



How

publishing peer review histories

alongside articles

promotes ethical publishing

practices

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Behavioral
Ecology**

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What is an open peer review?

Review history published alongside the publication

Review history published + reviewers sign

Reviewers sign

Post-publication public review

Endocranial volume is heritable and is associated with longevity and fitness in a wild mammal

C. J. Logan, L. E. B. Kruuk, R. Stanley, A. M. Thompson, T. H. Clutton-Brock

Published 14 December 2016. DOI: 10.1098/rsos.160622

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THE ROYAL SOCIETY PUBLISHING

ROYAL SOCIETY OPEN SCIENCE

Endocranial volume is heritable and is associated with longevity and fitness in a wild mammal

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Article citation details
R. Soc. open sci. 3: 160622.
<http://dx.doi.org/10.1098/rsos.160622>

Review timeline

Original submission:	23 August 2016	Note: Reports are unedited and appear as submitted by the referee. The review history appears in chronological order.
1st revised submission:	6 October 2016	
2nd revised submission:	16 November 2016	
Final acceptance:	17 November 2016	

December 2016



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KEYWORDS
quantitative genetics, endocranial volume, life history, longevity, fitness, fecundity

Review History

Is peer review effective? An empirical question...

...for which there is **no data** because peer review is usually confidential

→ publish peer review histories

...confounded with poor quality research because peer review happens **after the research** has been conducted

→ pre-study peer review

- Peer reviewer and editor time = **services** we control

Exploitative route

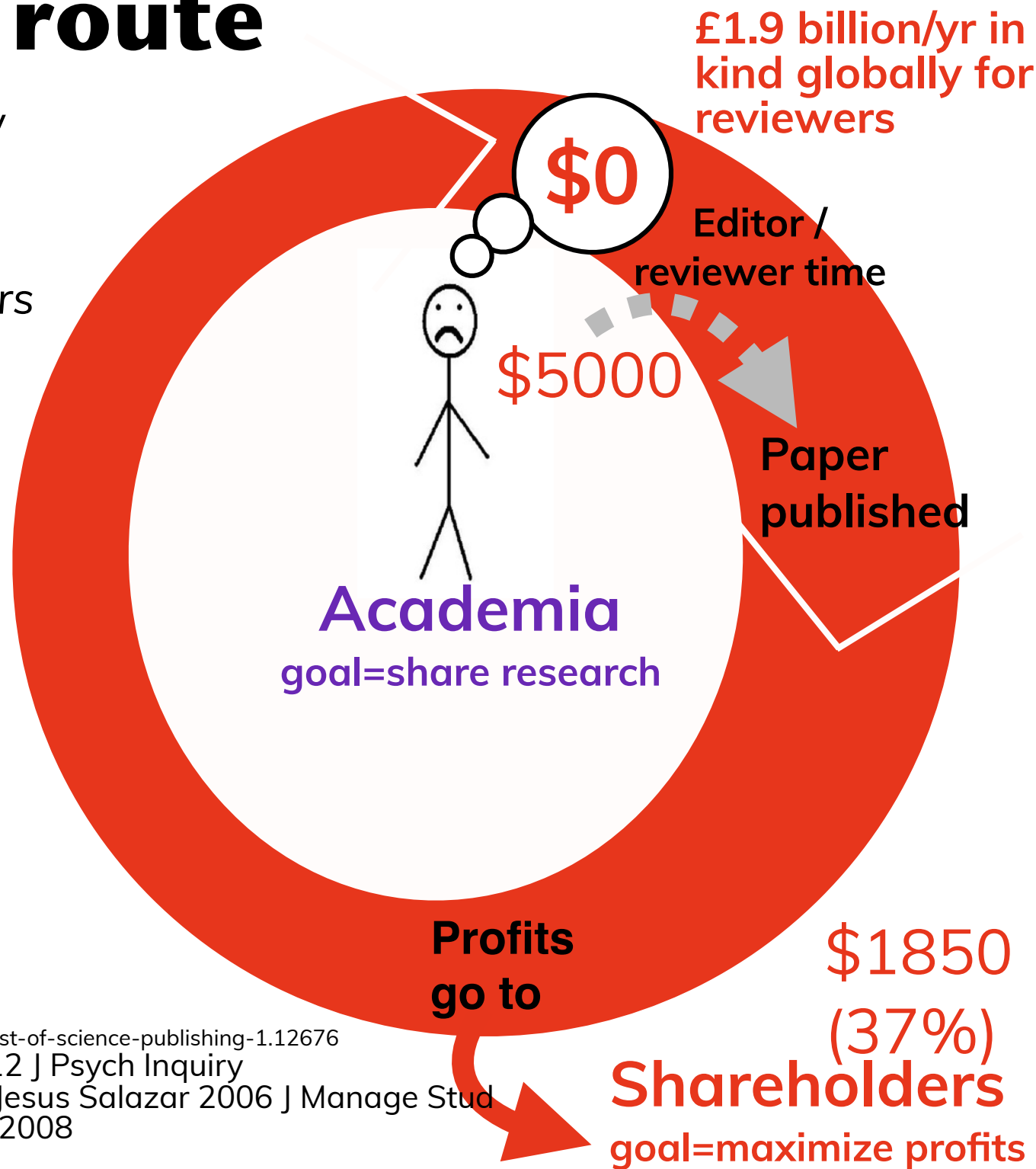


\$5000: Van Noorden 2013 <https://www.nature.com/news/open-access-the-true-cost-of-science-publishing-1.12676>
Goal: Nosek & Bar-Anan 2012 J Psych Inquiry.
Logan 2017 F1000Research

Exploitative route

Academics perform quality control at no cost to publishers

What services do publishers actually provide?



\$5000 & 37%: Van Noorden 2013

<https://www.nature.com/news/open-access-the-true-cost-of-science-publishing-1.12676>

Goal academia: Nosek & Bar-Anan 2012 J Psych Inquiry

Goal corporate publisher: Husted & de Jesus Salazar 2006 J Manage Stud

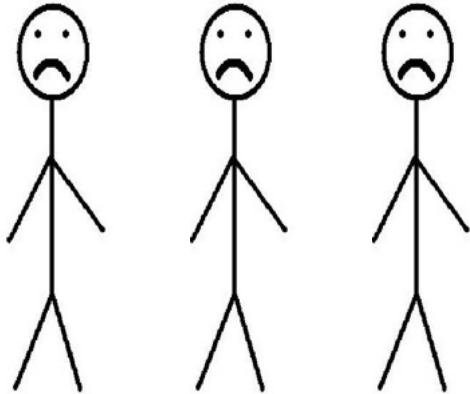
In kind: Research Information Network 2008

Logan 2017 F1000Research

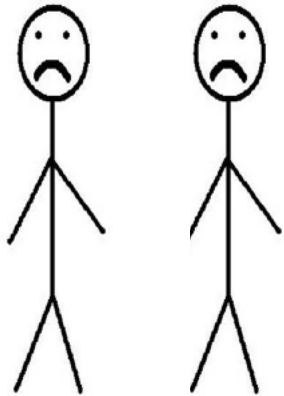
Exploitative route

**Indirect
discrimination**

Patient MD Public



Other
researchers



PAYWALL

Public
funds
research

\$0

£1.9 billion/yr in
kind globally for
reviewers

Editor /
reviewer time

\$5000

**Paper
published**

Academia

goal=share research

Available
to read by
scholarly
rich



Profits
go to

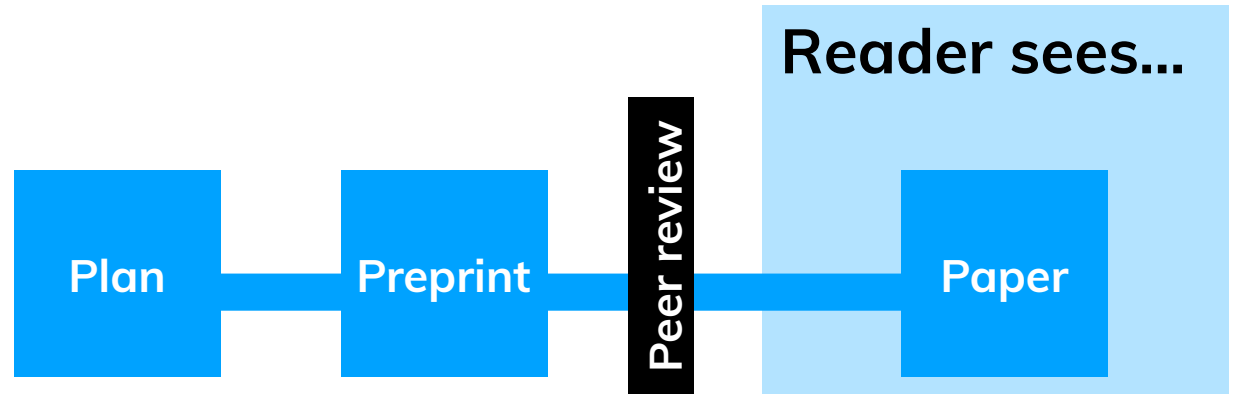
**\$1850
(37%)**

Shareholders
goal=maximize

Nosek & Bar-Anan 2012 Psychol Inq
Tennant et al. 2016 F1000Research
Murray-Rust 2011
<https://blogs.ch.cam.ac.uk/pmr/2011/10/05/the-scholarly-poor-dentists/>
Logan 2017 F1000Research

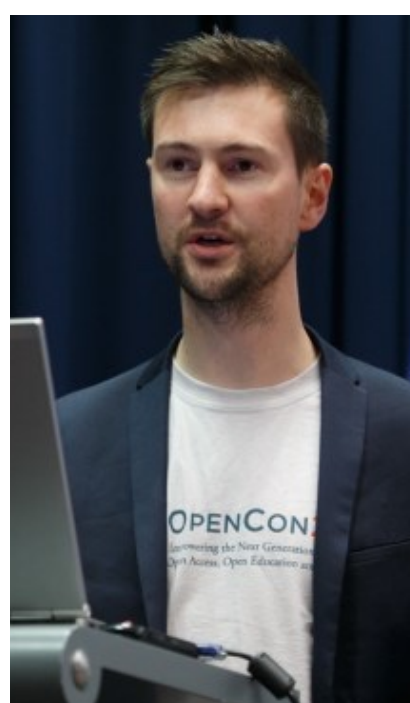
Does peer review improve research quality?

Closed peer review



Problems with closed peer review

- Prohibits quality control
- Reviews can be inadequate, biased, subjective
- Editors = key to high standards in research and ethics



Jon Tennant 2016

<http://blog.scienceopen.com/2016/04/editorial-control-is-a-critical-part-of-open-peer-review/>

“Peer review needs structure, coordination, and control. But why should this imply a closed system? In a closed system, who is peer reviewing the Editors? What are editorial decisions based on? Why and who are editors selecting as reviewers?”

“These are all questions that are obscured by traditional peer review, and traits of a closed, secretive, and subjective system - not the rigorous, objective, gold standard that we hold peer review to be.”

Resin & Elmore 2016 *Science & Engineering Ethics*,

<https://peerj.com/blog/post/100580518238/whos-afraid-of-open-peer-review/>

My closed peer review horror story

- I reviewed a paper, raised many issues, some insurmountable
- Decision = **Major Revision**
- Not cc'ed on further decisions, **no re-review**
- Asked to publish a response to accepted article. **Accepted version didn't address comments**; many factual errors
- Executive editor + handling editor + president of society **refused to acknowledge they accepted the paper without proper revision and didn't seem to care it was low quality / incorrect**
- I am mentioned in Acknowledgements

I control where I donate my reviewer/editor time

Reviewing Ethics

If I am invited to review a paper for a journal and/or publisher that is not aligned with my commitment to conducting rigorous science, I accept the review, write the below text in the Comments to the Authors section, and submit the review. I got this idea from the [Peer Reviewers' Openness Initiative](#) and modified it to suit my particular ethics.

- - -

My goal is to ethically conduct and promote rigorous science. I avoid exploiting myself as a scientist, I facilitate equality and diversity by ensuring that no one is discriminated against when reading scientific literature I contribute to, and I keep funds in academia (see my [presentation](#) for background). I use the mechanism of transparency to achieve my goal so anyone can evaluate my contributions at every step of the process.

Therefore, I am only willing to review papers that:

- 1) are going to be published gold open access under a CC-BY license,
- 2) will publish the review history alongside the paper (when it is an option),
- 3) are submitted to a journal where 100% of the articles are open access, and
- 4) are submitted to a journal that is published by an academic non-profit organization, or a for-profit corporation that a) has low or no article processing charges, and/or b) heavily invests profits in academia.

I am not willing to review this paper at this journal because criteria 1 and 3 are not met.

Sincerely,
Corina Logan

<http://www.corinalogan.com/ethics.html>

The ethical framework

- 1) **Researchers** and **publishers** have a **responsibility to the public** to provide them with **free access to publicly funded products**, which are a common good [1-2]
- 2) **Publishers** of research products have a **responsibility to researchers** to value the generation and packaging of knowledge [3]
- 3) **Researchers** have a **responsibility to the public to conduct rigorous research** because it will serve as the foundation for the advancement of discoveries, it provides the best value for money, and earns public trust [4]

[1] Stilgoe et al. 2013 Res Policy

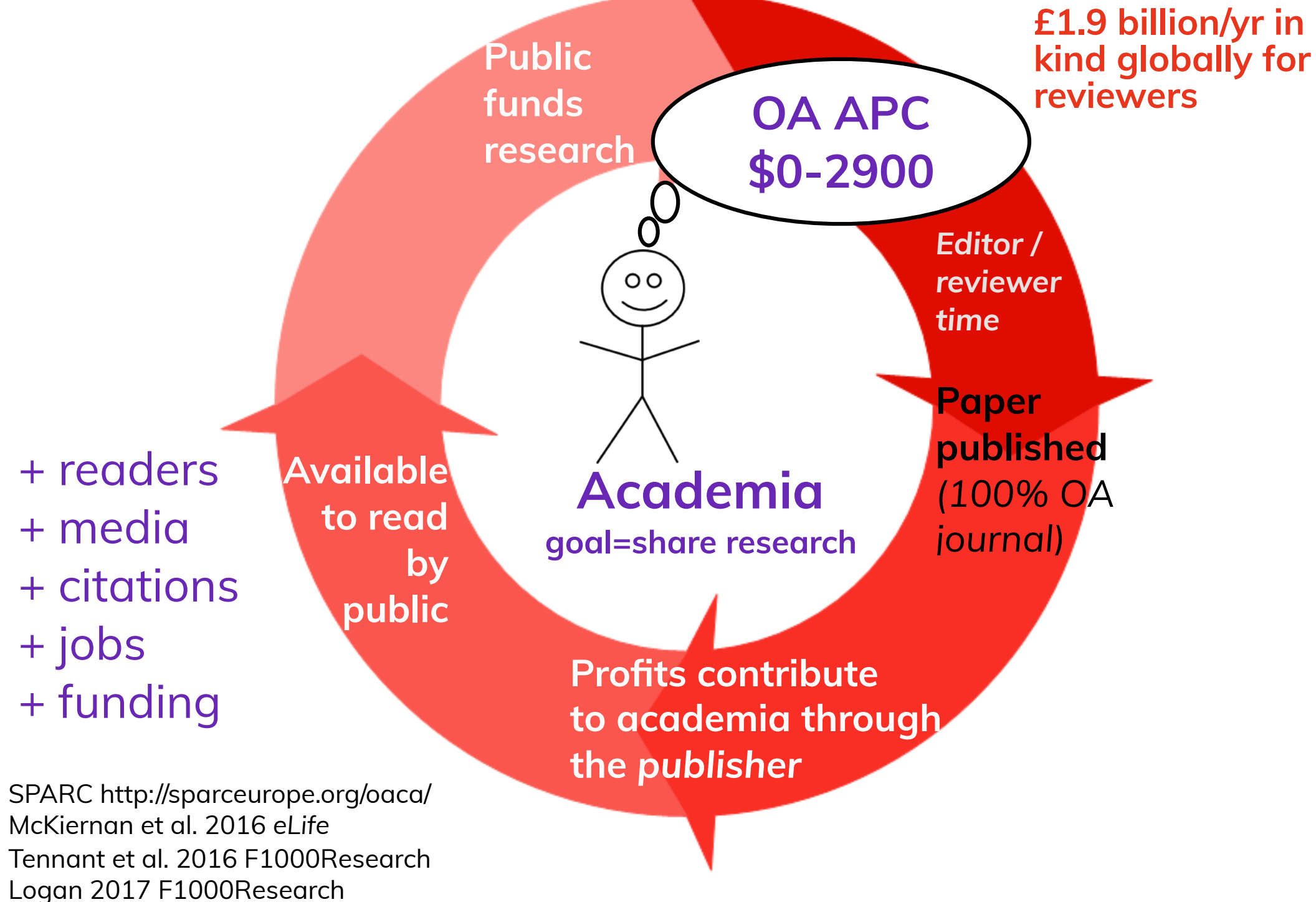
[2] Woodward 1990 Library Trends

[3] Fuchs & Sandoval 2013 TripleC: Communication, Capitalism & Critique

[4] Nosek & Bar-Anan 2012 J Psych Inquiry

Logan 2017 F1000Research

Ethical route



Is peer review effective? An empirical question...

...for which there is **no data** because peer review is usually confidential

➡ **publish peer review histories**

...confounded with poor quality research because peer review happens **after the research** has been conducted

➡ pre-study peer review

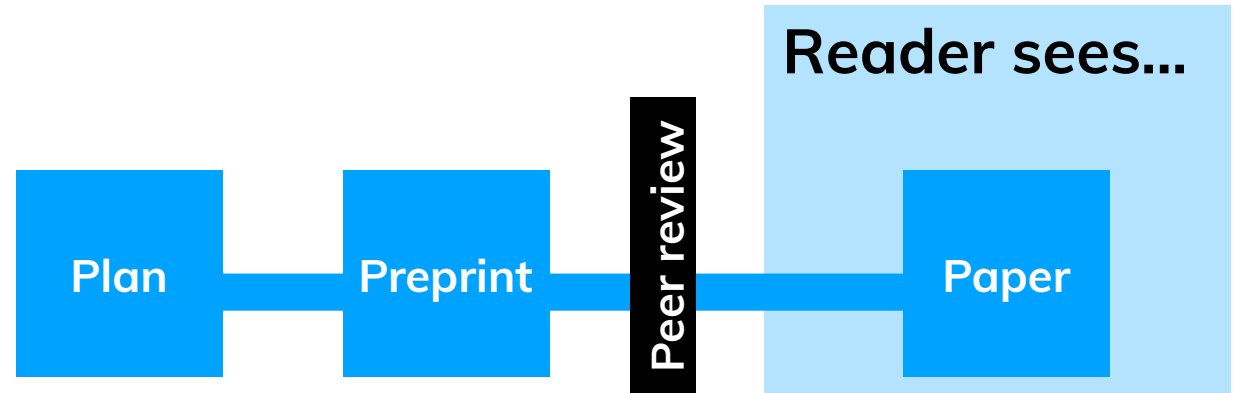
• Peer reviewer and editor time = **services we control**

Publish peer review histories

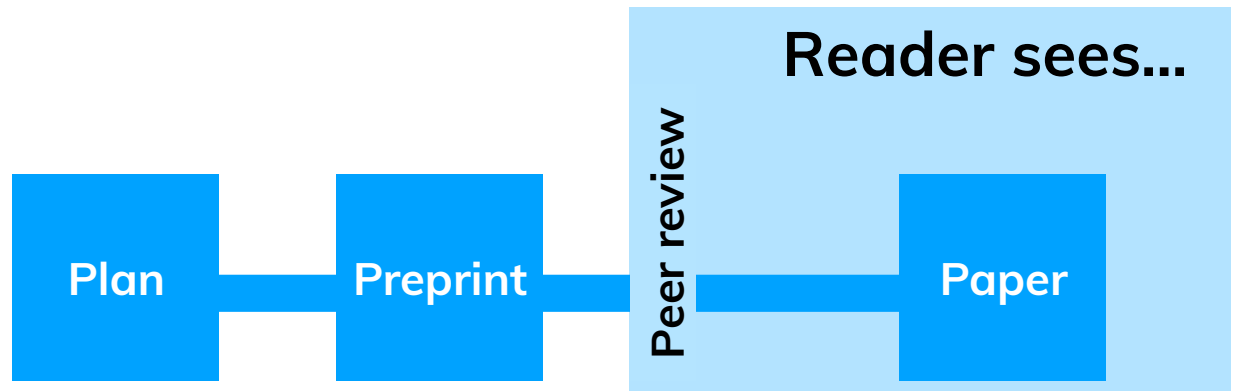
- **Goal** = improve research rigor by making peer review more effective & improves research quality
- **Assess quality** of reviewers and editors: *data!*
- Increased **accountability** of reviewers, editors
- Editors = **responsible** for ensuring high quality reviews
- Double blind still works
(*& reduces biases toward prestige & men*)

Does peer review improve research quality?

Closed peer review



Open peer review



Where can you publish peer review histories?

F1000Research
Open for Science



Collabra:
Psychology

ROYAL SOCIETY
OPEN SCIENCE



eLIFE

PeerJ

Peer Community In

Ecology

Free and transparent preprint and postprint
recommendations in ecology



Is peer review effective? An empirical question...

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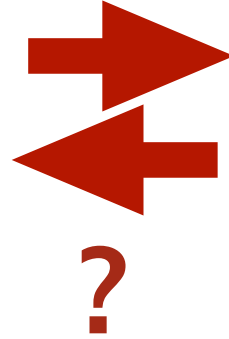
...confounded with poor quality research because peer review happens **after the research** has been conducted

→ pre-study peer review

• Peer reviewer and editor time = **services we control**

Post-study peer review: a confound

Poor quality **peer review**
& **editorial** decisions

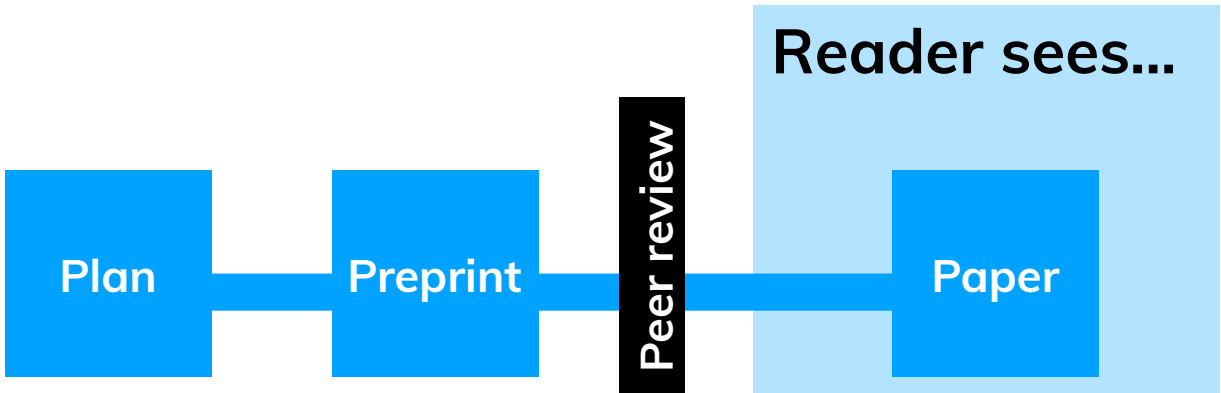


Poor quality of
(published) **research**

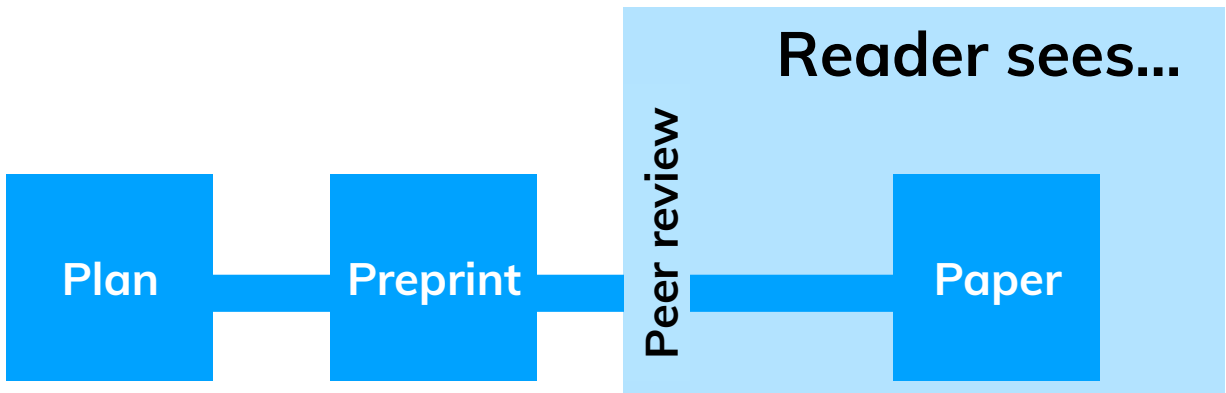
- Post-study reviewers/editors can't control study quality
- High quality peer reviews can't retrospectively fix a broken study

Does peer review improve research quality?

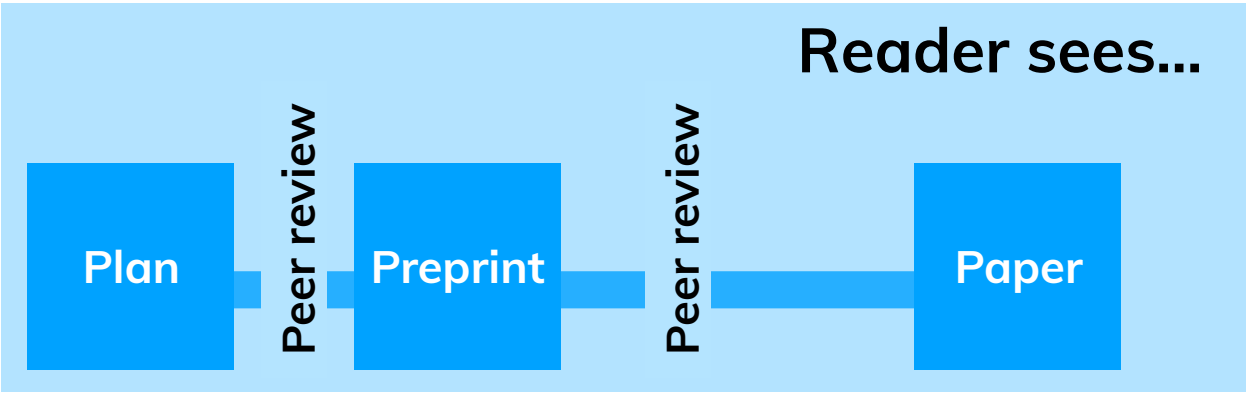
Closed peer review



Open peer review



Pre-study
open peer review



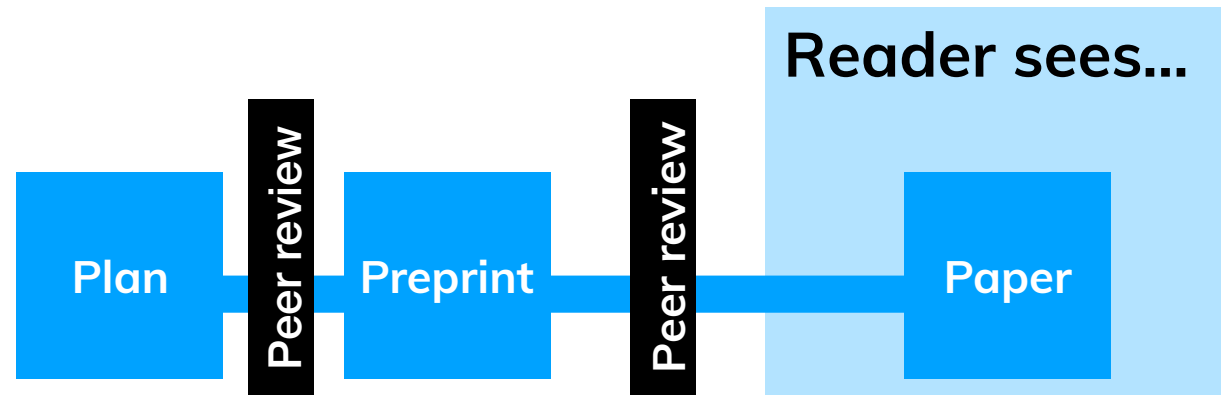
➡ **Pre-data collection review**

Prevents wasting resources on poor quality research

Closed peer-reviewed
Registered Reports...



ANIMAL
BEHAVIOR
AND
COGNITION

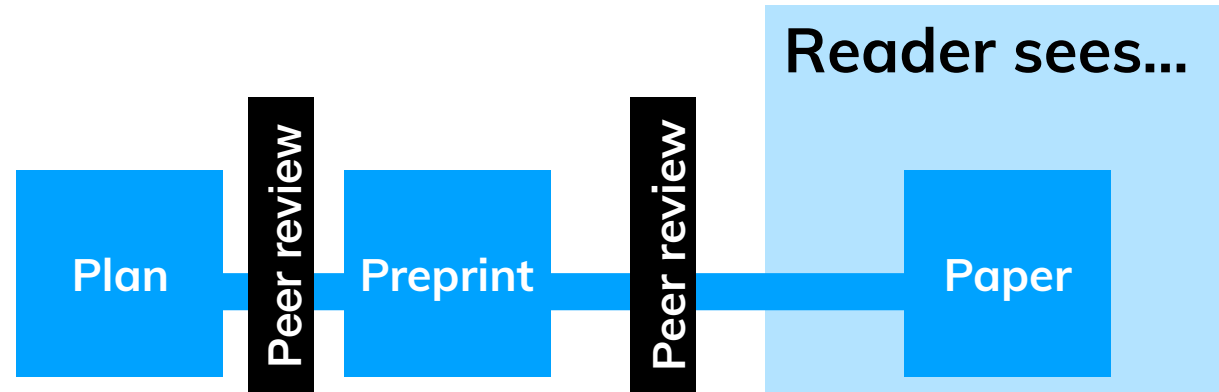


➔ Pre-data collection review

Closed peer-reviewed
Registered Reports...

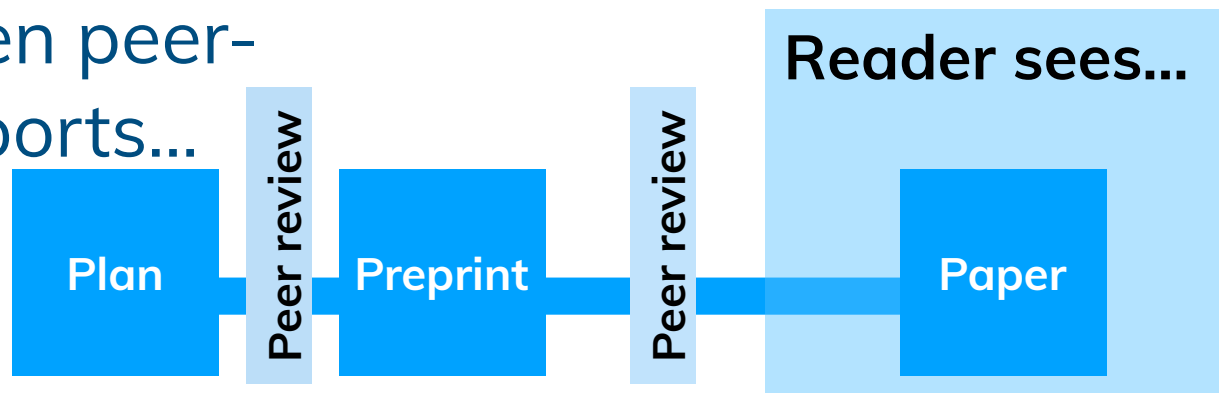


ANIMAL
BEHAVIOR
AND
COGNITION



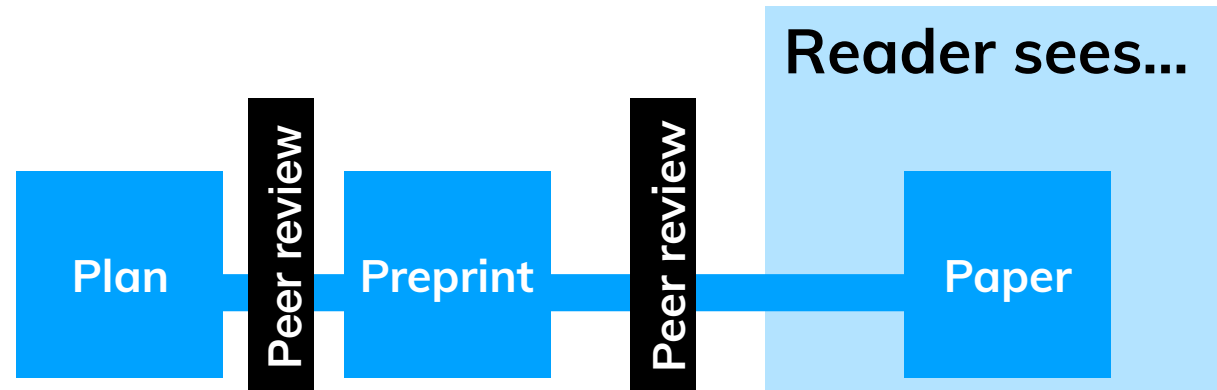
Eventually optionally open peer-
reviewed Registered Reports...

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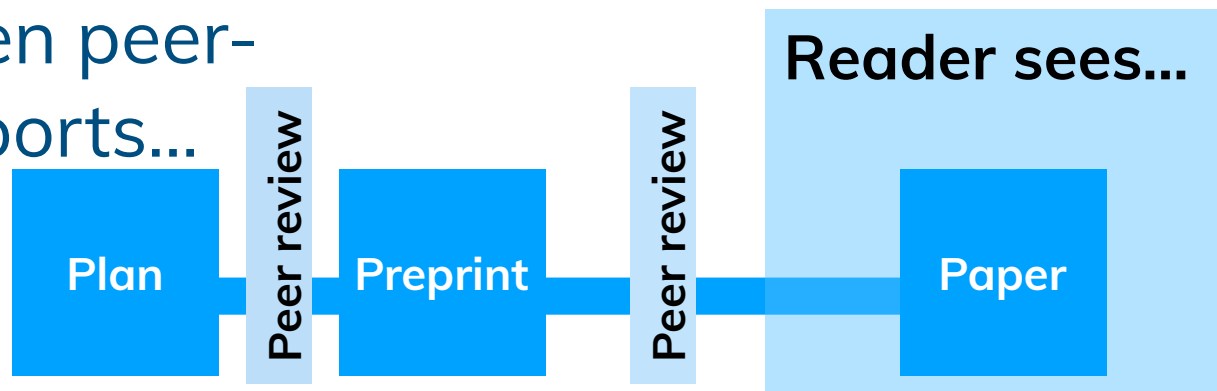
➔ Pre-data collection review

Closed peer-reviewed
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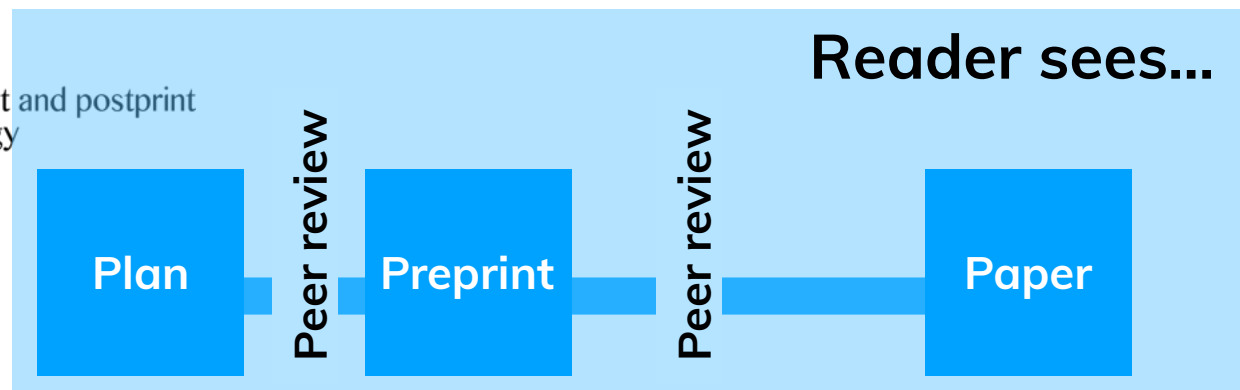


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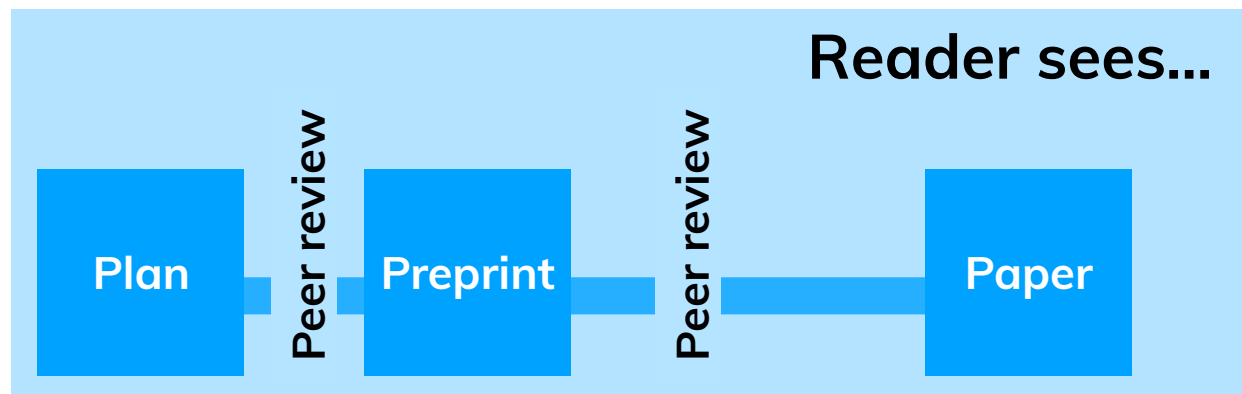


Openly peer-reviewed preregistrations...



Aim: pre-study open peer reviews

- Allows **quality checking** of editors, reviewers, and authors
- Transparency **increases research rigor** via enforcing accountability
- Greater effect on improving research quality **before research has begun**



Slides at: <https://osf.io/3bzkq/>

We won't be...



Corina Logan & Laurent Gatto



Leading individuals and
institutions in adopting open
practices to improve research rigor

ECRs often feel **pressured** into taking actions
against our **ethics** to pursue an academic career
(e.g., publishing in particular journals)

- ECRs: Sign the **petition** to help us change academic culture
- Non-ECRs: Join the list of **supporters** by valuing open practices, especially when making decisions about hiring, promotion, and grants

www.BulliedIntoBadScience.org | corina_logan@eva.mpg.de | @LoganCorina