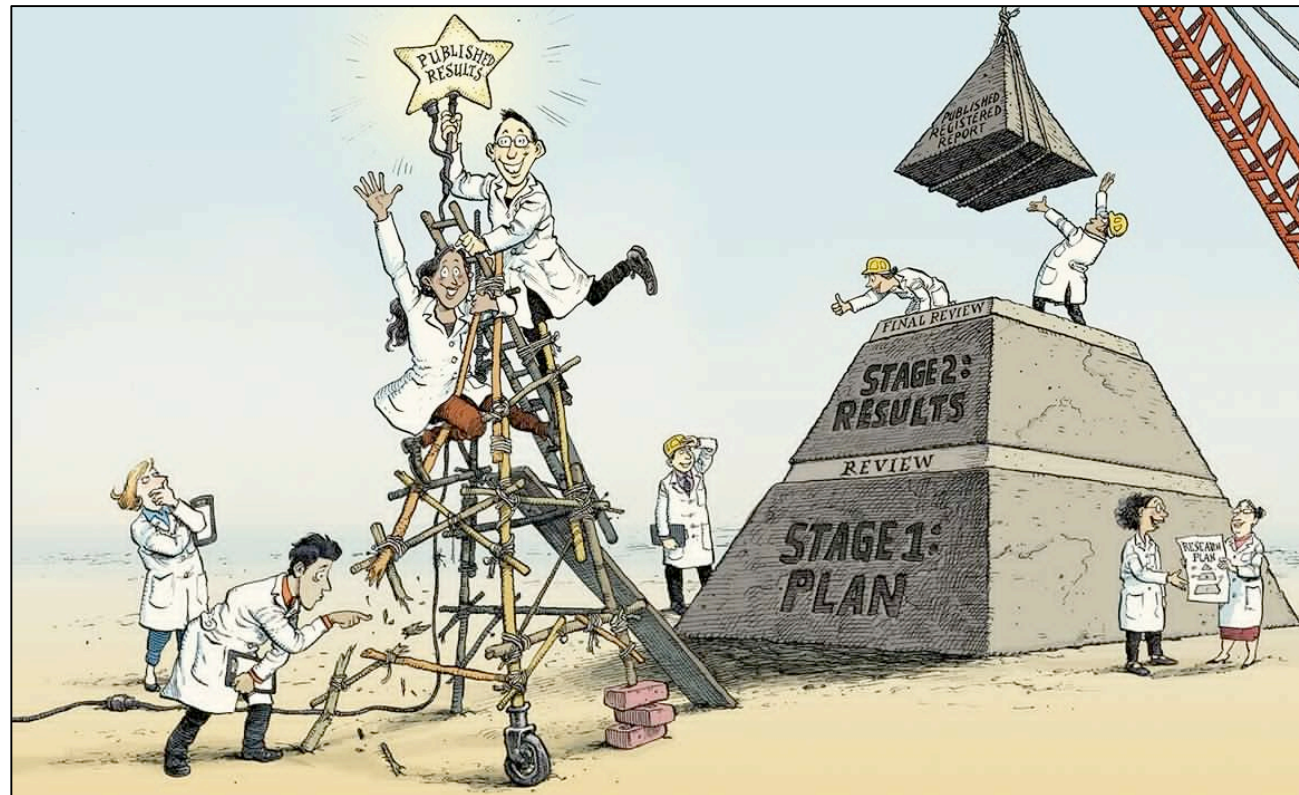


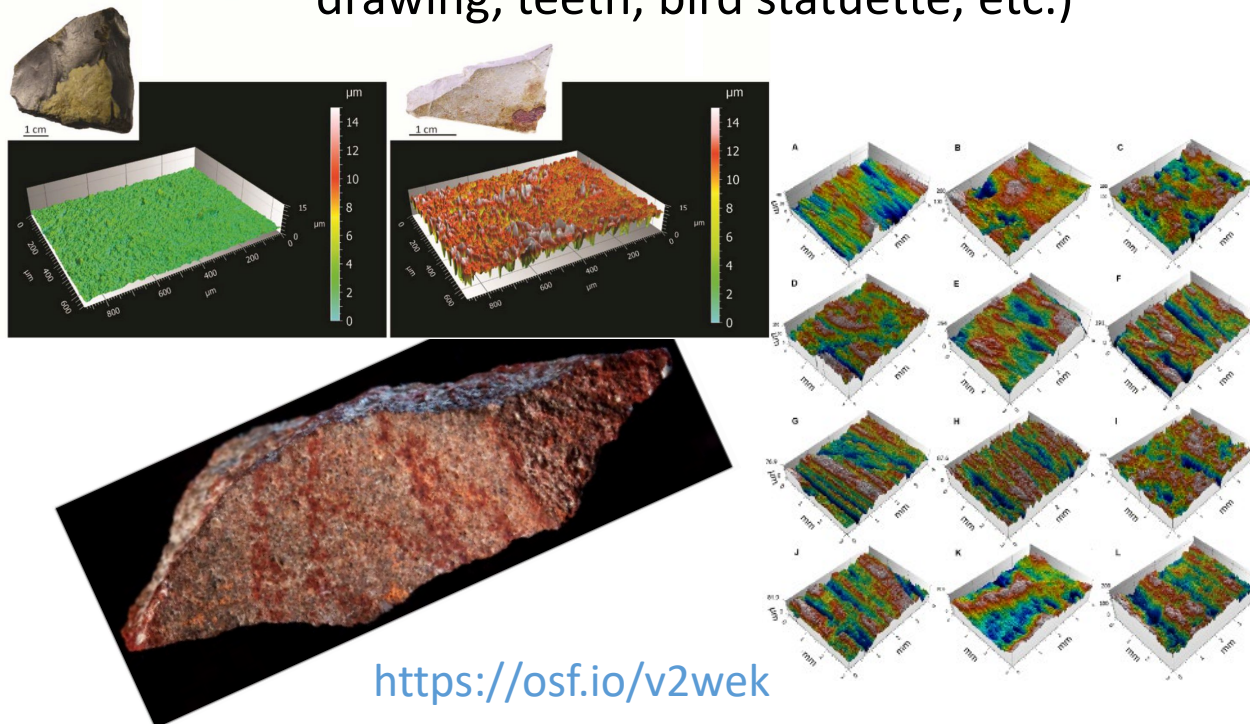
Registered Reports in Archaeology



Use-wear studies, a leader?

Alain QUEFFELEC

- Engineer in Archaeometry (CNRS, Univ. Bordeaux)
(Raman, pXRF, etc.)
- Founder of Peer Community in Archaeology (2020)
- User of confocal microscopy (ochre, flint, old drawing, teeth, bird statuette, etc.)

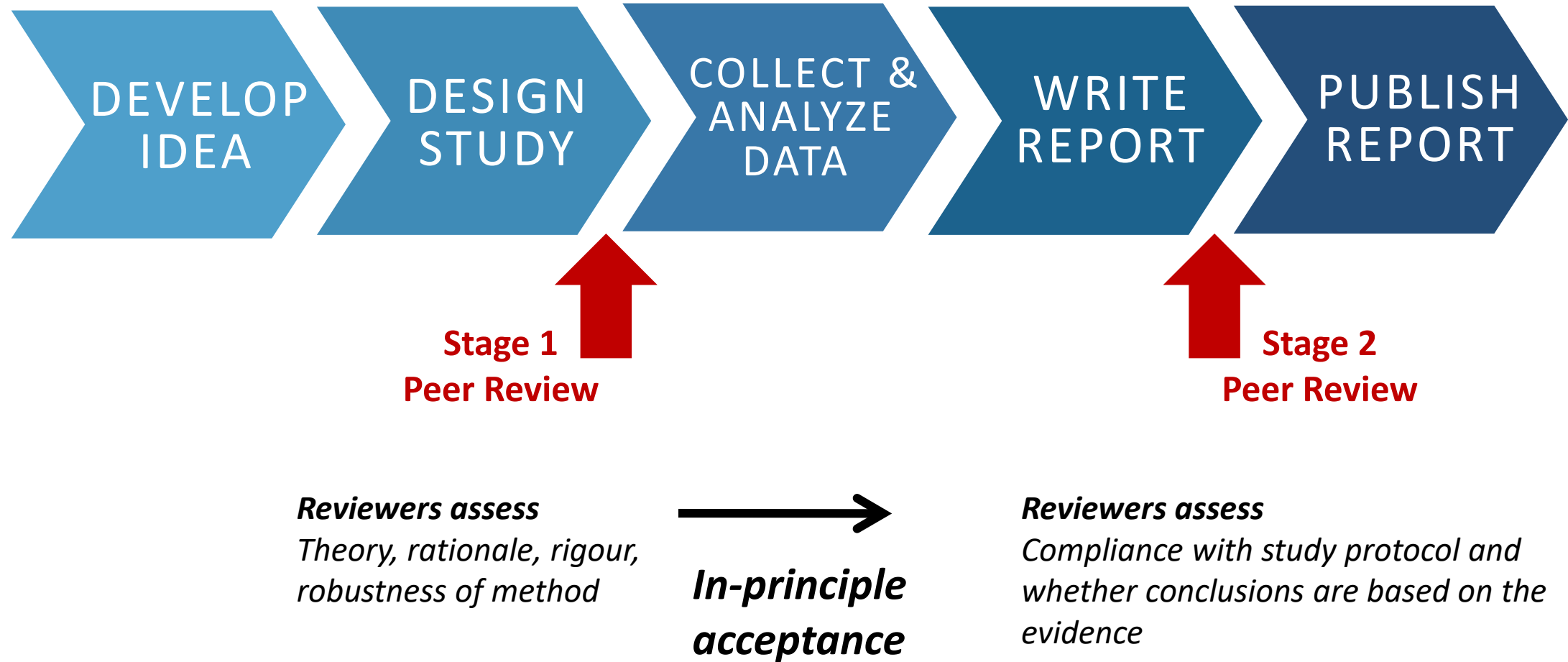


<https://osf.io/v2wek>

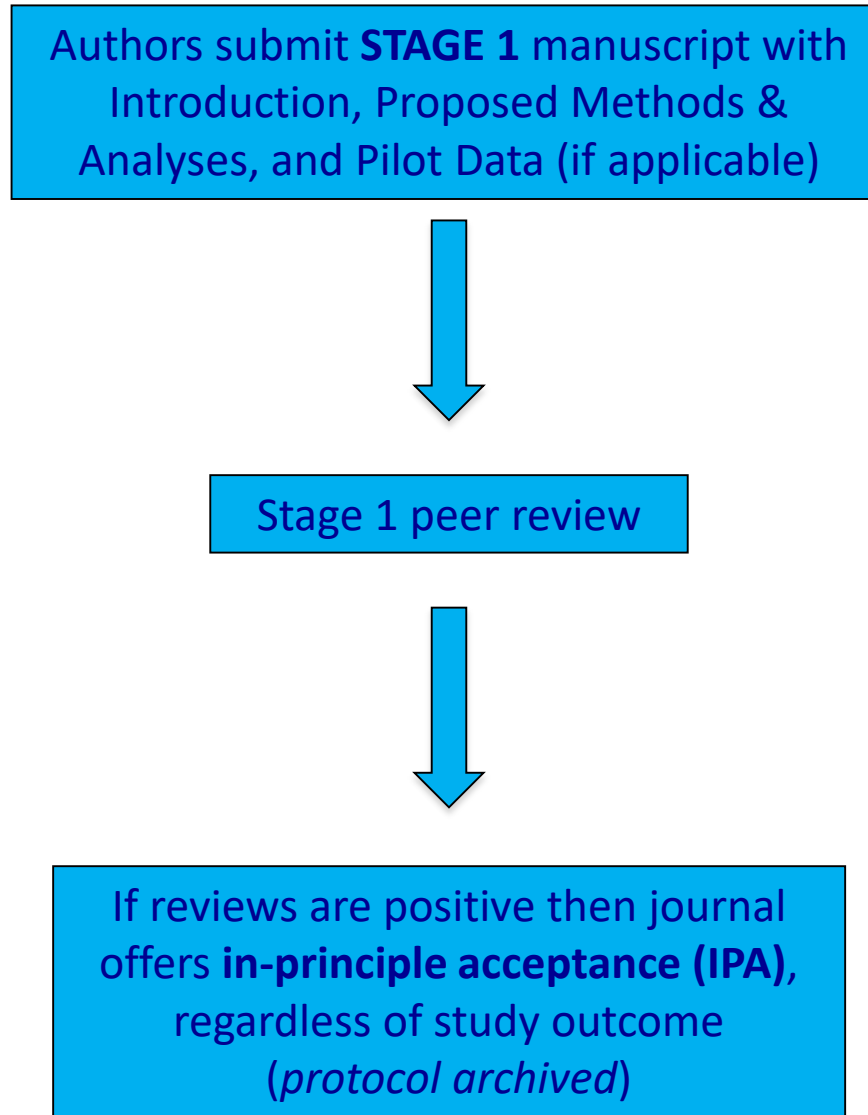
Chris CHAMBERS

- Professor of cognitive neuroscience at Cardiff University
- Co-founder of Registered Reports in 2012/13 and the Peer Community in Registered Reports (2021)
- Registered Reports editor at *Cortex*, *European Journal of Neuroscience*, *Royal Society Open Science*, *BMJ Open Science*, *NeuroImage*, *NeuroImage: Reports*, *PLOS Biology*; Advisory Board for *Nature Human Behaviour*
- Edited >300 Registered Report submissions
- Chair of the Registered Reports Committee supported by the Center for Open Science:
<https://cos.io/rr/>

What are Registered Reports (RR)?

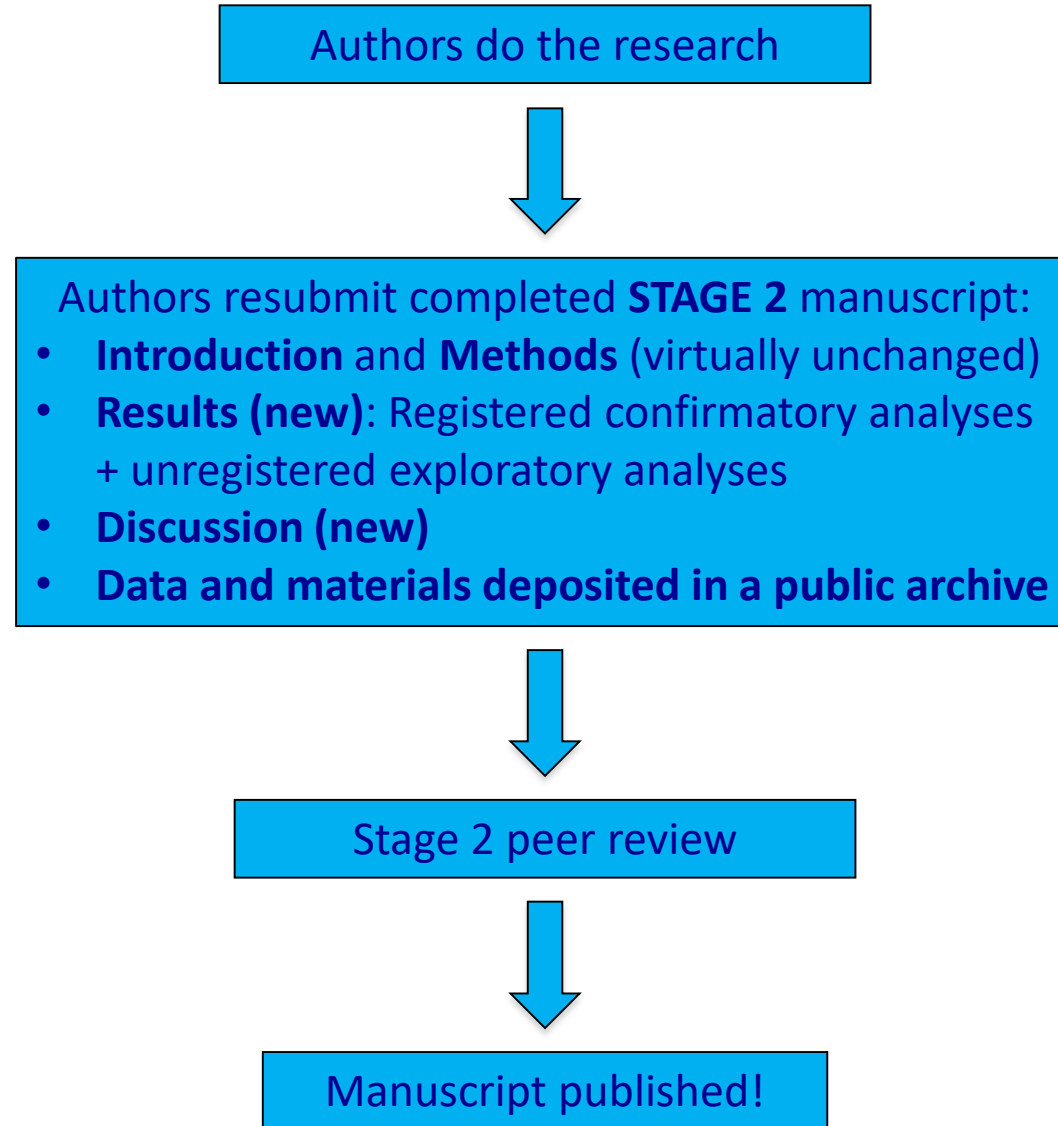


How it works: Stage 1



Reviewers assess importance of research question and rigor of the methodology according to specific criteria

How it works : Stage 2



Reviewers assess compliance with study protocol, whether pre-specified quality checks were passed, and whether conclusions are evidence-based

Advantages of the Registered Reports approach for science

– Reproducible –

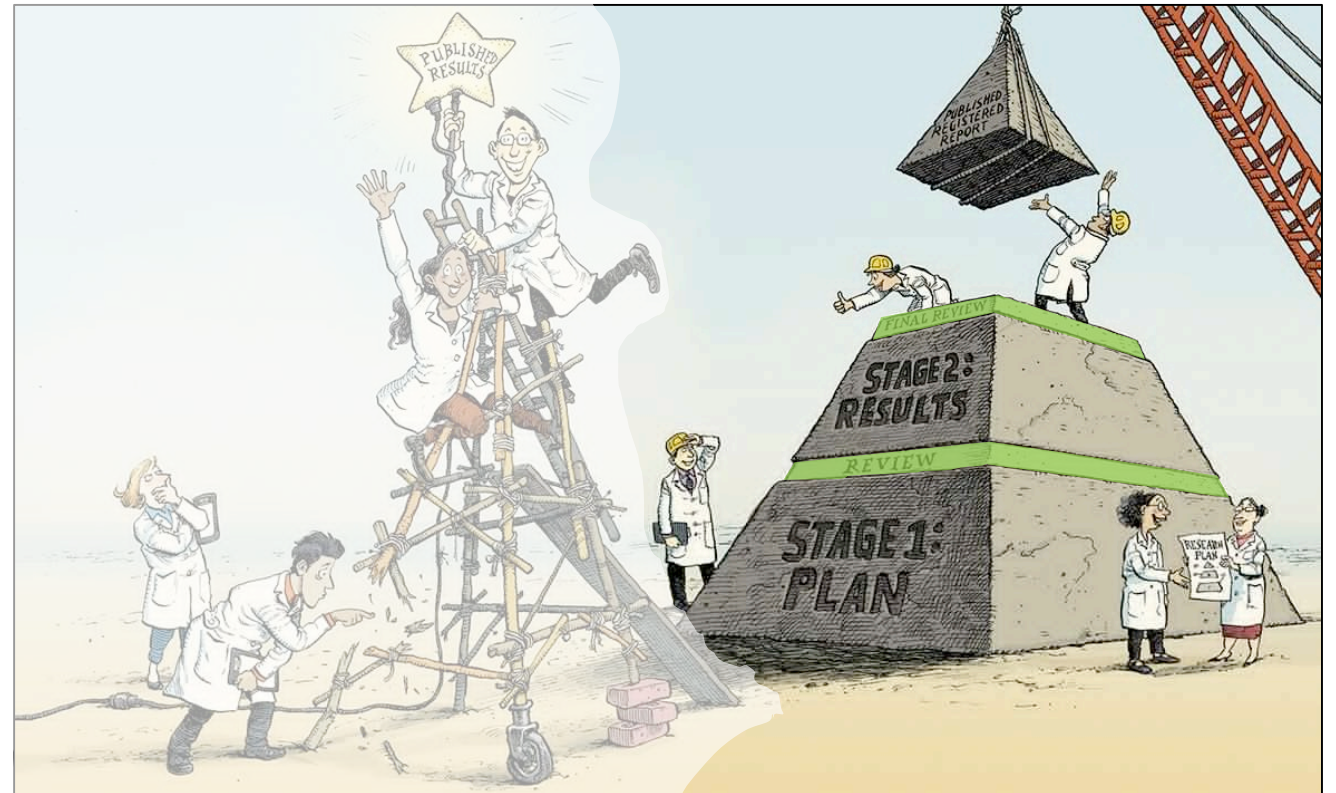
detailed, repeatable methods
high statistical power (2-3x > sample sizes)

– Transparent –

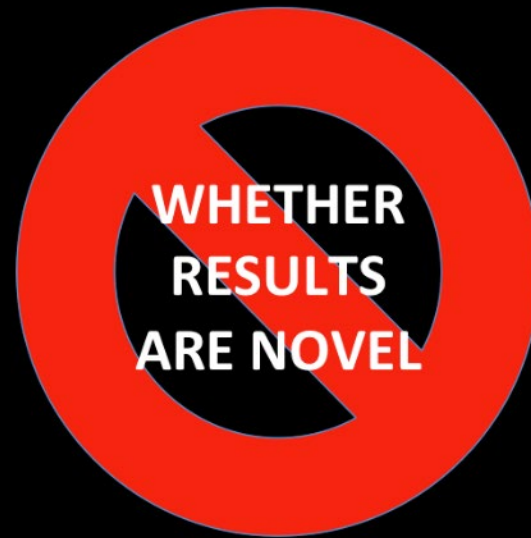
accompanied by open data & materials
outcomes of confirmatory and exploratory
analyses distinguished

– Credible –

no publication bias
no hindsight bias
no selective reporting



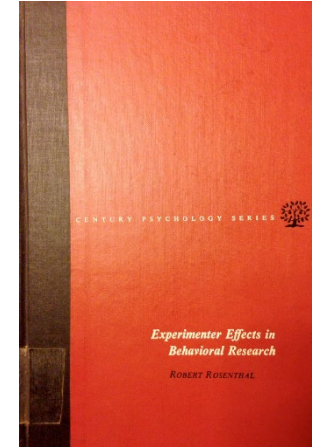
None of these things matter



Where it comes from?

Robert Rosenthal (1966). *Experimenter effects in behavioral research*. New York.

“What we need is a system for evaluating research based only on the procedures employed. If the procedures are judged appropriate, sensible, and sufficiently rigorous to permit conclusions from the results, the research cannot then be judged inconclusive on the basis of the results and rejected by the referees or editors. Whether the procedures were adequate would be judged independently of the outcome.”



A Proposal for a New Editorial Policy in the Social Sciences¹

G. WILLIAM WALSTER and T. ANNE CLEARY
The University of Wisconsin, Madison

“... there's this desert prison, see, with an old prisoner, resigned to his life, and a young one just arrived. The young one talks

A virtual prerequisite for the publication of research in the social sciences is the attainment of statistical

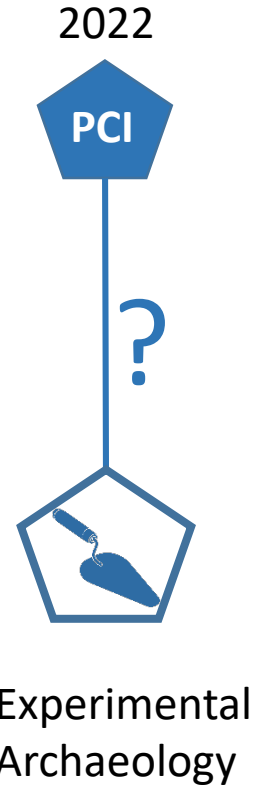
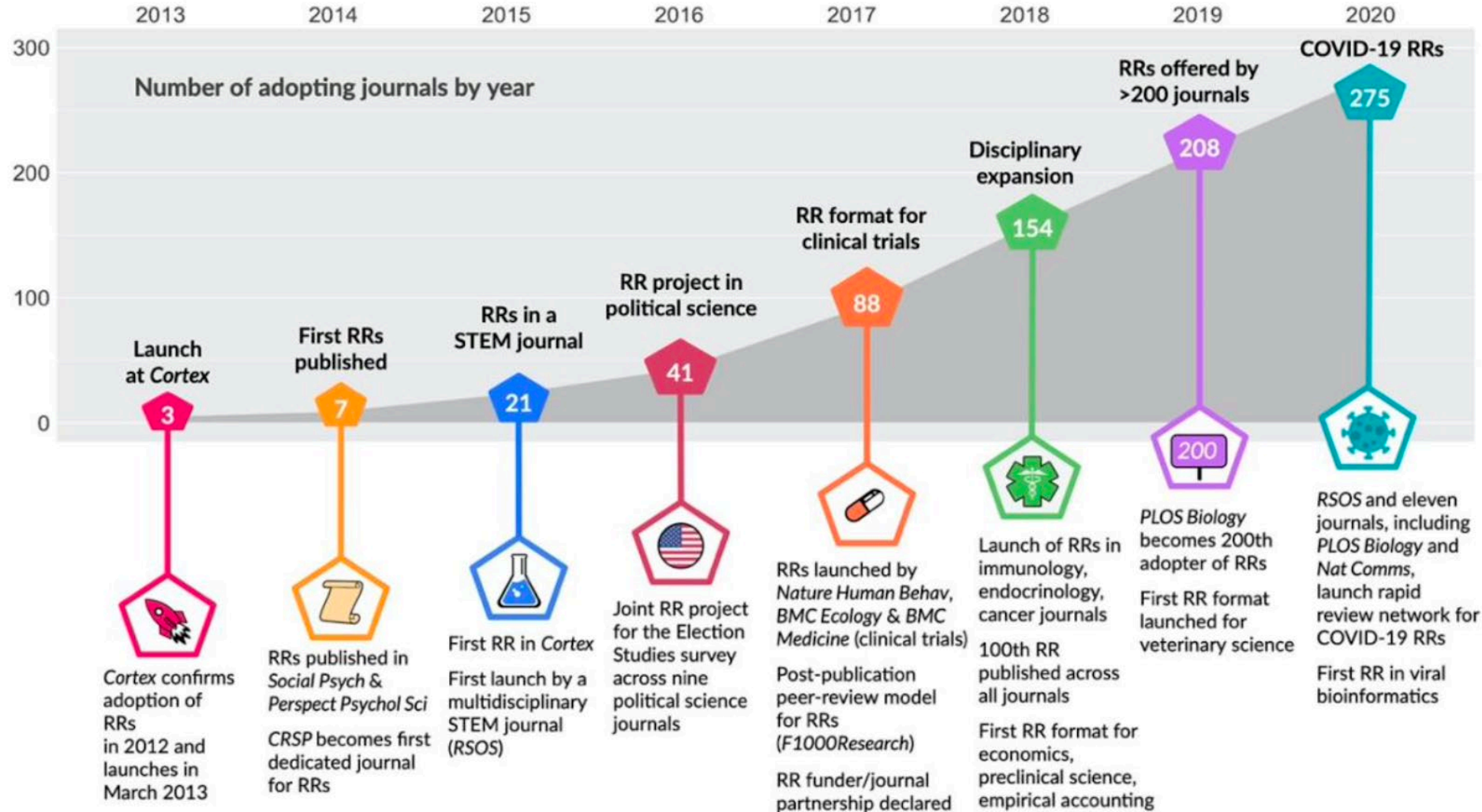
The American Statistician, 1970

Towards a reduction in publication bias

ROBERT G NEWCOMBE

*British Medical Journal, 1987*₁₀

How it developed?



What about archaeology?

***Not all archaeological studies could be
published as Registered Reports***

What about archaeology?

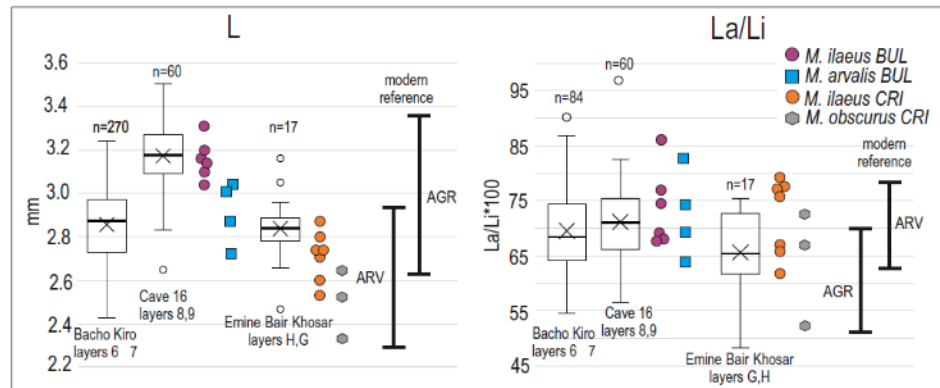
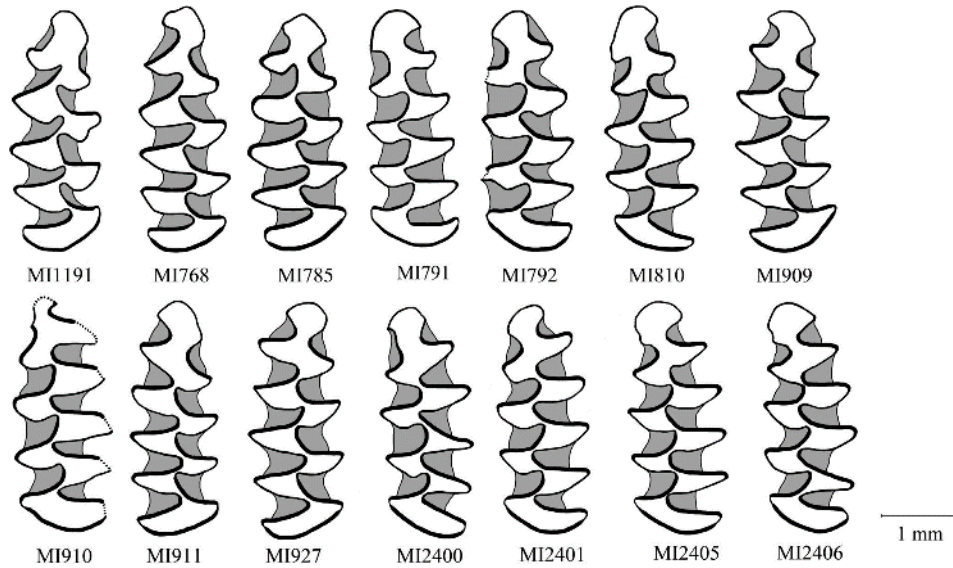
***Not all archaeological studies could be
published as Registered Reports***

Or could they...

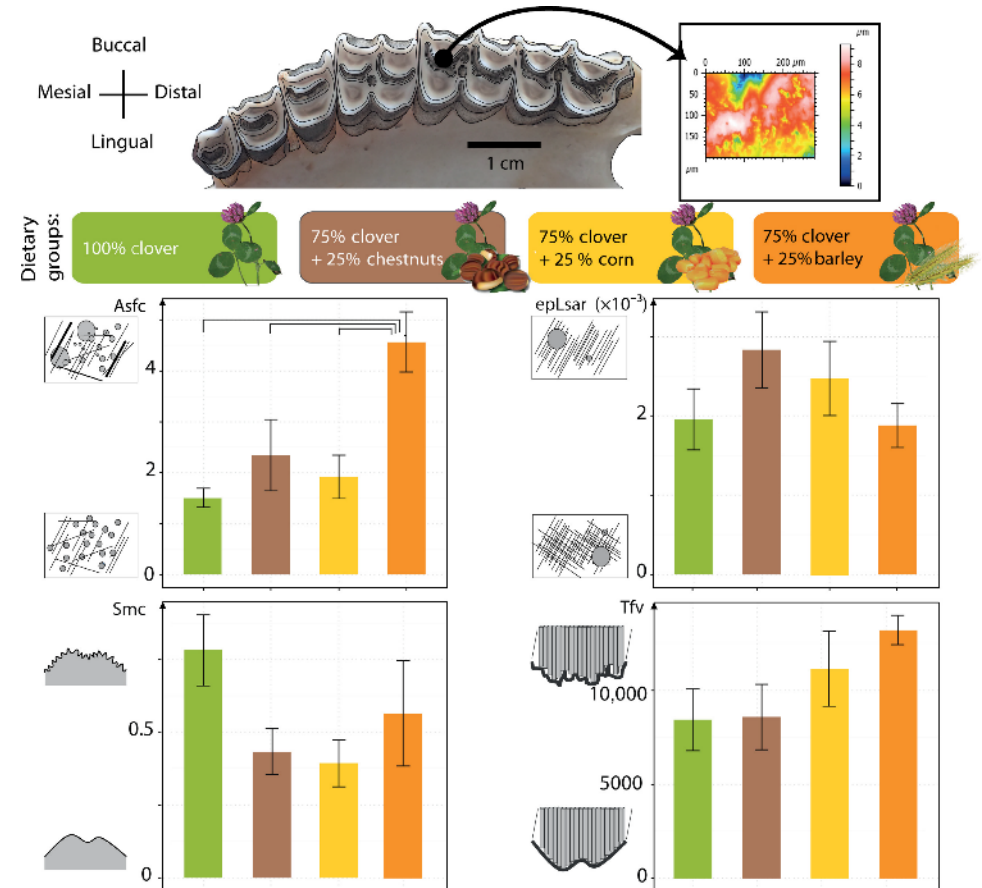
What about archaeology?

Faunal studies

Description of a new taxa of rodent in Pleistocene



Teeth micro-wears study on living animals fed in controlled environment



Ramdarshan et al. 2016

Baca et al. 2021

What about archaeology?

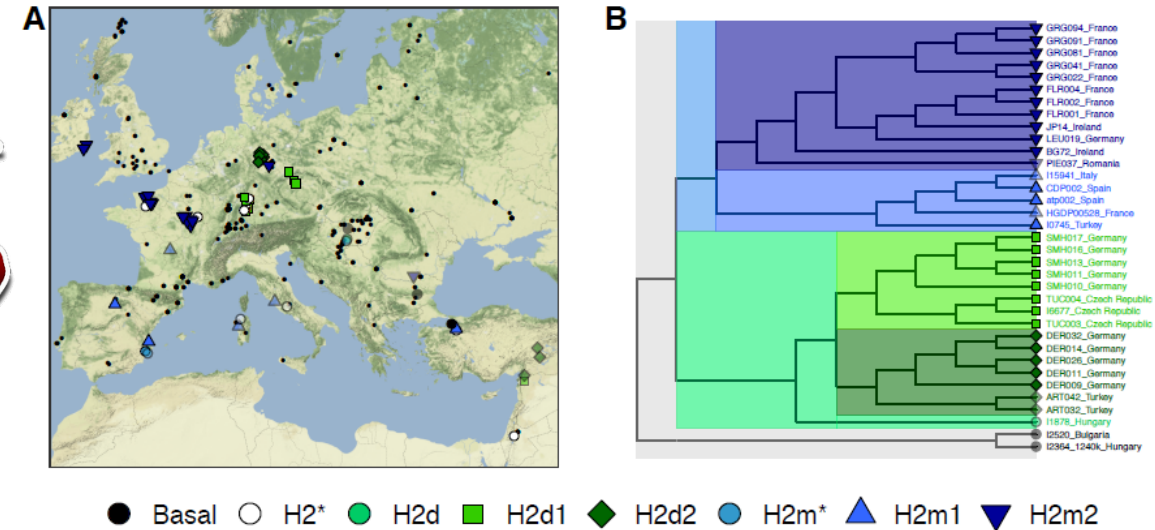
aDNA

New human species from a foot phalanx



aDNA study of migrations based on existing and new aDNA data

VS



What about archaeology?

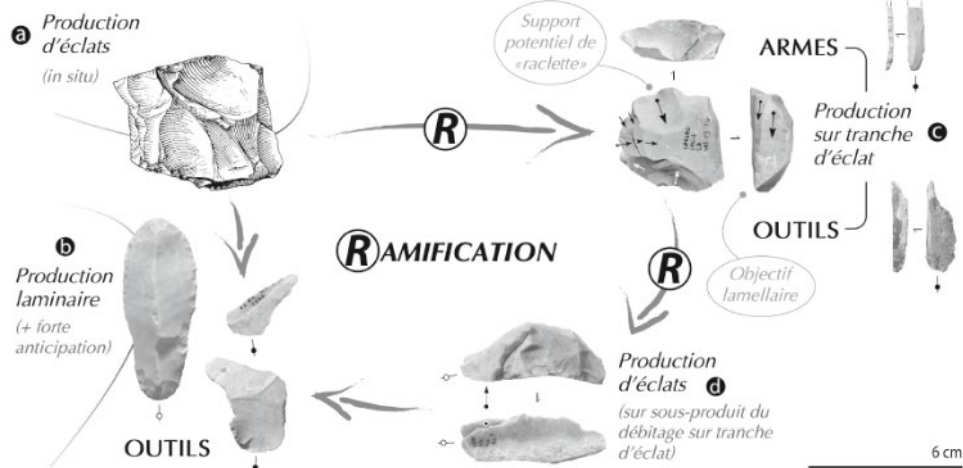
Lithics

Techno-typological description of
a chaîne opératoire

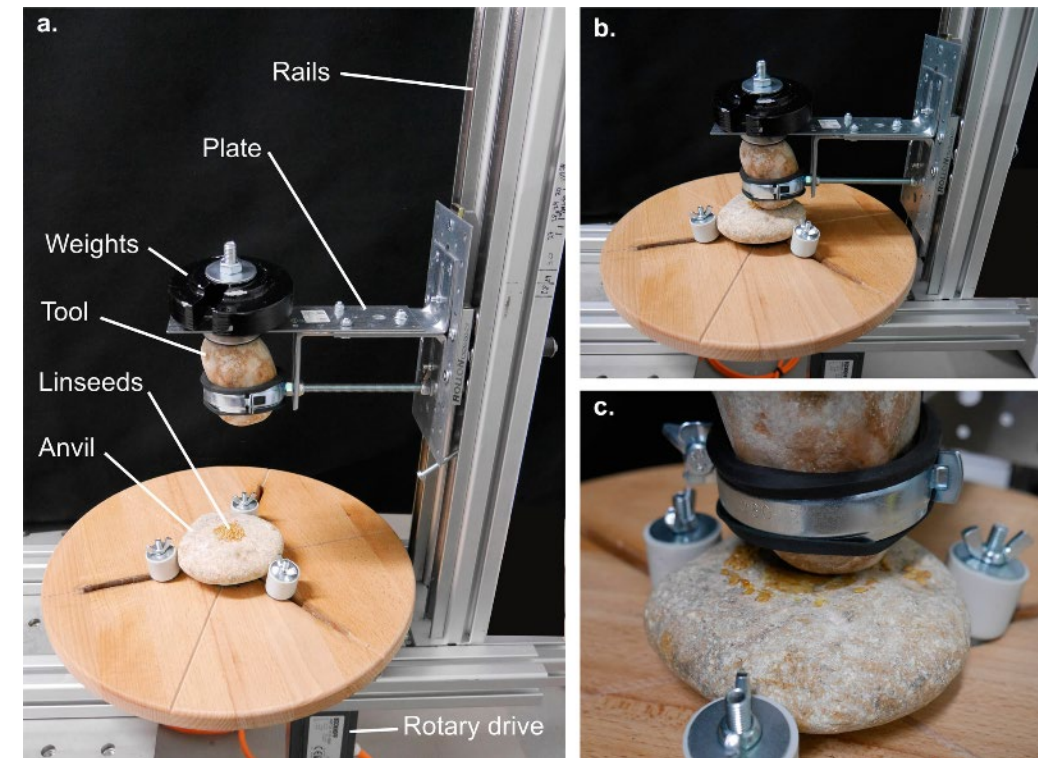
Use-wear studies

BADEGOULIEN - UNE TECHNOLOGIE D'ADAPTATION ET DE VOYAGE

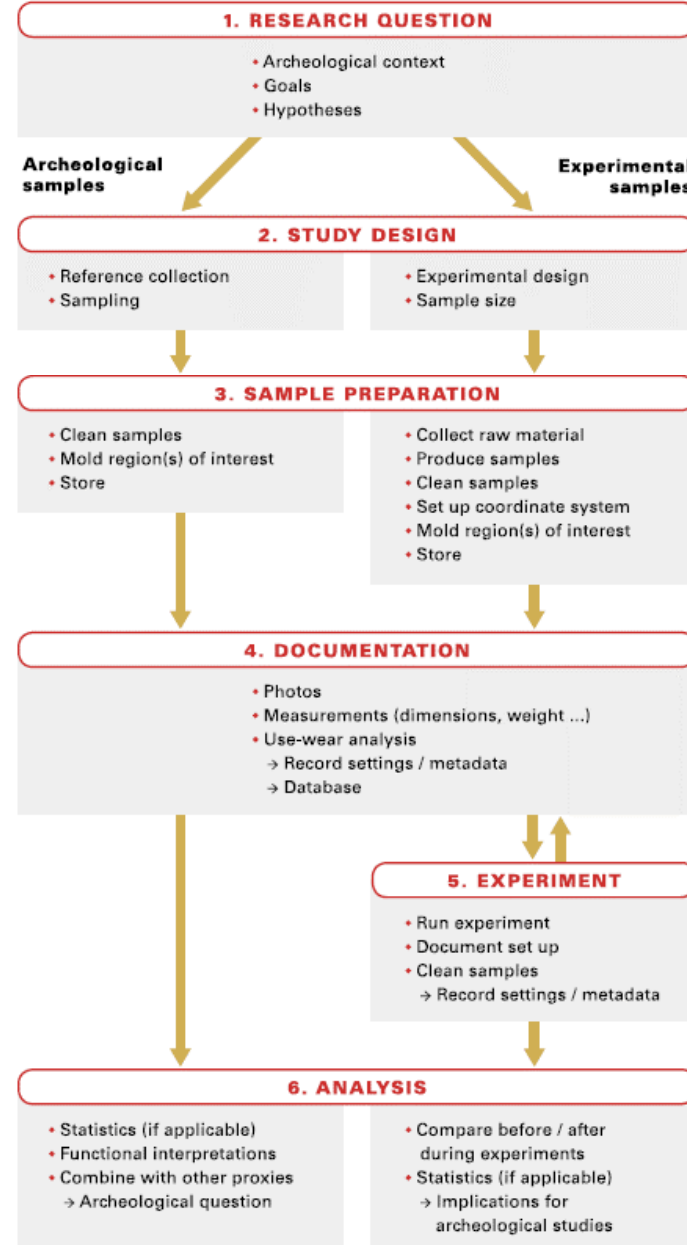
① «Ramification» des chaînes opératoires : imbrication des besoins domestiques et cynégétiques



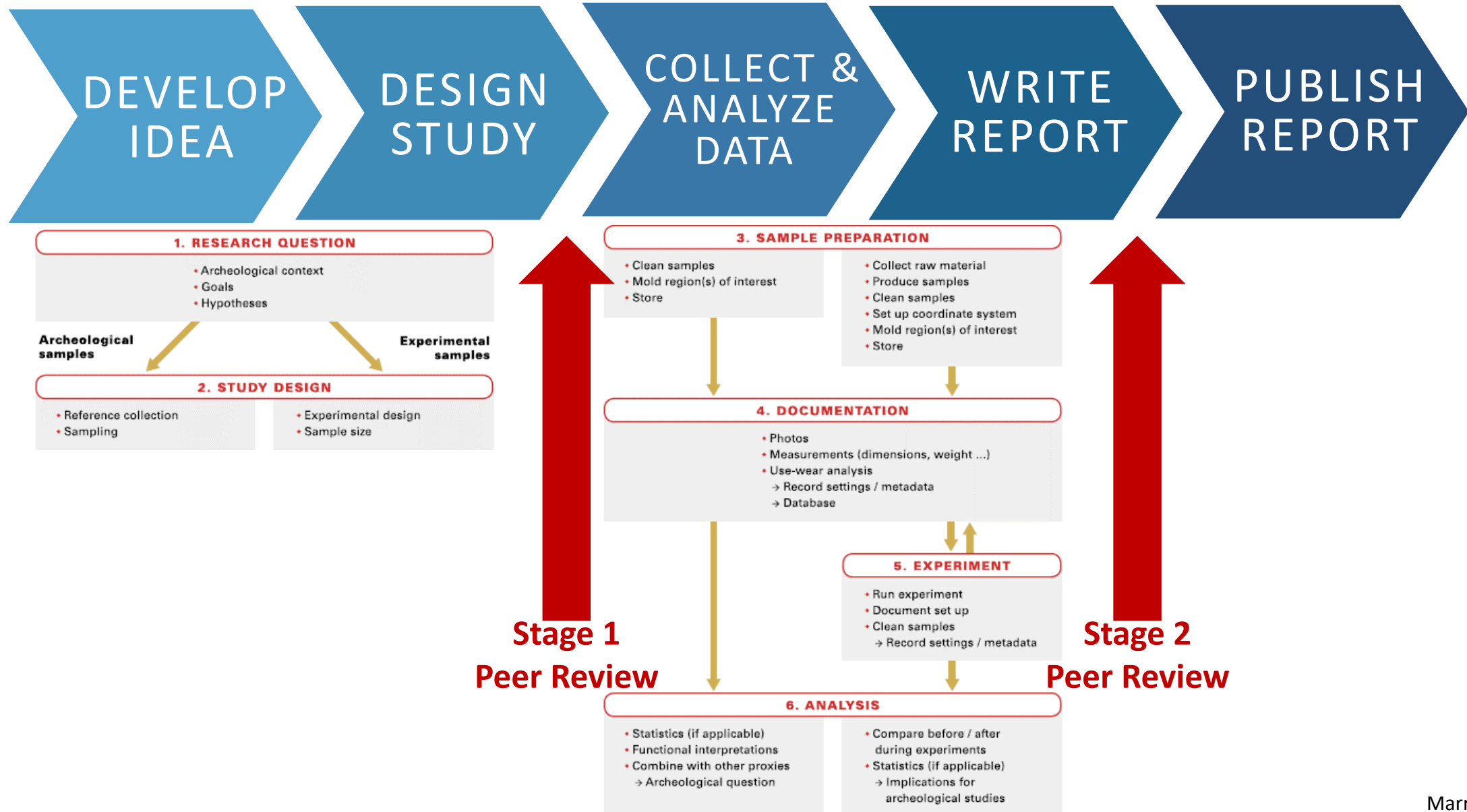
VS



Use-wear studies, the perfect fit?



Use-wear studies, the perfect fit?



Convinced?

*But where can you submit a
Registered Report in Archaeology...*



Peer Community In

Registered
Reports

Free and transparent pre- and post-study
recommendations across research fields

Where to submit RR in Archaeology?



Web: <https://rr.peercommunityin.org/>

Twitter: [@PCI_RegReports](https://twitter.com/PCI_RegReports)

Email: contact@rr.peercommunityin.org



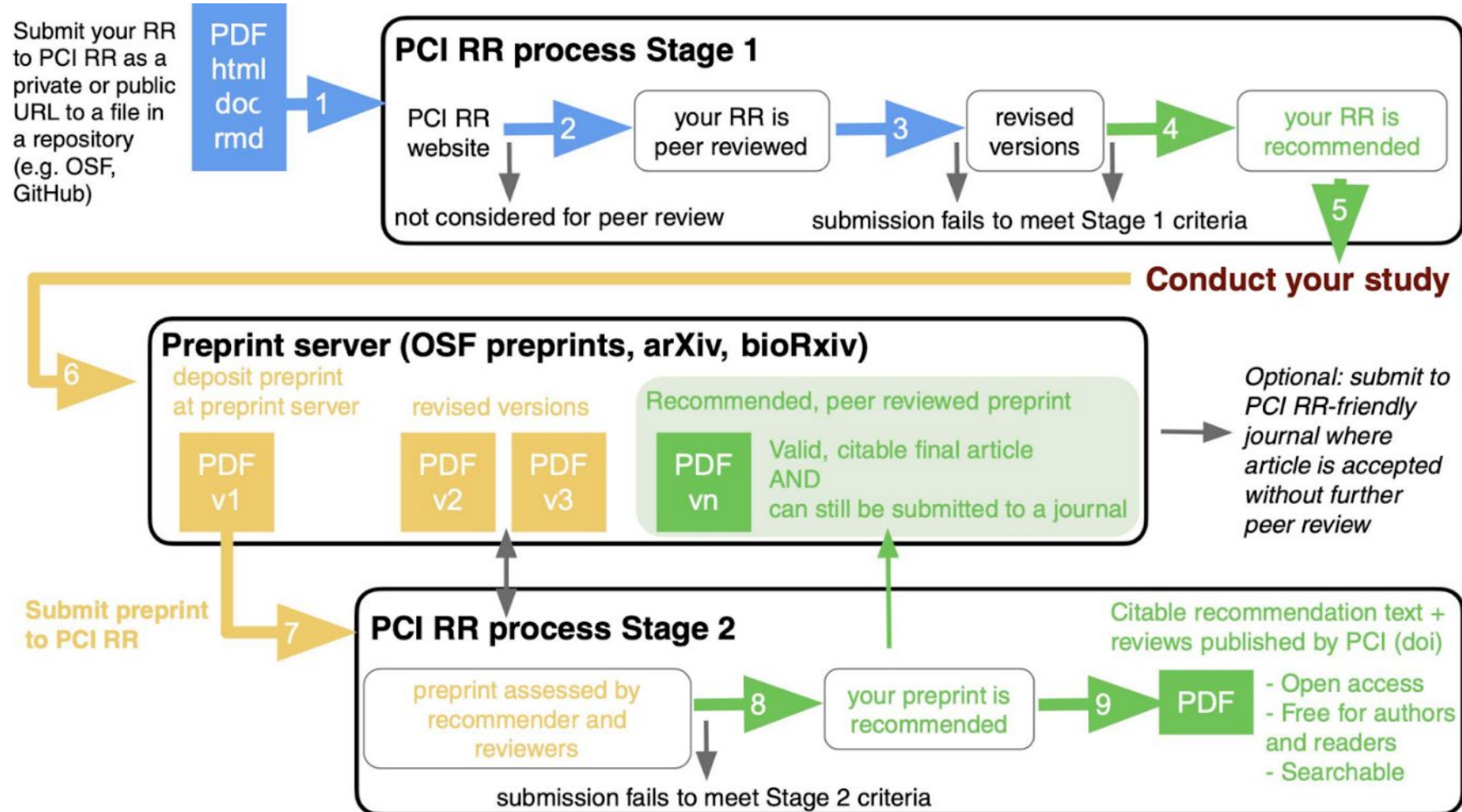
Founders: Corina Logan, Emily Sena, Zoltan Dienes, Chris Chambers, Ben Pujol

- [Peer Community in Registered Reports](https://rr.peercommunityin.org/) (PCI RR) is a free, non-commercial platform dedicated to reviewing and recommending Registered Reports *preprints* across STEM, medicine, the social sciences and humanities
- Once a submission is recommended by PCI RR following peer review, the revised manuscript is posted at the preprint server where the preprint is hosted, and the peer reviews and recommendation are published at the PCI RR website
- Authors then have the option to publish the preprint in a traditional journal, including a growing list of [PCI RR-friendly journals](#) that have committed to accepting PCI RR recommendations *without further peer review*

Where to submit RR in Archaeology?



How it works



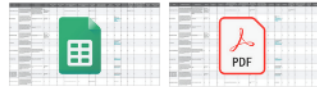
Where to submit RR in Archaeology?



List of PCI RR-friendly journals

There are currently **23** PCI RR-friendly journals. The current list can be viewed in spreadsheet and PDF format, and details of each journal's commitment and eligibility requirements are also listed below.

For open access journals, authors are strongly advised to check the journal website for latest information concerning article processing charges.



Journals interested in becoming PCI RR-friendly can learn more about the requirements [here](#) and can apply to join [here](#).

- [Addiction Research & Theory](#)
- [Advances in Cognitive Psychology](#)
- [BMJ Open Science](#)
- [Brain and Neuroscience Advances](#)
- [Cambridge Educational Research e-Journal](#)
- [Cortex](#)
- [Experimental Psychology](#)
- [F1000Research](#)
- [Infant and Child Development](#)
- [Journal for Reproducibility in Neuroscience](#)
- [Journal of Cognition](#)
- [Meta-Psychology](#)
- [NeuroImage: Reports](#)
- [Peer Community Journal](#)
- [PeerJ](#)
- [PeerJ Computer Science](#)
- [PeerJ Physical Chemistry](#)
- [PeerJ Organic Chemistry](#)
- [PeerJ Inorganic Chemistry](#)
- [PeerJ Analytical Chemistry](#)
- [PeerJ Materials Science](#)
- [Royal Society Open Science](#)
- [Swiss Psychology Open](#)

List of PCI RR-interested journals

Where authors seek to maximise the chances of their manuscript being picked up by a PCI RR-interested journal, we recommend they consult the journal's RR policy to determine what additional conditions may need to be met, over and above the PCI RR review criteria. For instance, some PCI RR-interested journals set a more stringent requirement on pre-planned evidence strength (including prospective statistical power or Bayes factors) while others may only consider RRs where data do not exist prior to in-principle acceptance (in line with [Level 6 of the PCI RR bias-control taxonomy](#)).

The list of PCI RR-interested outlets below includes a link to each journal's RR author guidelines.

- [Affective Science](#) [RR author guidelines TBC]
- [Animal Behavior & Cognition](#) [RR author guidelines]
- [Biolinguistics](#) [RR author guidelines]
- [Collabra: Psychology](#) [RR author guidelines]
- [Nature Human Behaviour](#) [RR author guidelines]
- [PLOS Biology](#) [RR author guidelines]

PCI RR-friendly journals commit to accepting PCI RR recommendations without further peer review. **You, the author, decides which journal gets to publish your Stage 2 RR**

[https://rr.peercommunityin.org/about/pci rr friendly journals](https://rr.peercommunityin.org/about/pci_rr_friendly_journals)

Since April, we have received 25 submissions and have issued 2 x Stage 1 recommendations (IPAs)

We welcome **new recommenders from archaeology** and **new archaeology journals** as PCI RR-friendly

F1000Research

PCJ

PeerJ
Life & Environment

ROYAL SOCIETY
OPEN SCIENCE



Other unique features

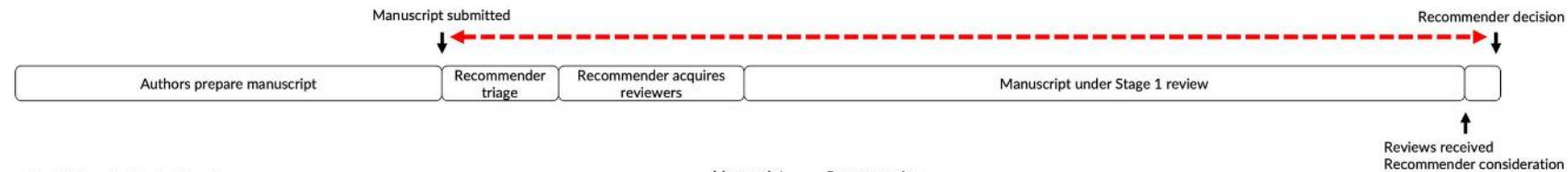
Programmatic RRs: One Stage 1 manuscript leading to multiple Stage 2 outputs

See: https://rr.peercommunityin.org/help/guide_for_authors#h_52492857233251613309610581

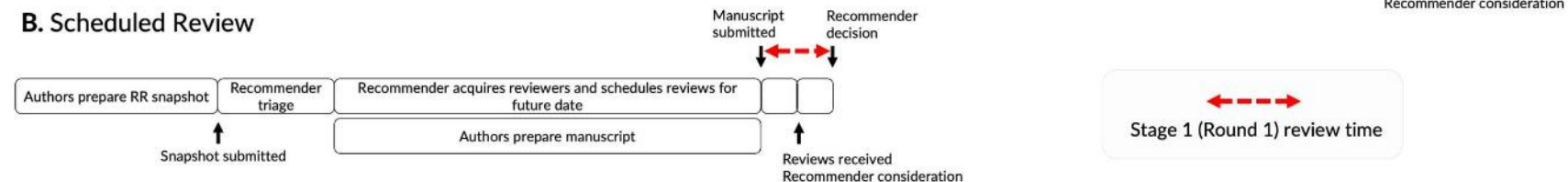
Scheduled Review: Following submission of a one-page Stage 1 “snapshot”, peer review is scheduled in advance so that the Stage 1 review time following full manuscript submission = days rather than weeks

See: https://rr.peercommunityin.org/help/guide_for_authors#h_61998243643551613309672490

A. Standard Review



B. Scheduled Review



Where to submit RR in Archaeology?



What are the benefits of PCI RR?	Regular non-RR article at a traditional journal	RR at a traditional journal	RR at PCI RR
Offers pre-study peer review	✗	✓	✓
Offers in-principle acceptance before results are known	✗	✓	✓
Offers programmatically RRs : one Stage 1 RR leading to multiple Stage 2 manuscripts	✗	✗	✓
Offers scheduled review to accelerate the Stage 1 review process	✗	✗	✓
Requires handling editor (or recommender) to have proven their knowledge of RRs by passing an entrance test, which serves as useful training of a rarely taught skill	✗	✗	✓
Peer review undertaken independently of any journal	✗	✗	✓
Author has the power to decide their destination journal (if any)	✗	Very rare	✓
No need for author to decide on destination journal until after Stage 2 acceptance by PCI RR	✗	Very rare	✓
Peer reviews for accepted manuscripts published online and free to read	✗	Very rare	✓
Free for authors and readers	Depends on journal	Very rare	✓

**OPEN SCIENCE
IS JUST
GOOD SCIENCE**

J. Tennant †

WHAT DO WE NEED FOR GOOD SCIENCE?



FREE



2X PEER-REVIEWED



OPEN



REPRODUCIBLE



OPEN SCIENCE IS JUST GOOD SCIENCE



Thank you for your attention

These slides are available at <https://osf.io/6ehfq/>

<https://rr.peercommunityin.org/>
<https://archaeo.peercommunityin.org/>



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@PCI_Archaeology