

LUDWIG-MAXIMILIANS-UNIVERSITÄT MÜNCHEN



Preprints: The (only) way to Open Access?

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Introduction to preprints

Pros and cons

Preprint server

Prospects and discussion



Changing requirements of funders/institutions





Preprints – a history

- Origins in the 60s in the fields of biology and physics (prePRINT)
- Preprints are preliminary scientific reports that are made publicly available online at no cost
- Preprints enable rapid release, (critical) discussion and constant feedback before they have been peer reviewed → base for informal or formalized Open Peer Review
- Preprints enable linking to the journal article (via DOI) and can be found via services like Unpaywall
- Preprint cultures vary widely in disciplines
 - In physics, over 90% of all journal articles are available on the preprint server



Preprints & COVID-19

= a love story

- Need for research around virus identification, prevention, testing and vaccination to be quickly shared
- Pandemic inspired third-parties to provide services for curation (e. g. <u>PreLights</u> for reviews)
- Rise of "overlay journals" (e. g. RR\C19 by MIT Press)
- *iSearch COVID-19 Portfolio tool* developed in 2020 by the NIH Office



Benefits

Creator

- Speed: Free and easy
- Feedback: Community and collaboration
- Visibility: Attention and citations
- **Career**: Jumpstart your career and get credit

User

- Access: Early access to research at any time
- **Open Science**: Active participation
- **Transparency**: Revisions and feedback

"Preprints move science along faster!"

"People started using our software, we got citations, and fellowship applications in a new area had credibility faster!"

> James Fraser Associate Professor, UCSF

James Fraser Associate Professor, UCSF

Challenges with preprints

- Increases pressure to publish quickly
- Many preprints are never revised
- Preliminary results could be reused by the media or posted and discussed on social media
 → risk of misinterpretation and fostering of "fake news" (e. g. Hydroxychloroquine and
 Ivermectin studies on COVID-19)



- Preprints are often not indexed in mainstream bibliographic services
- "Preprint Scoop"









Indicate Use

Find More Evidence

Preprint server - Overview

UB

• Directory of preprint server policies and practices: <u>https://asapbio.org/preprint-servers</u>



Preprint server - Selection

- Post preprints using an <u>Creative Commons CC BY 4.0 license</u> for reuse and recognition
- Ensure assignment of a DOI
- Use discipline-specific preprint servers before generic preprint servers
- Before publishing in a journal (or on a preprint server) check policy via Sherpa Romeo:

▼ None			
No Embargo			
CC BY 4.0			
Authors			
Any Website			
Publisher source must be acknowledged with citation			
Authors are encouraged to submit their published articles to institutional repositories			

Preprint server - generic



OSFPREPRINTS

A scholarly commons to connect the entire research cycle <u>Powered by OSF Preprints</u>





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medRxiv

THE PREPRINT SERVER FOR HEALTH SCIENCES

Search

Advanced Search

Caution: Preprints are preliminary reports of work that have not been certified by peer review. They should not be relied on to guide clinical practice or health-related behavior and should not be reported in news media as established information.

COVID-19 SARS-CoV-2 preprints from medRxiv and bioRxiv

Preprint server - institutional



UΒ

https://epub.ub.uni-muenchen.de/

Preprint server - selfmade

OPEN PREPRINT SYSTEMS

Accelerate research with a preprint server where researchers can upload datasets, revise papers before publication, and link preprints to the final published work.

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Download and install OPS on your own server.

OPS

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DOCUMENTATION →

Our technical documentation for sysadmins, plugin developers, and theme builders.

USER GUIDES \rightarrow

Tutorials and step-by-step guides for librarians, publishers and editorial managers. l iP

Indexing and finding preprints in medicine

PrePubMed

• <u>PrePubMed</u> indexed preprints for 2 years from arXiv q-bio, PeerJ Preprints, bioRxiv, F1000Research, preprints.org, The Winnower, Nature Precedings, and Wellcome Open Research

NIH Preprint Pilot

- Pilot in January 2023 (expansion of iSearch COVID-19)
- Project of the National Library of Medicine (NLM) and PubMed Central (PMC)
- Preprints resulting from research funded by the National Institutes of Health (NIH) and are
 posted to an eligible preprint server (bioRxiv, medRxiv, arXiv, and Research Square) on
 January 1, 2023 or later

Preprint Indicator:



Preprints in Europe PMC





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Publishing workflow

JB



Source: Shafee, Thomas (2020). Typical publishing workflow for an academic journal article (preprint, postprint, and published) with open access sharing rights per SHERPA/RoMEO. Own work; adapted from diagram by Ginny Barbour

Traditional model of publishing vs. Preprints



Traditional		Preprints	
•	Small number of reviewers The review process is not transparent (a paper might have been accepted despite a negative review, but the readers don't have access to this information)	•	Commenting, discussing and providing feedback (which may not be relevant, but it's at least transparent)
•	Slow process Paywalls (one can't have an opinion on a paper they can't read)	•	Immediate Open access to a large number of researchers around the world
•	The common opinion is that the published results are certainly good (proof? \rightarrow need of replication studies)	•	The common opinion is that preprints are not verified and that anyone can write them
•	The part of the evaluation system which relies on the impact factor	•	Preprints are not recognized in many countries and officially accepted in the research evaluation system
•	Publishers constantly encourage publishing through the traditional model (personal gain)	•	Publishers often do not allow the publication of a preprint in their journals, which may discourage authors from setting up a preprint first and then publishing the paper

Preprints: The article type of the future?

- Preprints *complement* the current status quo (co-existence with publishers but also dependency)
- Moving away from classic publishing model within publishers portfolio (quit increasing prices)
- Sharing research will become focus (interoperability)
- Connecting different research outputs (Knowledge Graph)
- Preprints support new formats such as Open Peer Review
- Increasing acceptance of preprints by funding agencies (but also researchers and institutions)



Discussion

"In a fast-moving era of digital information, preprints should become the new normal."

Source: Banks, Marcus. *Opinion*: A Lesson of the Pandemic: All Prints Should Be Preprints, 2020. <u>https://undark.org/2020/10/29/opinion-all-prints-preprints/</u>

- Abbadia, Jessica. Was ist ein Preprint-Papier und wie können Sie davon profitieren?, 2022. <u>https://mindthegraph.com/blog/de/preprint-papier/</u>
- Banks, Marcus. Opinion: A Lesson of the Pandemic: All Prints Should Be Preprints, 2020. <u>https://undark.org/2020/10/29/opinion-all-prints-preprints/</u>
- Evans, Ian. More researchers than ever are using preprints here's why, 2022. <u>https://www.elsevier.com/connect/more-researchers-than-ever-are-using-preprints-heres-why</u>
- National Library of Medicine. Preprints: Accelerating Research. <u>https://open-access.network/informieren/publizieren/preprints</u>
- Open Access Network. Themenseite Preprints. 2022. <u>https://open-access.network/informieren/publizieren/preprints</u>



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Thank you!

