AFFILIATE JOURNALS

 Life Science Alliance	 eLife	 THE EMBO JOURNAL	 EMBO reports	 EMBO Molecular Medicine	 molecular systems biology
 MBoC MOLECULAR BIOLOGY OF THE CELL	 JCB Journal of Cell Biology	 Biology Open	 Development	 Disease Models & Mechanisms	 Journal of Cell Science
 PLOS PATHOGENS	 PLOS BIOLOGY	 PLOS COMPUTATIONAL BIOLOGY	 PLOS GENETICS	 PLOS ONE	



eLife

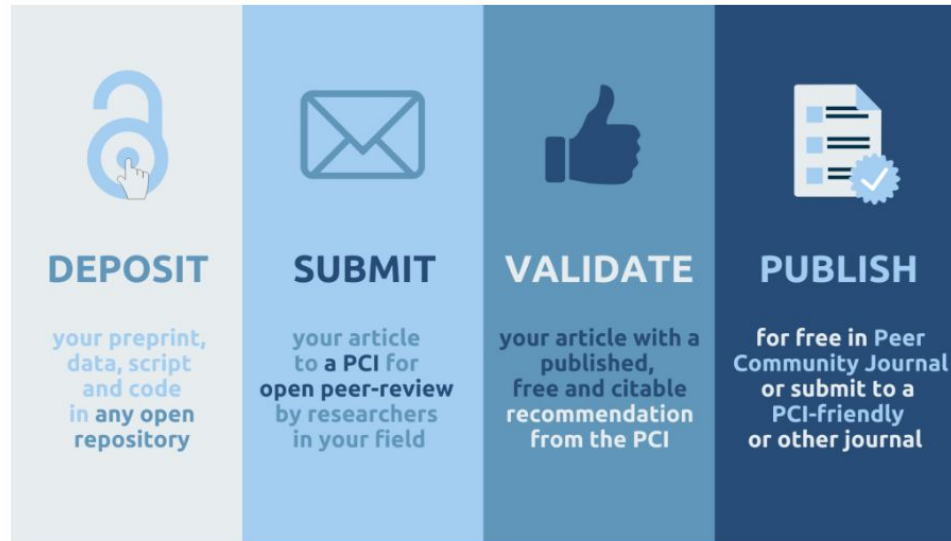
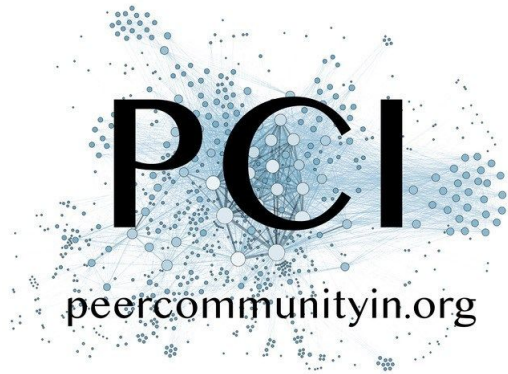


Magazine | Editorial

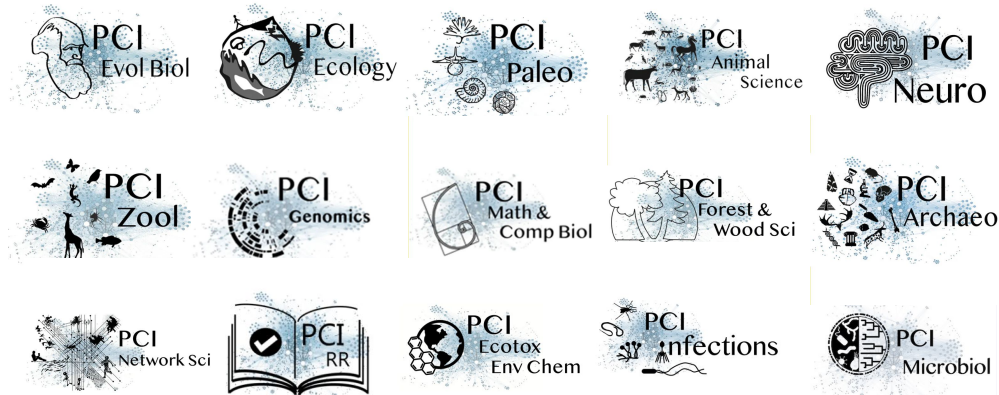
Peer Review: Implementing a "publish, then review" model of publishing

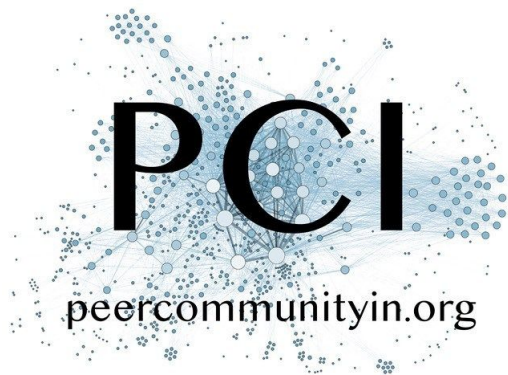
From July 2021 eLife will only review manuscripts already published as preprints, and will focus its editorial process on producing public reviews to be posted alongside the preprints.

Dec 1, 2020 · <https://doi.org/10.7554/eLife.64910>  



15 PCIs





90 PCI friendly journals

Peer Community Journal

PCI-recommended
article



Final, citable
article hosted
by preprint
server

Author's
choice to
submit to

Peer Community Journal
Direct publication in diamond open access

OR

PCI-friendly journals

- accept with no further peer review

OR

- fast response (≤ 5 days) to presubmission enquiry

OR

- use of PCI evaluation if appropriate

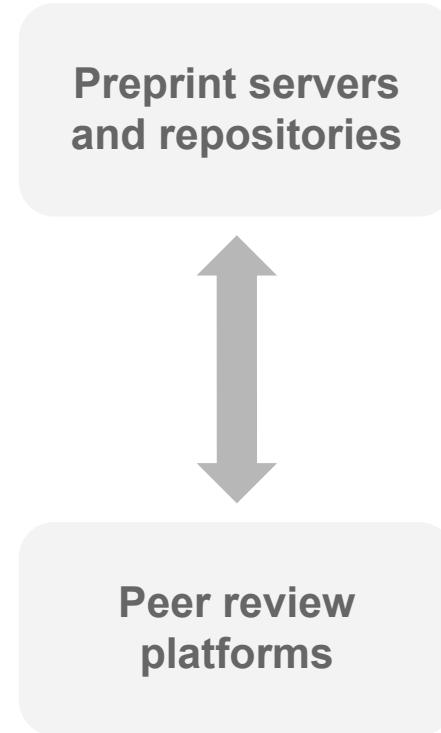
OR

Other journals

If not satisfied by
the decision

If not satisfied by
the decision

Scenario 3: No journal involved





PREVIEW



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

PREreview is a platform, resource center and convener. We provide ways for feedback to preprints to be done openly, rapidly, constructively, and by a global community of peers. Join us!

[Start reviewing now](#)



Abstract

Full text 

Citations & impact

Reviews 

Host phenology can drive the evolution of intermediate virulence strategies in some obligate-killer parasites

MacDonald H , Akçay E, Brisson D 

Reviews

Reviews, recommendations & commentary from expert sources.

Peer Community In

<https://doi.org/10.24072/pci.evolbiol.100129> 

The home of public preprint evaluation

<https://society.org/articles/activity/10.1101/2021.03.13.435259> 



bioRxiv

THE PREPRINT SERVER FOR BIOLOGY

bioRxiv posts many COVID19-related papers. A reminder: they have not been formally peer-reviewed and should not guide health-related behavior or be reported in the press as conclusive.

New Results

 [Follow this preprint](#)

Host phenology can drive the evolution of intermediate virulence strategies in some obligate-killer parasites

 Hannelore MacDonald,  Erol Akçay,  Dustin Brisson

doi: <https://doi.org/10.1101/2021.03.13.435259>

Now published in *Evolution* doi: [10.1111/evo.14507](https://doi.org/10.1111/evo.14507)



1 TRiP Peer Reviews

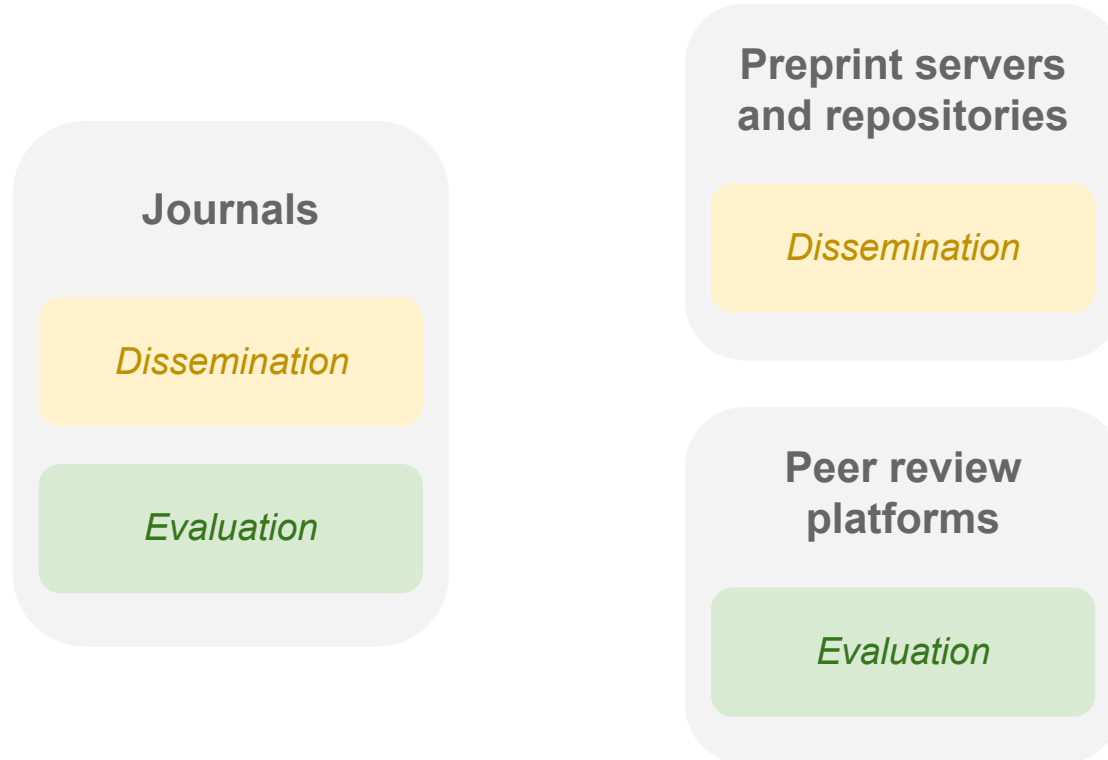
The Notify Project



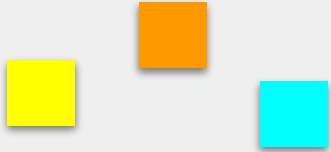
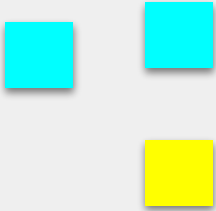
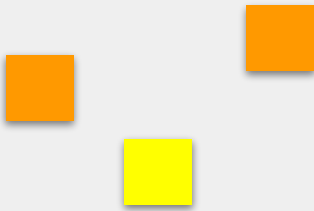
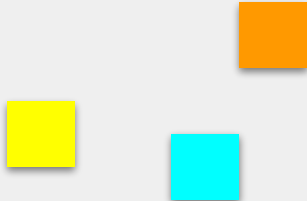
a standard,
interoperable, and decentralised approach to linking research outputs hosted
in the distributed network of repositories with resources from external services
such as overlay-journals and open peer review services, using linked data
notifications.




Preprint peer review

Different ways of organizing dissemination and evaluation of scientific knowledge ?



Breakout groups - interactive discussion

<p><i>Pros and cons</i></p> 	<p><i>Ways to bring further</i></p> 
<p><i>Disciplinary differences</i></p> 	<p><i>Other topic(s)</i></p> 

-  *Physical Sciences / Life Sciences*
-  *Social Sciences*
-  *Humanities*

Breakouts - 20 minutes

Slide deck available:

<https://tinyurl.com/OSF2022Preprints>

Part 3: Publish Your Reviews

PublishYourReviews



#PublishYourReviews

Encouraging peer reviewers
to post reviews alongside
preprints

Sign the pledge

PublishYourReviews



 **ASAPbio**



Ludo Waltman
Professor of Quantitative
Science Studies



Making my peer review activity more useful

October 13, 2021 • Opinion & Commentary • 5 min read

Ludo Waltman studies peer review in a project of the Research on Research Institute (RoRI). In this blog post he discusses how he wants to make his own peer review activity more useful.

About **168 hours per year** spent in peer review of journal articles

“By making reviews available only to the small group of individuals directly involved in the peer review process of an article, **readers of the article are denied the opportunity to benefit from the information provided by the reviews**”

“Given the significant efforts made by many reviewers to provide detailed comments on the articles they review, this is a **major waste of scientific labor**”

Publish Your Reviews

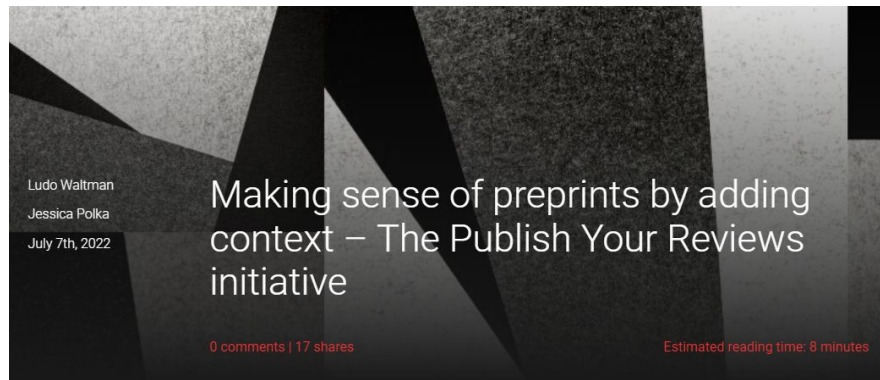


Announcing Publish Your Reviews

Home / ASAPbio news / Announcing Publish Your Reviews

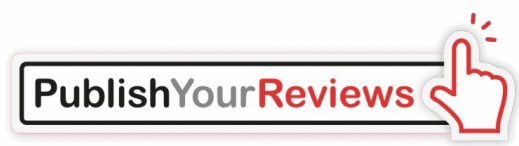
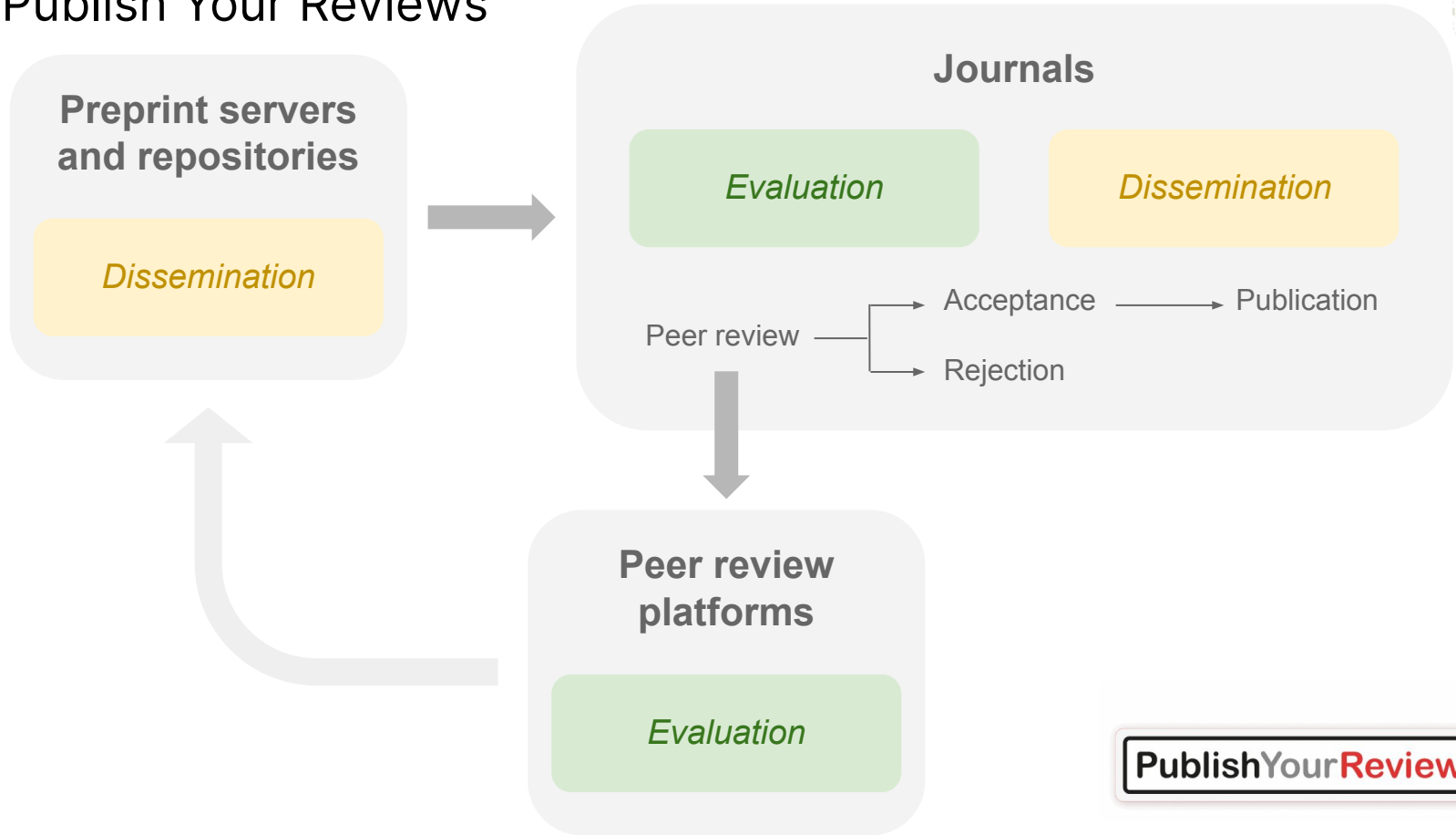
ASAPbio news
Preprint Review

Jul
7
2022



Improving scientific publishing is often framed as an issue of openness and speed and less often as one of context. In this post, Ludo Waltman and Jessica Polka make the case for a more contextualised approach to open access publishing and preprinting, and introduce the *Publish Your Reviews initiative*. Launched today by ASAPbio, the initiative allows reviewers to provide richer contextual information to preprints by publishing peer reviews and linking them to the preprint versions of the articles under review.

Publish Your Reviews



Publish Your Reviews - Benefits



Provide readers with additional context on preprints, pointing out strengths, weaknesses, and unanswered questions.



Enable reuse of peer reviews, thereby reducing burden on editors and reviewers.



Bring discussions into the public domain, where readers can **enrich the conversation with diverse expertise**.



Surface the work of reviewers to a broader audience, promoting greater recognition for this important work.



Catalyze a culture of open commenting on preprints by surfacing hidden conversation.

Publish Your Reviews - Supporters

10 publishers/journals (below)
25 other organizations (right)
11 ambassadors
70+ signatories



Bill & Melinda Gates
foundation



Publish Your Reviews - Sign the pledge

Join the 70+ colleagues that have already signed the **Publish Your Reviews pledge**:

When a journal invites me to review an article that is available as a preprint, I will publish my review alongside the preprint. I will make sure that the published version of my review does not include the journal name, a recommendation for publication, or other confidential information.

<http://publishyourreviews.org>



Interactive discussion



Participant takeaways, plans, intentions

AS A COOPERATION SUPPORT THE INFRASTRUCTURE NEEDED BY OUR MEMBERS THROUGH A 'NATIONAL CONSENSUS' THAT CAN EITHER JOINTLY NEGOTIATE CONDITIONS UNDER WHICH WE WOULD WANT COMMERCIAL PROVIDERS TO PROVIDE PLATFORMS/SERVICES

JOINTLY REALISE (ONE OR MORE) PLATFORMS TO PROVIDE REVIEW/PREPRINT SERVICES WHERE NEEDED

RE-AMP THE INSTITUTIONAL DEPOSITORY INFRASTRUCTURE FOR USE OF PREPRINTS/REVIEWS THROUGH A PROGRAM TOGETHER WITH THE RESEARCH LIBRARIES

Nicole Looibach
Univ. of Toronto

Actions I can take:

- More attention on preprints + open peer review: on university website, in mandatory course for PHD students on academic publishing in conversations w/ faculties about moving forward in open access
- Especially for the social-sciences faculty: awareness + reassurance that posting preprints will probably not mean they can't publish in a journal anymore.

Help create an ecosystem of tools for creating, analyzing and sharing research data and papers
ERNEST SWINER

promote other research outputs like software to be recognised, to stimulate recognition & rewards

Lieke de Boer
Netherlands eScience Center

Extend Scholia with more preprint things I learned about in this session.
Ellen

- I will encourage open peer review for my journal (of this open review)
- better communication & dissemination of preprint to invited researchers in the research community

inform researchers on

Participant takeaways, plans, intentions

Nicole Looch
Univ. of Toronto

preprints +
: an university
course for
academic publishing
faculties
and in open access
natural-sciences
+ reassurance
its will
they can't
real anymore-

Help create an ecosystem
of tools for creating, analyzing,
and sharing research data
and papers. ERNEST SWIVER

USE LIBRARY - FACULTY
DISCUSSION GROUPS TO
PROPOSE THE EVOLUTION
TO POST PUBLICATION REVIEW
—
HELP FUND EN4XRIV
AD / DELFT

with
I learned
on.
@lv

- o I will encourage open peer review
for my journal
(of this open review process)
- o better communication to invited reviewers
& dissemination of pre-print to
the research community

Ambitions (rather than feasible in a few months)
↳ start, not get achieve ✓

- Raise awareness
- Show how easy it can be
- Make it even easier (guides, support, facilities)
- Include preprint, peer review etc
in Tenure track policies and in
evaluations

Participant takeaways, plans, intentions

Raise awareness to
our community - journals'
editors, book editors

TO Delft library: Federique

- * Raise awareness amongst the researchers I interact with (also my colleagues!)
- * Provide guidance that shows the benefits
- * Speak with management / team leaders about incentives, recognition, rewards.

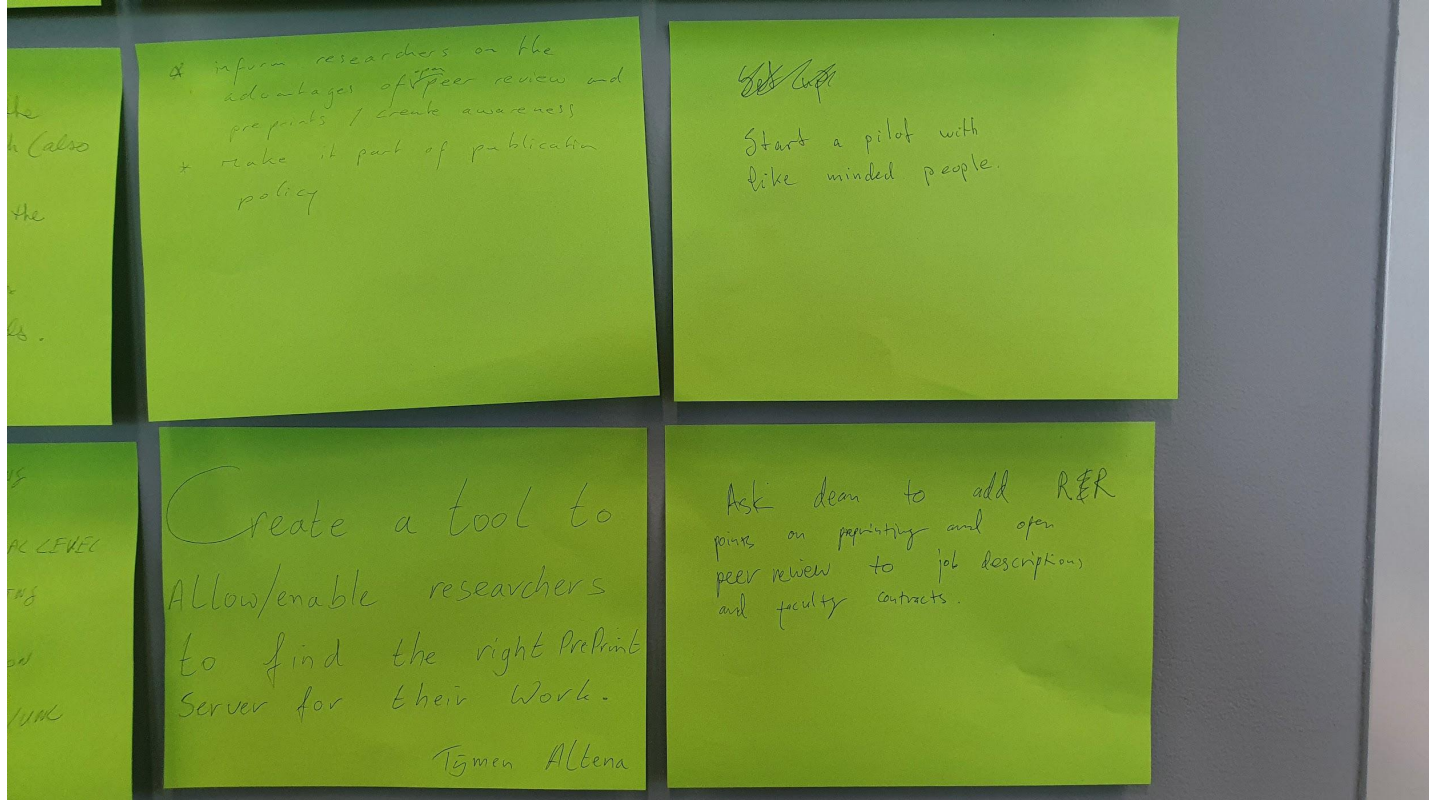
* inform resea
advantages
preprints /
+ make it p
policy

Look into "publish your reviews"
and publish my peer review.

TO MAKE PREPRINTING
AND PEER REVIEW
A POLICY AT NATIONALENVEC
including collective FUNDING
AND stimulate
AND REWARD RECOGNITION
DD/UNC

Create a
Allow/enable
to find the
Server for th

Participant takeaways, plans, intentions



New Developments in Preprinting and Preprint Review

Jeroen Bosman (UU)
Bianca Kramer (Sesame Open Science)
Jeroen Sondervan (UU)
Ludo Waltman (CWTS)

Open Science Festival, Amsterdam, 1 September 2022

Slide deck (also) available at: <https://tinyurl.com/OSF2022Preprints>
NB most images in this slidedeck are clickable!



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