Anne Gärtner
Faculty of Psychology

Workshop Open Science Practices
Part 2
Open Access

Overview

Time	Topic
13:30 – 13:40	Welcome
13:40 – 14:10	Open Access (Anne)
14:10 – 14:50	Open Data and Materials (Anne)
14:50 – 15:05	Break
15:05 – 15:50	Reproducible Analyses (Alex + Christoph)
15:50 – 17:20	Practices (Alex + Christoph)
17:20 – 17:35	Break
17:35 – 18:05	Questions
18:05 – 18:25	Wrap Up, Evaluation

Workshop material

Outline

Introduction
- The current situation
- Where are we heading

What is Open Access
- Types of Open Access

The lifecycle of an open paper
- Creative Commons Licenses
- Open Access @ SLUB

Exercise

Summary

Sidenote: Stop Tracking Science

https://science.rmtmo.eu/de/neues/open-access-informationsfluss-in-der-wissenschaft/

Introduction
A closed access story

Ebola outbreak 2013–2016

- > 11,000 deaths, mainly in Liberia, Sierra Leone, and Guinea
- Detection of the outbreak was delayed because doctors did not know it was present in the area
- But: A 1982 scientific article had predicted the outbreak
- Article was hidden behind a paywall (45$ = half week's salary of a local physician)
- In response to publicly raised criticism, Elsevier lifted the paywall for Ebola-related papers for 2 months

Masnik (2015), | Capot (2014) | Dahn et al. (2015)
Pic 1 https://www.minimed.at/medizinische-themen/infektion-allergie/ebola-virus/ | Pic 2 PHIL ID 6136

The current situation
How publishers make money

researchers

free content

free reviews

(mostly) free editorial service

$ private publishing money

publishers

$ final editing
$ server costs
$ administration
$ advertising
$ running a paywall
$ issuing take-down notices to researchers who share their papers
$ suing Sci-Hub
$ Lobbyism

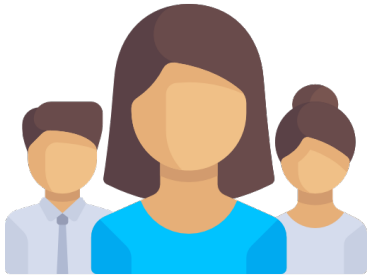
$ $ $ profit margin

university

$ publication fees

$ subscription fees

$ tax money



general public & industry

$ subscription fees

$ single paper payments

Pictures: Freepik.com, flaticon.com

The current situation
How publishers make money

Publishers costs

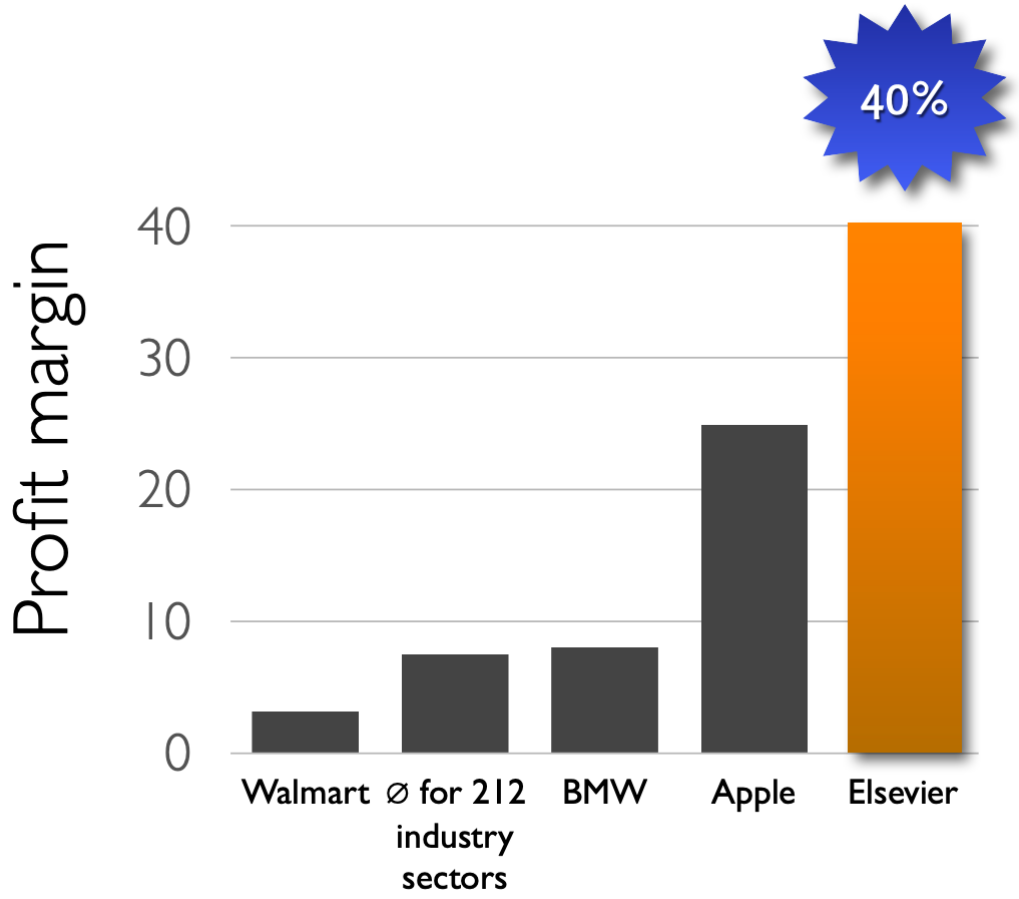
— We (society, researchers) pay on average between **3.800 €** and **5.000 €** for publishing a paper
  – all subscription fees + APCs + payments divided by published papers; not counting free labor such as reviewing, editing, etc.

— „Billion dollar donation“: In 2020, 130 mio. hours of unpaid reviewing time were done by scientific community overall; translated to money value with average wages:
  – $1,510,810,944 (US)
  – $391,036,638 (UK)

— Actual costs for publishing one paper (online only, no print): ~ 400 € (estimates range between 200 € and 1000 €)

Schimmer et al. (2015), Van Noorden (2013), Grossmann & Brembs (2021), Aczel et al. (2021)
Picture: flaticon.com

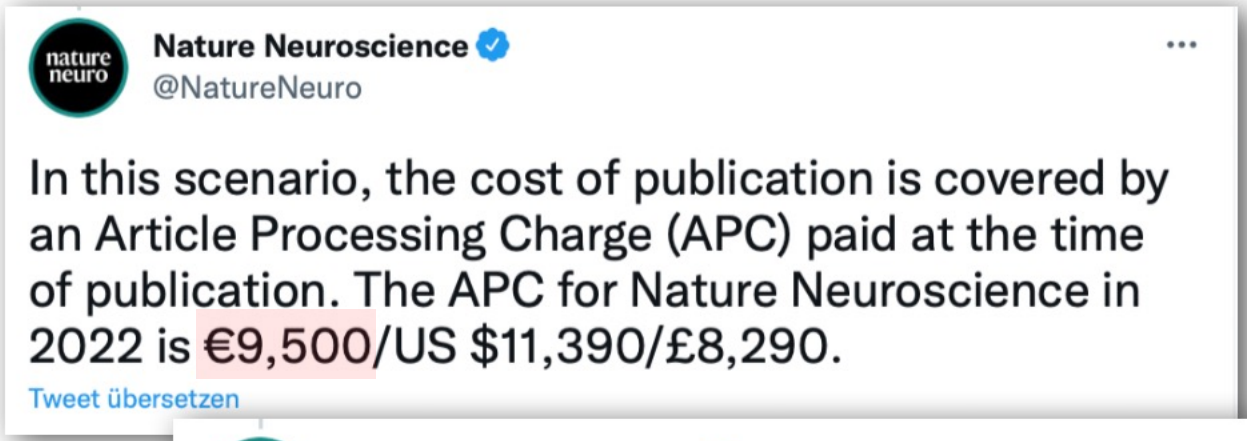
The current situation
How publishers make money

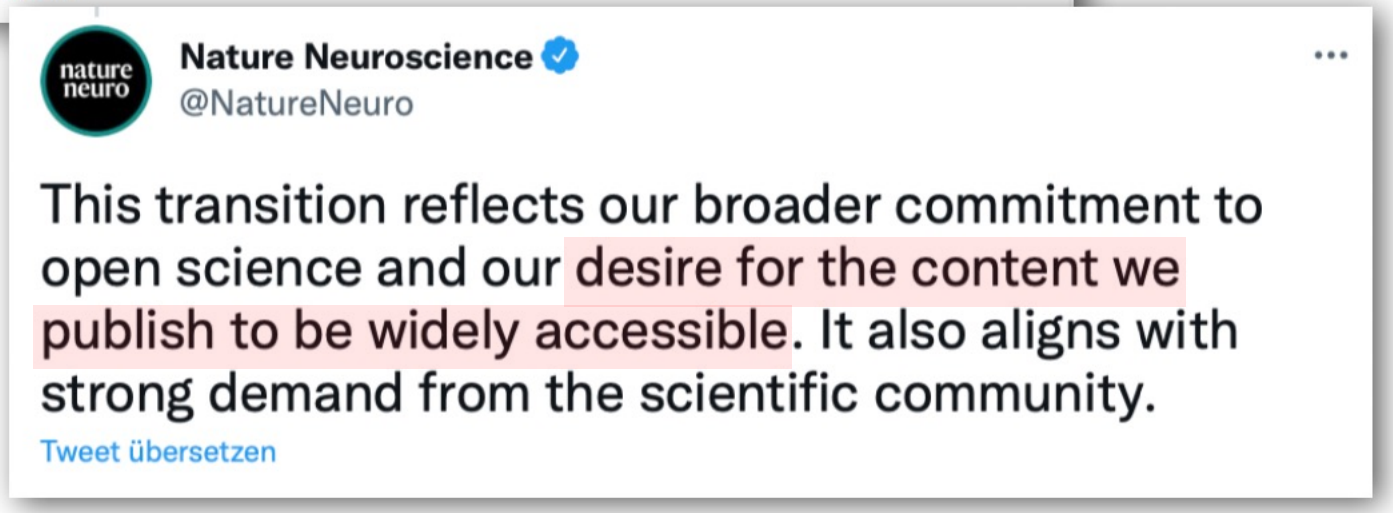


https://paywallthemovie.com/

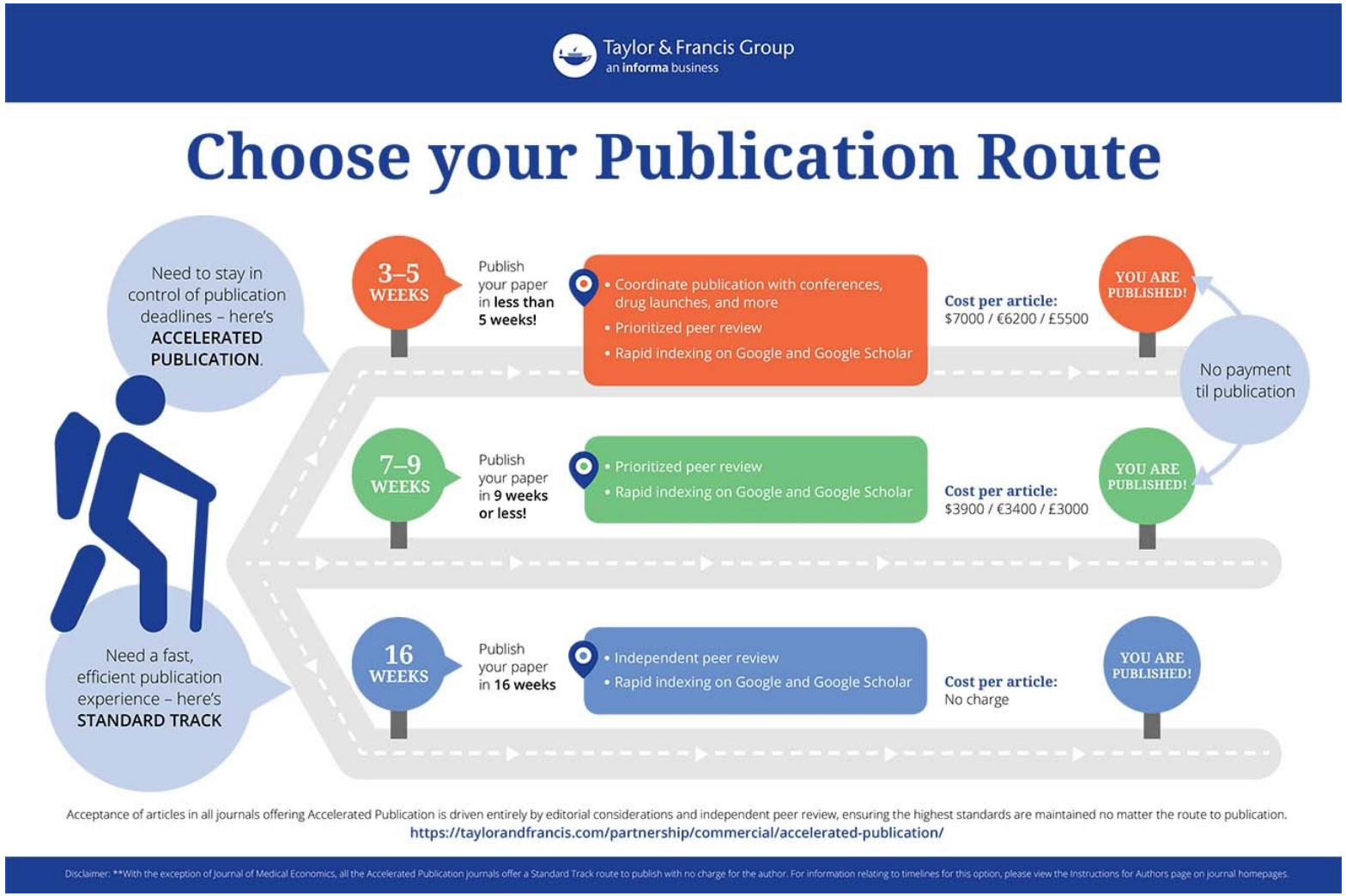
https://www.theguardian.com/science/2012/apr/24/harvard-university-journal-publishers-prices

Where are we heading?





Where are we heading?



- These cost are on top of APCs
- Naturally, none of the money goes to the reviewers, who are supposed to work faster now

What is Open Access?

The Budapest Open Access Initiative (BOAI) Declaration

— “free availability [of scholarly literature] on the public internet permitting any users to read
articles

Suber (2015); Vilnius University Library (2018);
https://open-access.net/en/information-on-open-access/what-is-open-access | https://osc.cam.ac.uk/open-access

What is Open Access?

The Budapest Open Access Initiative (BOAI) Declaration

— “free availability [of scholarly literature] on the public internet permitting any users to read, download, copy, distribute, print, search, or link to the full texts of these articles, crawl them for indexing, pass them as data to software, or use them for any other lawful purpose, without financial, legal, or technical barriers [...]“

— „The only constraint on reproduction and distribution, and the only role for copyright in this domain, should be to give authors control over the integrity of their work and the right to be properly acknowledged and cited."

Open Access is simply: Freely sharing the results of your tax-paid research

Open Access does not imply...

... high costs
... predatory publishing
... lower quality

Suber (2015); Vilnius University Library (2018);
https://open-access.net/en/information-on-open-access/what-is-open-access | https://osc.cam.ac.uk/open-access

Types of Open Access

	Description	Costs for author	Other/hidden costs	Where is the PDF?	Look at PDF	Example (prices from 01/2022)
Green	Self-archiving of the pre- or postprint in repositories or private websites	0 €	(depends – usually subscription fees)	Open Repository	Author's version (Word, Latex, etc.)	Science
Bronze	Journals make articles free to read on their website, but without open license, and without right to download or share	0 €	(depends – usually subscription fees)	Journal's website	Formatted journal's layout	Nature ReadCube
Gold	Journals that are entirely open access; authors pay article processing charges (APCs)	typically 600 € – 5000 €	0 €	Journal's website	Formatted journal's layout	PLOS ONE (APC 1.749 $)
Hybrid	Subscription (i.e., paywalled) journals, where single articles can be made open access by paying APCs	typically 600 € – 9500 €	subscription fees (→ "double dipping")	Journal's website	Formatted journal's layout	Current Biology (APC 6.700 $)
Diamond/ Platinum	Open access journals without APCs	0 €	Institutions pay for journal maintenance costs / APCs	Journal's website	Formatted journal's layout	Social Psychol. Bulletin Meta-Psychology Personality Science

What is Open Access?

Free your research

- At the end, every OA publication (gold, green, diamond) can be freely read by everybody
- The main difference is in financing
- If green OA is possible - why pay at all? Make your research free for no extra costs (and without throwing more money at publishers)
- But: Funding agencies might have regulations
- Moral obligation to release your research as green OA wherever possible

CHECK

Reference this list for your chosen journal to check if it is trusted.

Do you or your colleagues know the journal?

- ☐ Have you read any articles in the journal before?
- ☐ Is it easy to discover the latest papers in the journal?
- ☐ Name of journal: is the journal name the same as or easily confused with that of another?
- ☐ Can you cross check with information about the journal in the **ISSN portal**?

Can you easily identify and contact the publisher?

- ☐ Is the publisher name clearly displayed on the journal website?

What about predatory publishing?

https://thinkchecksubmit.org/

The lifecycle of an open paper

- Preprint = manuscript before peer review a.k.a. „Author's Original Manuscript (AOM)“
- Check if journal allows preprints (http://sherpa.ac.uk/romeo/index.php)
- Upload to preprint server
- Get a doi - makes preprint citable
- Clearly mark the PDF as preprint, e.g.: DRAFT - not peer-reviewed
- Optionally: Ask for feedback on social media (external review)

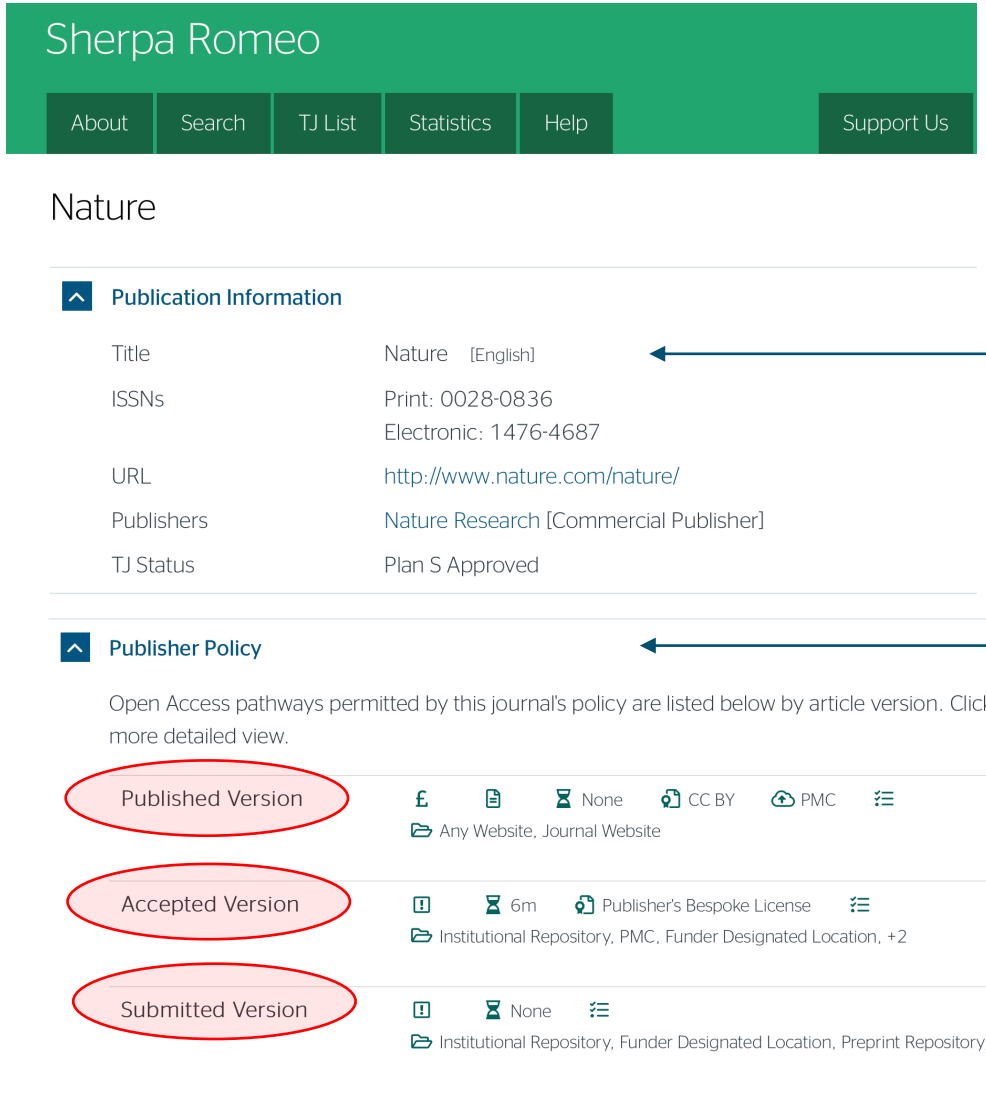
The lifecycle of an open paper

- Preprint = manuscript before peer review a.k.a. „Author's Original Manuscript (AOM)“
- Check if journal allows preprints (http://sherpa.ac.uk/romeo/index.php)
- Upload to preprint server
- Get a doi - makes preprint citable
- Clearly mark the PDF as preprint, e.g.: DRAFT - not peer-reviewed

> Scientific articles usually go through a peer-review process. This means that independent researchers evaluate the quality of the work, provide suggestions, and speak for or against the publication. Please note that the present article has not (yet) undergone this standard procedure for scientific publications.

https://psyarxiv.com/p6gwh/

The lifecycle of an open paper



search target journal

summary of their OA policy

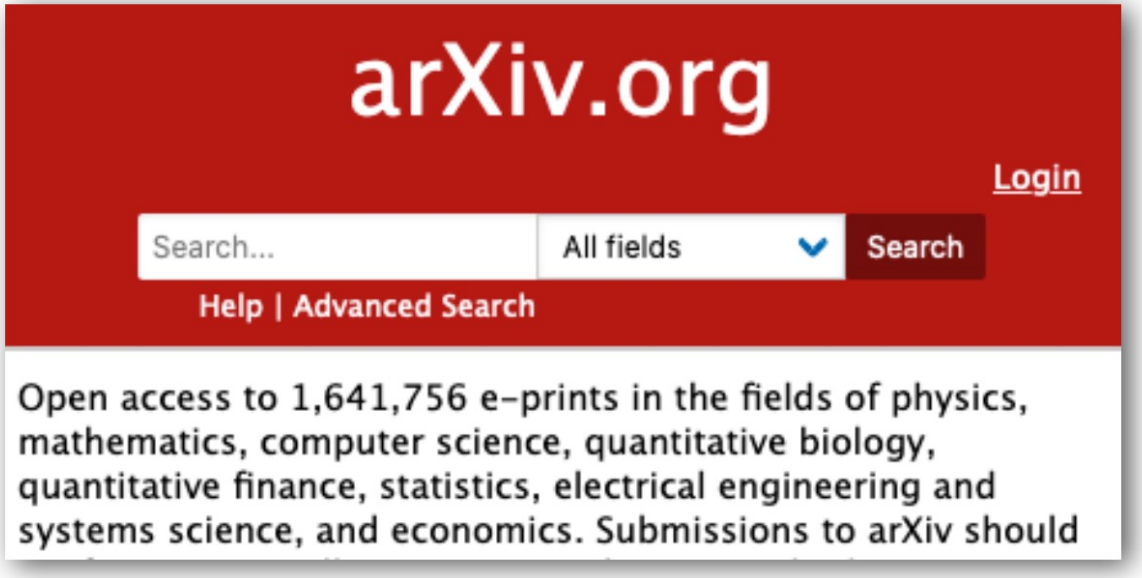
immediately publishable, any website

Embargo for 6 months

immediately publishable, institutional website

http://sherpa.ac.uk/romeo/search.php

Preprint servers



bioRχiv beta

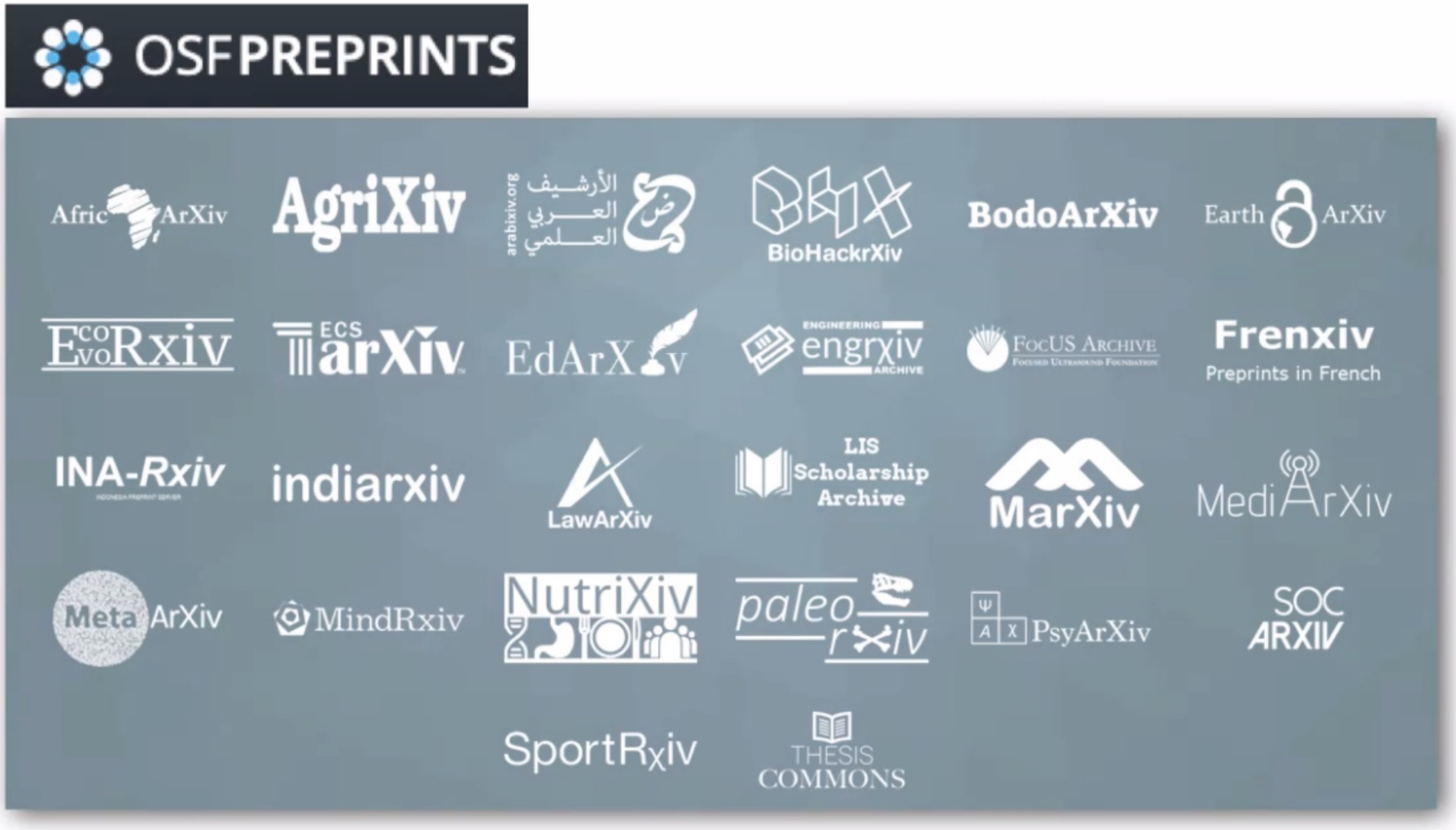
THE PREPRINT SERVER FOR BIOLOGY

ΨA χ

PsyArXiv

https://arxiv.org

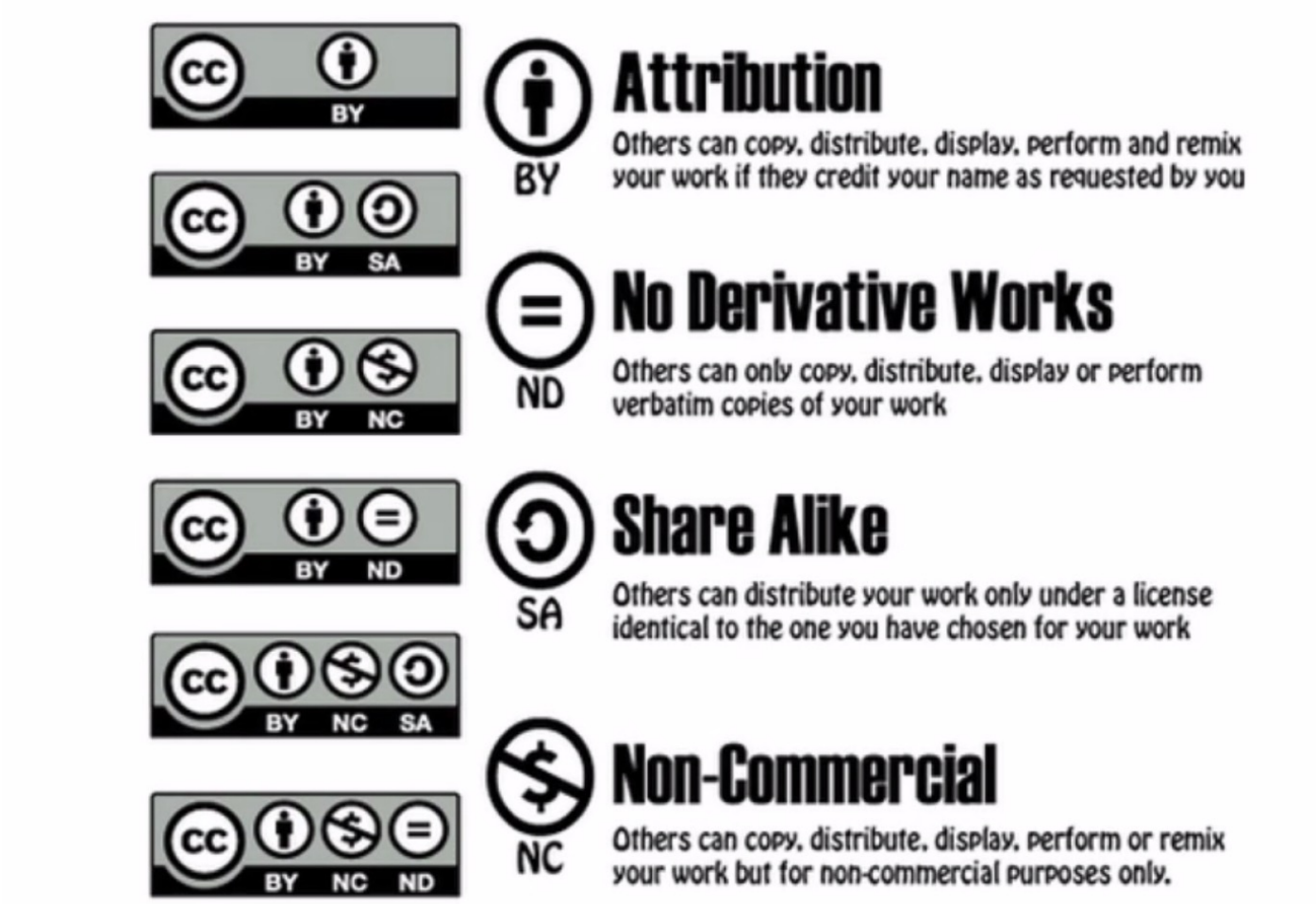
Preprint servers



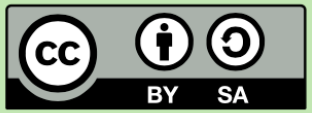
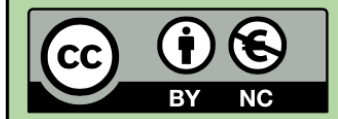
In contrast to *ResearchGate* and *academia.edu* these are **non-commercial** services!

https://osf.io/preprints/

Creative Commons Licenses



https://www.fullerton.edu/openfullerton/_resources/images/CC_Licenses.jpg

Lizenz	Bedingung	Materialien dürfen …
	Gemeinfrei	… frei genutzt werden ohne weitere Bedingungen oder Angaben
	Namensnennung der Urheber*innen	… geteilt, verändert und kommerziell genutzt werden
	Namensnennung & Wiederveröffentlichung unter gleichen Bedingungen (SA = Share Alike)	… geteilt, verändert und kommerziell genutzt werden
	Namensnennung & keine kommerzielle Nutzung (NC = Non-Commercial)	… geteilt und verändert werden
	Namensnennung & keine kommerzielle Nutzung & Wiederveröffentlichung unter gleichen Bedingungen	… geteilt und verändert werden
	Namensnennung & keine Bearbeitung erlaubt (ND = No Derivatives)	… nur geteilt (und nicht verändert werden) und kommerziell genutzt werden
	Namensnennung & keine kommerzielle Nutzung & keine Bearbeitung erlaubt	… nur geteilt (und nicht verändert werden)

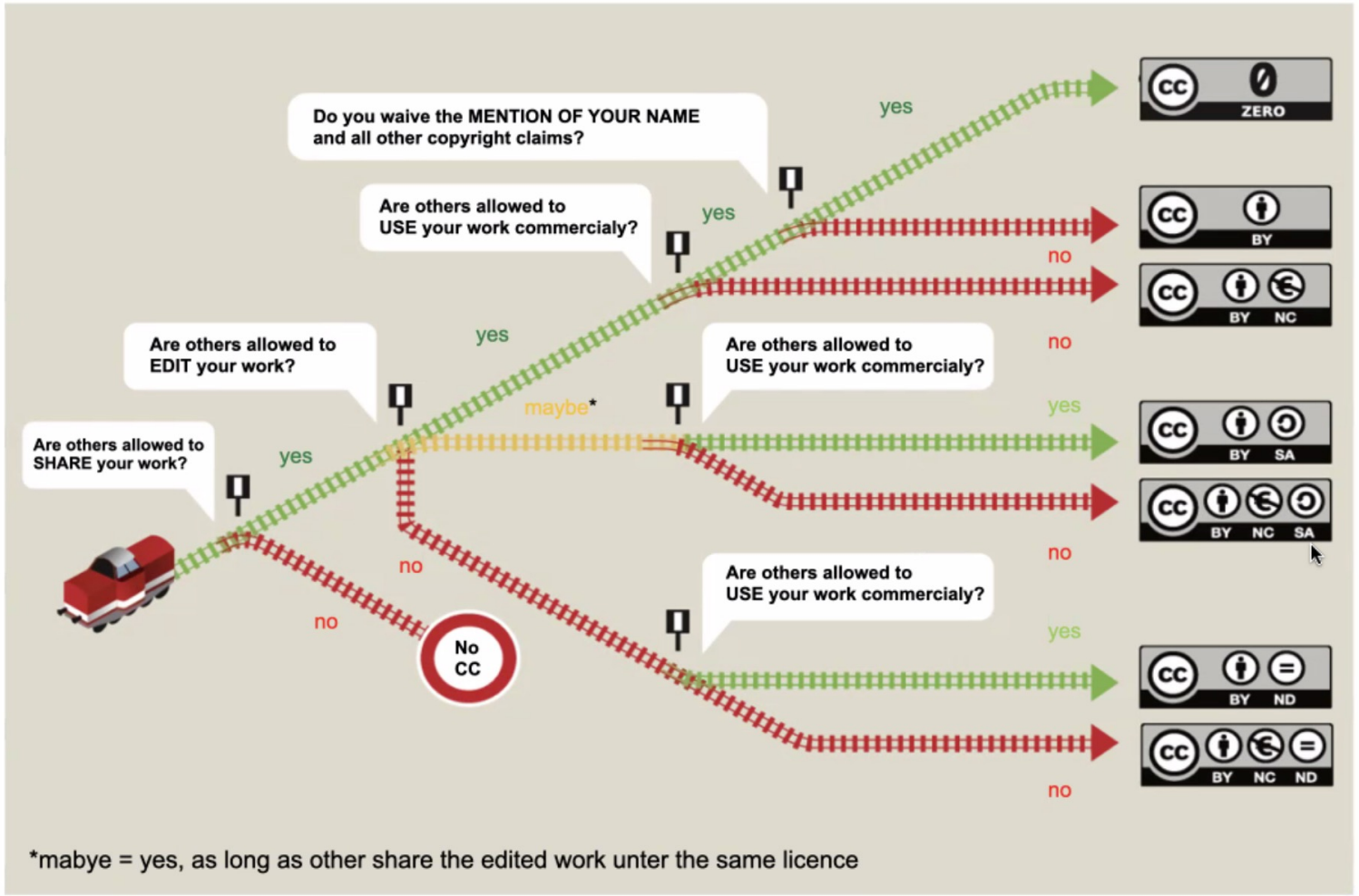
completely free

free with attribution

https://dbs-lin.ruhr-uni-bochum.de/lehreladen/e-learning-technik-in-der-lehre/open-educational-resources/creative-commons/

Lizenzformen Creative Commons

Creative Commons Licenses
Decision Tree



— Suggestion from SLUB: **CC-By** und **CC-0**

— for example on OSF: **CC-By Attribution 4.0 International**

„Welches ist die richtige CC-Lizenz für mich?“
(Graphic by Barbara Klute and Jöran Muuß-Merholz for wb-web under CC BY SA 3.0)

The lifecycle of an open paper

— **Optionally**: Update preprint on preprint server with revised version

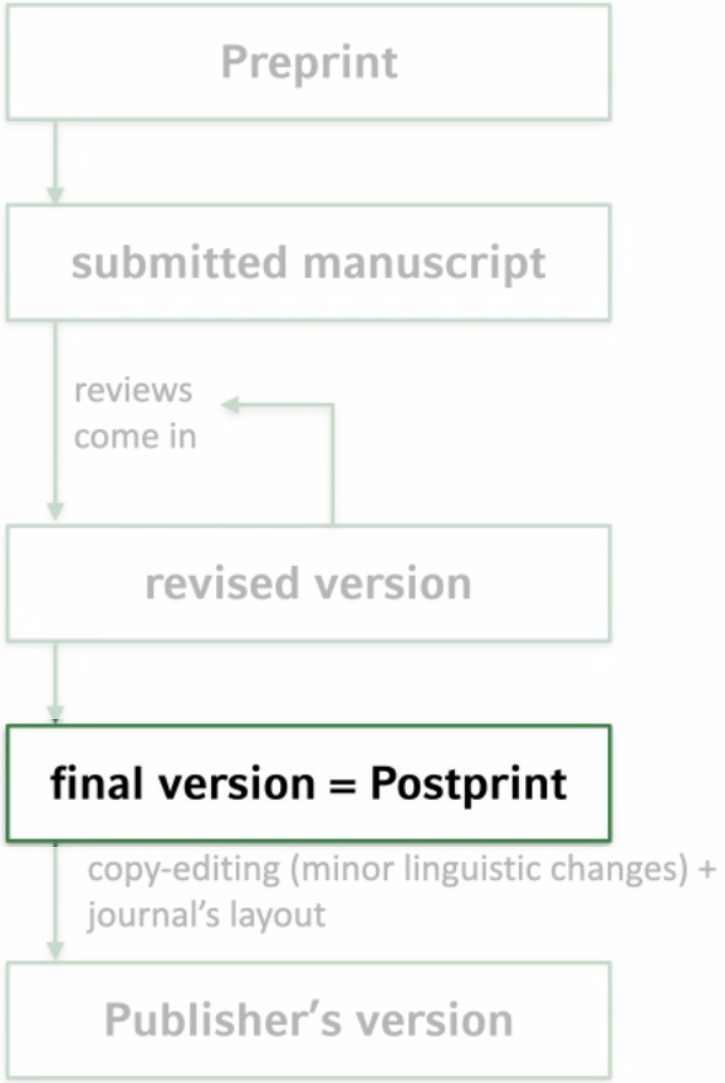
— Make a note on the front page that this is a revised version

— (technically, a revised version is somewhere between pre- and postprint)

https://twitter.com/50shadesofrev

The lifecycle of an open paper

- Post-print = accepted version after review, but before copyediting and layouting, a.k.a. „Accepted Manuscript (AM)“
- Check if journal allows post-prints (http://sherpa.ac.uk/romeo/index.php)
- Update PDF on preprint server with the post-print (→ Green Open Access)
- Clearly mark the PDF as postprint, link to the official journal version (many journals have guidelines how this note has to look like) → in practice, preprint servers actually host a mixture of pre- and post-prints
- Distribute the link to the open access version to colleagues, Twitter, etc. Put OA link on your website



The lifecycle of an open paper

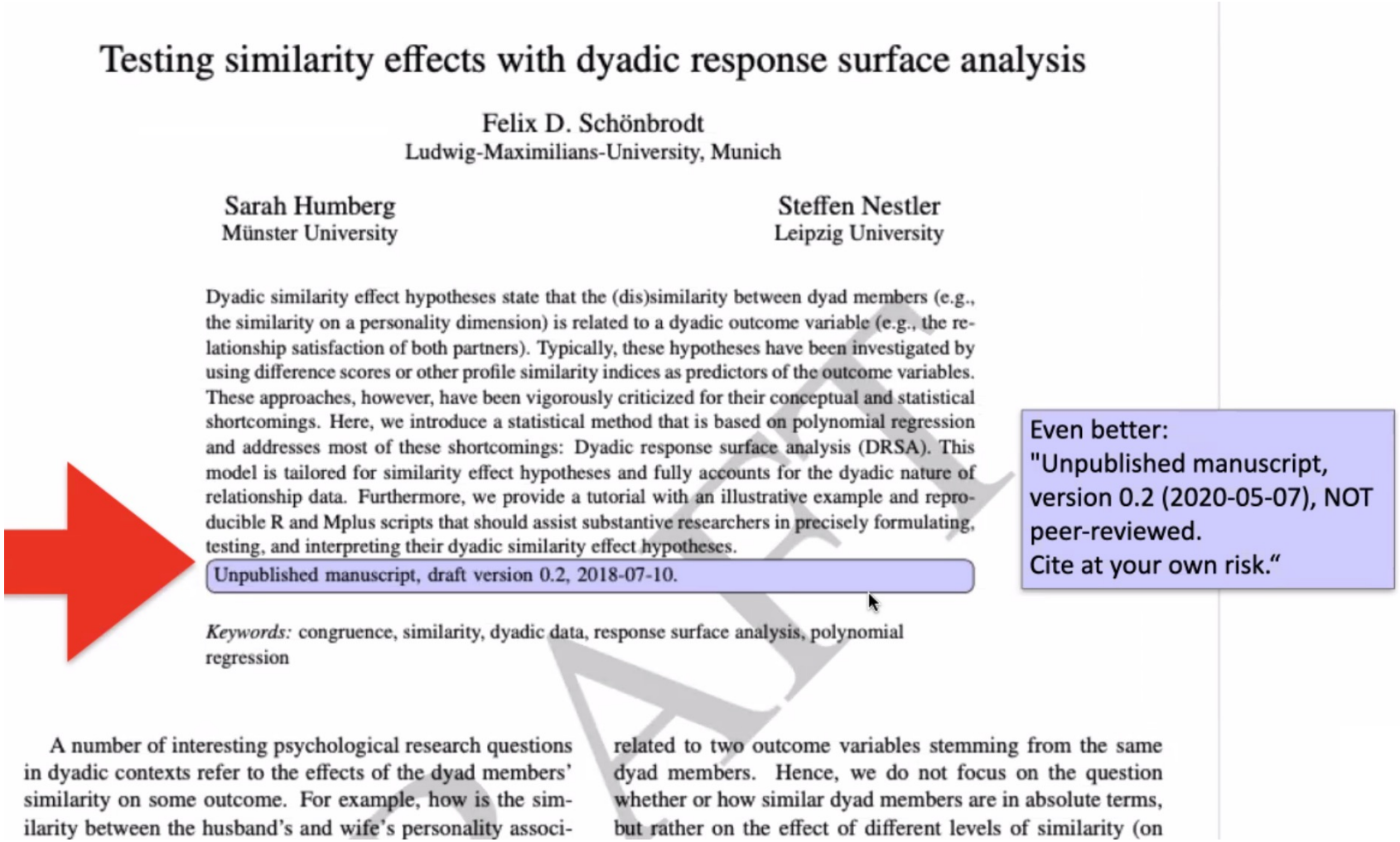
- Post-print = accepted version after review, but before copyediting and layouting, a.k.a. „Accepted Manuscript (AM)“
- Check if journal allows post-prints (http://sherpa.ac.uk/romeo/index.php)
- Update PDF on preprint server with the post-print (→ Green Open Access)
- Clearly mark the PDF as postprint, link to the official journal version

This preprint is in its pre-peer-review form.

The peer-reviewed and accepted version is now available as an Open Access article in Nature Scientific Reports: https://rdcu.be/cAIXG

https://psyarxiv.com/kcp2z/

The lifecycle of an open paper
Pre- or Postprint?



Testing similarity effects with dyadic response surface analysis

Felix D. Schönbrodt
Ludwig-Maximilians-University, Munich

Sarah Humberg
Münster University

Steffen Nestler
Leipzig University

Dyadic similarity effect hypotheses state that the (dis)similarity between dyad members (e.g., the similarity on a personality dimension) is related to a dyadic outcome variable (e.g., the relationship satisfaction of both partners). Typically, these hypotheses have been investigated by using difference scores or other profile similarity indices as predictors of the outcome variables. These approaches, however, have been vigorously criticized for their conceptual and statistical shortcomings. Here, we introduce a statistical method that is based on polynomial regression and addresses most of these shortcomings: Dyadic response surface analysis (DRSA). This model is tailored for similarity effect hypotheses and fully accounts for the dyadic nature of relationship data. Furthermore, we provide a tutorial with an illustrative example and reproducible R and Mplus scripts that should assist substantive researchers in precisely formulating, testing, and interpreting their dyadic similarity effect hypotheses.

Unpublished manuscript, draft version 0.2, 2018-07-10.

Keywords: congruence, similarity, dyadic data, response surface analysis, polynomial regression

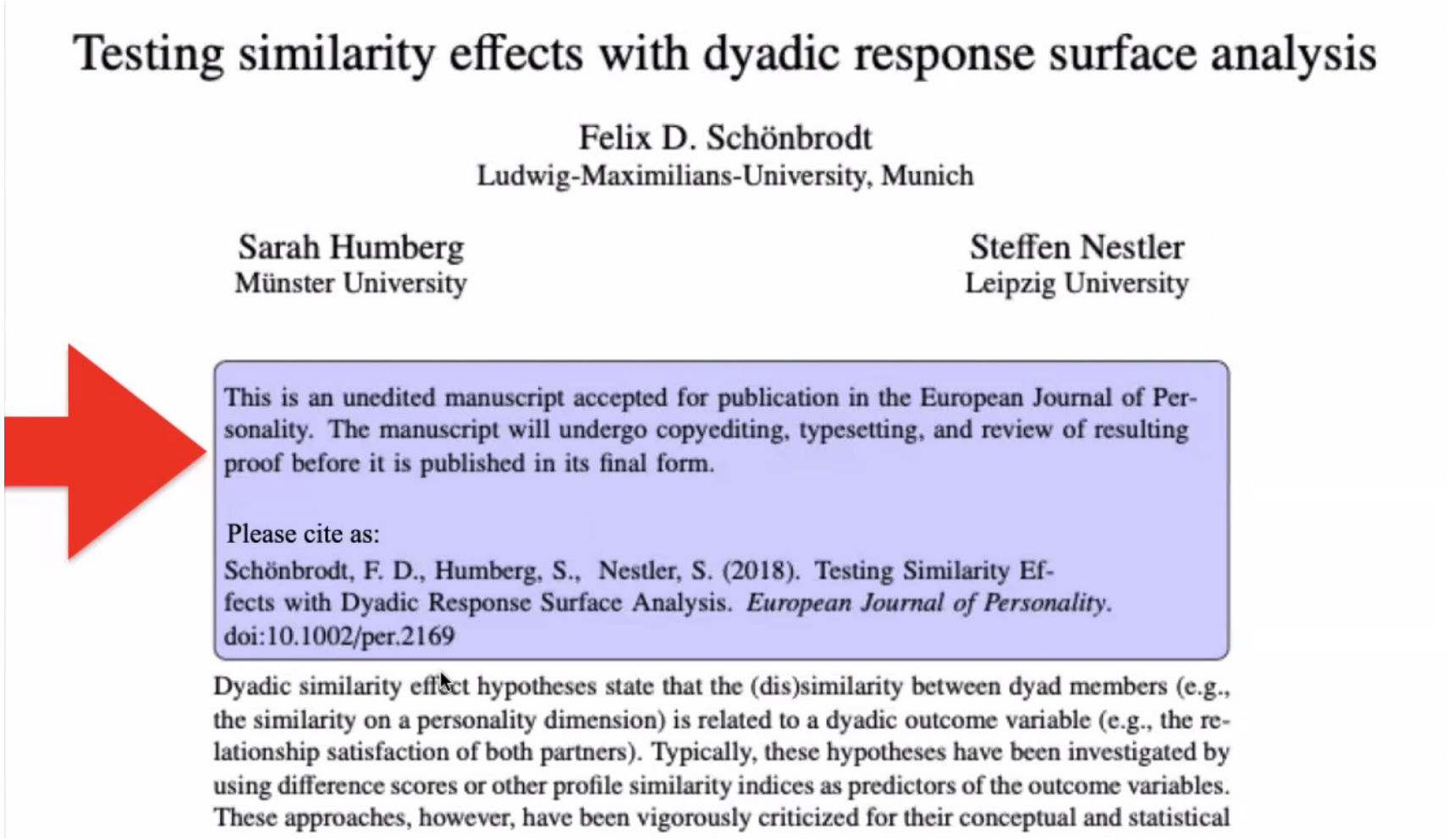
Even better:
"Unpublished manuscript, version 0.2 (2020-05-07), NOT peer-reviewed.
Cite at your own risk."

A number of interesting psychological research questions in dyadic contexts refer to the effects of the dyad members' similarity on some outcome. For example, how is the similarity between the husband's and wife's personality associ-

related to two outcome variables stemming from the same dyad members. Hence, we do not focus on the question whether or how similar dyad members are in absolute terms, but rather on the effect of different levels of similarity (on

Slide from Felix Schönbrodt: https://osf.io/j3mnc/

The lifecycle of an open paper
Pre- or Postprint?



Testing similarity effects with dyadic response surface analysis

Felix D. Schönbrodt
Ludwig-Maximilians-University, Munich

Sarah Humberg
Münster University

Steffen Nestler
Leipzig University

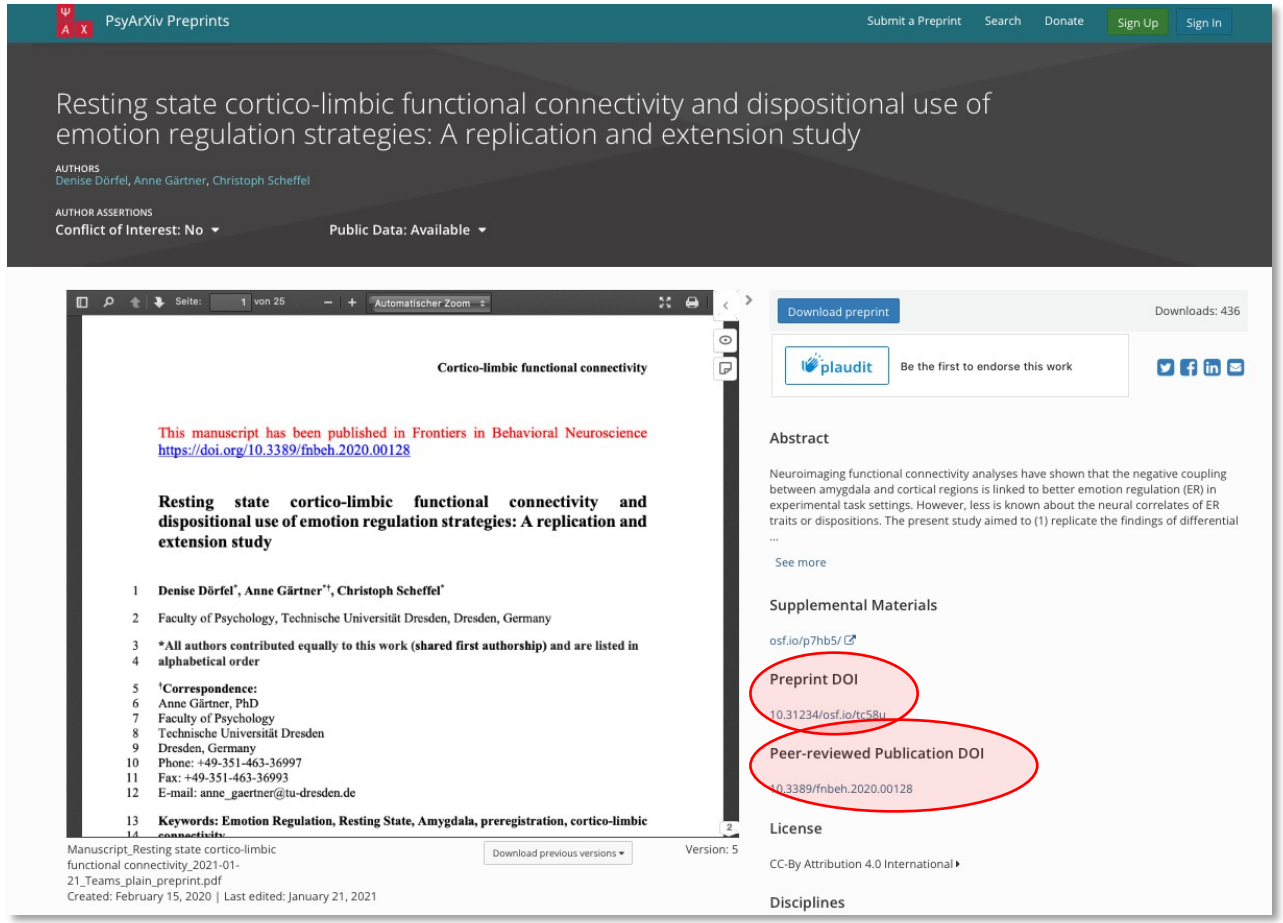
This is an unedited manuscript accepted for publication in the European Journal of Personality. The manuscript will undergo copyediting, typesetting, and review of resulting proof before it is published in its final form.

Please cite as:
Schönbrodt, F. D., Humberg, S., Nestler, S. (2018). Testing Similarity Effects with Dyadic Response Surface Analysis. *European Journal of Personality*. doi:10.1002/per.2169

Dyadic similarity effect hypotheses state that the (dis)similarity between dyad members (e.g., the similarity on a personality dimension) is related to a dyadic outcome variable (e.g., the relationship satisfaction of both partners). Typically, these hypotheses have been investigated by using difference scores or other profile similarity indices as predictors of the outcome variables. These approaches, however, have been vigorously criticized for their conceptual and statistical

Slide from Felix Schönbrodt: https://osf.io/j3mnc/

The lifecycle of an open paper
Pre- or Postprint?



Dörfel, D.*, **Gärtner, A.***, & Scheffel, C.* (2020). Resting state cortico-limbic functional connectivity and dispositional use of emotion regulation strategies: A replication and extension study. *Frontiers in Behavioral Neuroscience, 14,* 128. *All authors contributed equally and are listed in alphabetical order. doi: 10.3389/fnbeh.2020.00128 | Preprint PsyArXiv | Präregistrierung | OSF

[Preprint PsyArXiv]

The lifecycle of an open paper
SLUB publication fund

- Pay for gold OA? SLUB Publication Fund: https://www.slub-dresden.de/veroeffentlichen/open-access-finanzieren
- New system from now (2022) on!
- **SLUB will fund articles in OA journal or hybrid journal within the SLUB transformation agreement** (see here)
- **Hybrid OA journal without SLUB transformation agreement**: published closed access and second publish your postprint free of charge after one year embargo period
- **Fully OA journal without SLUB transformation agreement**: current DFG funding framework allows for application for a grant of 700 € after acceptance of their article via a form (will be available from SLUB), but fund is limited
- Funding for OA monographs possible under certain conditions

Researcher life hack
Free your images

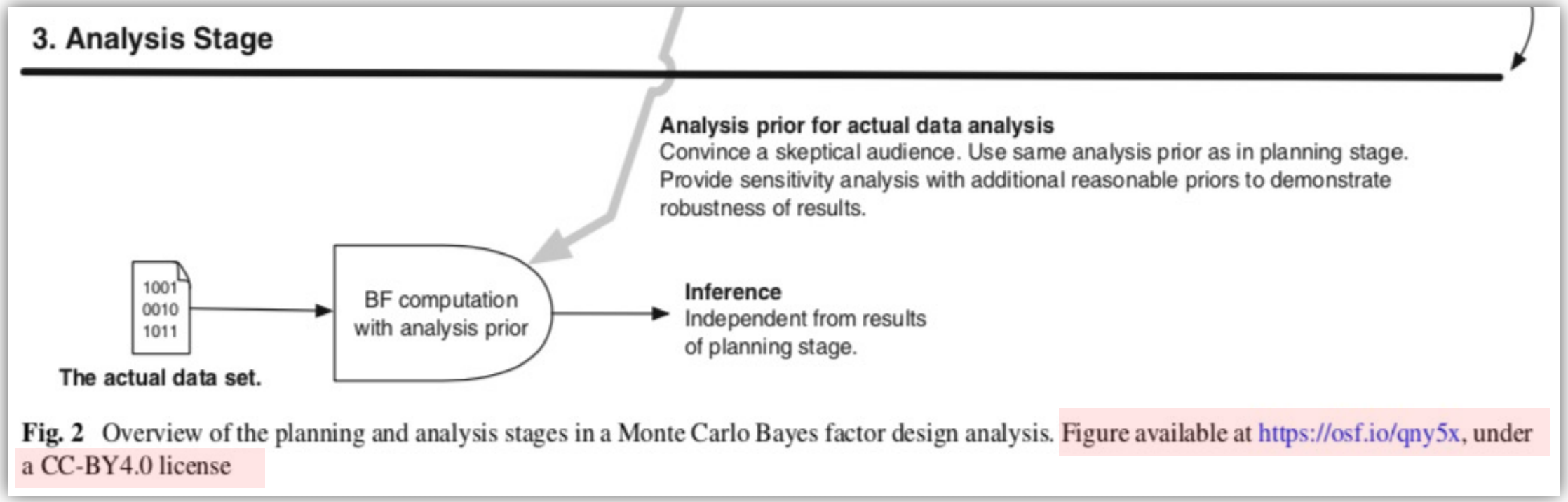


Fig. 2 Overview of the planning and analysis stages in a Monte Carlo Bayes factor design analysis. Figure available at https://osf.io/qny5x, under a CC-BY4.0 license

Publish your figures under a free license (prior to submission), and then ***you*** **give the license to the journal** (not the other way round).

For more details, see: https://medium.com/@malte.elson/retaining-copyright-for-figures-in-academic-publications-to-allow-easy-citation-and-reuse-77c6e2b511fe

Exercise

Group Discussion

Find a free Open Access journal from your discipline!

https://doaj.org/subjects

Focus on your most recent publication in a good journal.

Check if you are allowed to post the pre- or even the post-print on a preprint server!

sherpa.ac.uk/romeo/index.php

Discuss with colleagues what a suitable preprint server could be!

Summary

Open Access
3 Easy Steps

How you can improve your OS record (almost) without effort

1. If your journal allows it (check on SHERPARomeo), upload your submitted paper to a preprint server.
2. Publish the figures you use in your paper under a CC-BY license (add the sentence “this figure is available under CC-BY 4.0 license under …”).
3. (Apply for Gold Access funding in your next grant application.)

Further recommendations

Further Resources

— Björk, B.-C., Welling, P., Laakso, M., Majlender, P., Hedlund, T., Gudnason, G. (2010). Open access to the scientific journal literature: Situation 2009. *PLoS ONE 5*(6): e11273. doi: 10.1371/journal.pone.0011273

— Creative Commons (2017). About the licenses. https://creativecommons.org/licenses/?lang=en

— Suber, P. (2015). Open Access Overview. Available on https://legacy.earlham.edu/~peters/fos/overview.htm

References

ASAPbio (2016). Survey results. Available on asapbio.org/survey

Björk, B.-C., Welling, P., Laakso, M., Majlender, P., Hedlund, T., Gudnason, G. (2010). Open access to the scientific journal literature: Situation 2009. PLoS ONE 5(6): e11273. doi: 10.1371/journal.pone.0011273

Capot, C. (2014). Free access to medical information for African countries battling Ebola: New initiative gives healthcare professionals access to Elsevier's medical content online and via mobile. Elsevier Connect blog, available on elsevier.com/connect/free-access-to-medical-information-for-african-countries-battling-ebola

Cisarella, J. (2013). Open Access: Which Side Are You On. Slides available on https://www.slideshare.net/cirasella/open-access-which-side-are-you-on-oa-week-2013

Dahn, B., Mussah, V., & Nutt, C. (2015). Yes, we were warned about Ebola. The New York Times. Available on nytimes.com/2015/04/08/opinion/yes-we-were-warned-about-ebola.html?_r=0

Masnik, M. (2015). Don't Think Open Access Is Important? It Might Have Prevented Much Of The Ebola Outbreak. techdirt blog, available on tdrt.io/eEp

Matthias, L., & Tennant, J. (2018). How to make your research open access? For free and legally. (Version 3). Figure available on figshare. doi: 10.6084/m9.figshare.5285512.v3

Research Information Network (2008). Activities, costs and funding flows in the scholarly communications system in the UK. Report available on https://silo.tips/download/activities-costs-and-funding-flows-in-the-scholarly-communications-system-in-the-3

Suber, P. (2015). Open Access Overview. Available on https://legacy.earlham.edu/~peters/fos/overview.htm

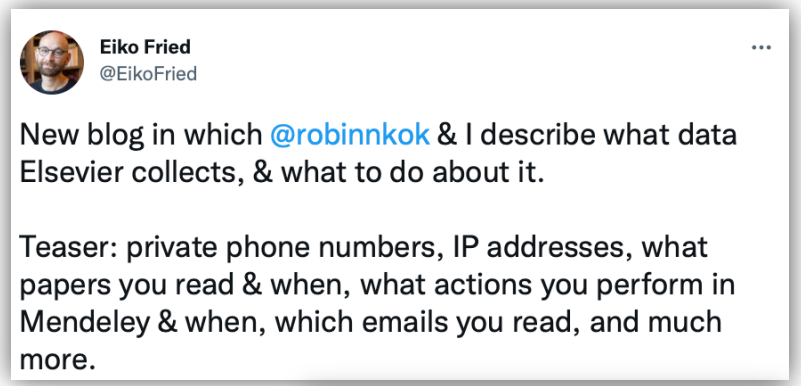
Travis, J. (2016). In survey, most give thumbs-up to pirated papers. Science Magazin. doi: 10.1126/ science.aaf5704

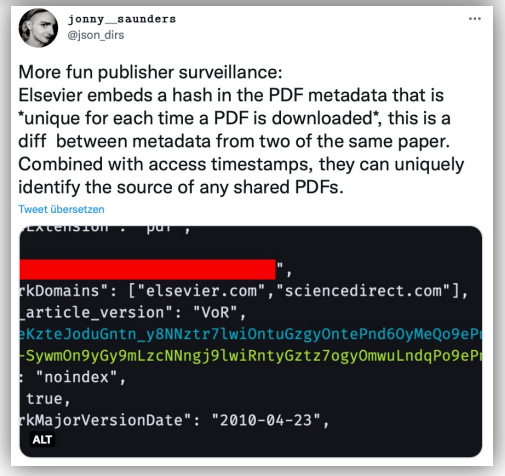
Vilnius University Library (2018). Open Access Databases. Available on www.vgtu.lt/library/e-resources/databases/open-access/287178

Stop Tracking Science

Stop Tracking Science

The big publishers track and record scientists' everyday behavior → *Opening* a paper on a Nature website triggers > 70 different tracking tools, same for Elsevier (or even worse)





What is tracked?

— Which paper do you look at for how long?

— Where do you click in the paper?

— Which sentences do you highlight with the markup tool?

— What software do you have installed on your computer?

— At which location are you at each usage of their website or software?

— Connect these profiles with your other (private) profiles, e.g. on social media

Stop Tracking Science

Where do they get the data from?

— Their own websites

— „Free“ software like Mendeley

— Plugins in (some) universities’ libraries

— Personalized data via browser fingerprinting

— Detailed analysis by the DFG Committee on Scientific Library Services and Information Systems

Stop Tracking Science

What do they do with the data?

- Create researcher profiles and intransparent research assessment indicators (Clarivate, SciVal)
- Sell them to universities (which base their hiring and promotion decisions on it)
- „Elsevier will essentially accept a ‚zero revenue growth' position for its journal in exchange for the universities purchasing a large set of their data analytics products." (Leaked Dutch Contract with Elsevier Raises Significant Alarm Bells - SPARC).
- Sell the data to the U.S. Immigration and Customs Enforcement
- Sell them to other third parties („data brokers")
- „Surveillance capitalism" (Zuboff)

Stop Tracking Science

What can you do as an individual?

- Sign the petition at https://stoptrackingscience.eu
- Signed by 1292 scientist and also supported by a position paper by the German psychology student representation (PsyFaKo)
- Don't use „free" software from big publishers (e.g., Mendeley, SSRN)
- Use real open source software, such as Zotero
- Don't put preprints on commercial servers (such as SSRN, academia.edu or ResearchGate); rather use non-commercial servers, such as psyArXiv (COS), psyArchives (ZPID), Zenodo
- Don't support publishers that do tracking, by ...
  - not submitting papers (e.g., the Cost of Knowledge pledge)
  - not reviewing their papers (set priorities for reviewing)
  - not being an unpaid editor for them

Stop Tracking Science

What can you do as an institution?

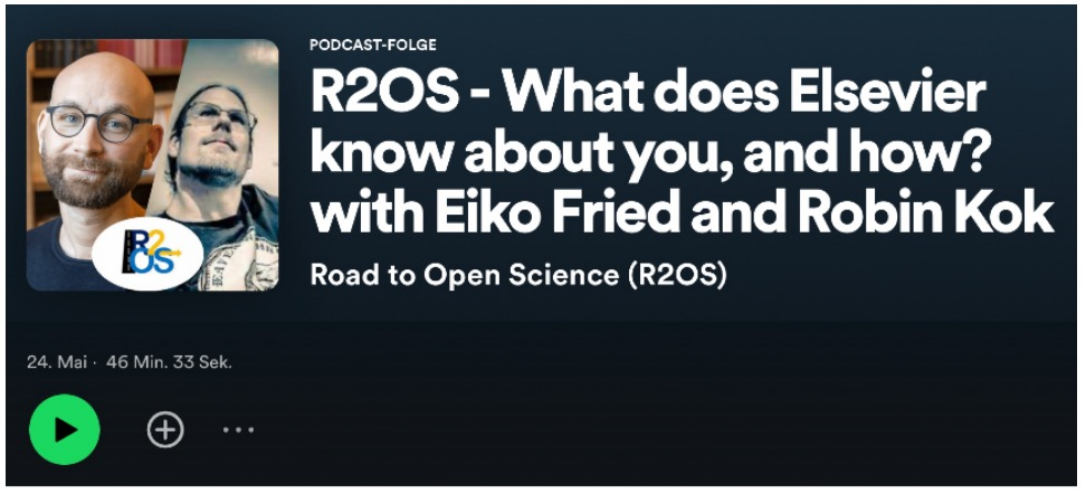
— Sign and implement the San Francisco Declaration on Research Assessment (DORA)

— Do not use SciVal, Clarivate Tools, or other proprietary assessment tools (which are based on the tracked data) in hiring committees

— Ask your local library whether they installed trackers from publishers

— Support open scholarly infrastructures (such as DOAJ, Sherpa/ Romeo, PKS Open Journal Systems, Open Science Framework, PsyArXiv)

Stop Tracking Science



https://open.spotify.com/episode/4wMZbpyWjw6DTkhs4emlK5?si=eLEXNkMASf2s4SOaZER74w&nd=1

https://www.laborjournal.de/editorials/2505.php

Thank you!

Credentials

The creation of this workshop material was partially funded by the German Research Foundation (Deutsche Forschungsgemeinschaft, DFG; SFB 940/3)

Some slides of the workshop were taken or adapted from the Open Science Workshop Materials of the LMU Open Science Center: https://osf.io/zjrhu/wiki/home/