



Open, community-led peer review through preprints

Session II

Open Reviewers Workshop

May 7, 2026

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Technical Guidelines

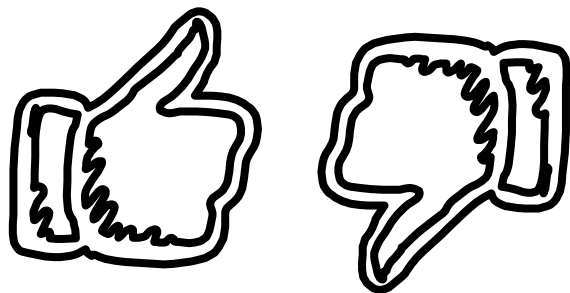


- Stay muted unless speaking to cut down on background noise
- Ask questions at any time by using the raise hand function and unmuting or typing in the chat
- Try to speak slowly and clearly
- Captions are available (CC button)
- Please keep camera on if you are able, particularly in breakout rooms, to aid understanding and break down barriers
- Use reactions to share what you are thinking or feeling (smiley face button)



PREVIEW

Group Agreements



- Please add your name and pronouns to the roll call in the Google doc
- This workshop follows the **Chatham House Rule**, meaning anyone here is free to use information from the discussion, but is not allowed to reveal who made any particular comment (no AI bots allowed)
- Please feel free to eat, stretch, move, step away as you need to
- Try to make space and time for others who may be less comfortable talking than you
- Be open to, curious about and respectful of different opinions and experiences

Code of Conduct

We are committed to fostering learning in a space where everyone is and feels safe. We expect everyone to abide by [PREreview Code of Conduct](#). Expected behaviors from all participants include:

- Using welcoming and inclusive language;
- Providing feedback that is constructive, *i.e.*, useful to the receiver;
- Being respectful of differing viewpoints and experiences;
- Gracefully accepting constructive criticism;
- Showing empathy towards other participants and community members.

If you feel uncomfortable or unwelcomed at any point during this meeting, please send an email to report@prereview.org in confidence OR report via the [Code of Conduct Incident Report Form](#). All reports will be handled with discretion by PREreview's Safety Team.

Learning Objectives

Session I

After this session you will have gained:

- A general understanding of the current peer-review ecosystem: how it works and what can be improved
- Knowledge of Open Peer Review - the different models, the benefits, and the challenges
- An introduction to open peer review platforms including who we are at PRereview

Session II (today)

After this session you will have gained:

- An understanding of how systems of oppression manifest in peer review
- An introduction to strategies to self-assess and mitigate bias in the context of manuscript review
- An overview of how to peer review a manuscript in a way that minimizes bias, striving for constructive, clear, and actionable feedback



OpenCon 2016 - Washington DC



I describe how the Open Science movement that was founded to reform science often recycles the same extractive dynamics of neoliberal capitalism described by dependency theory. I show that even when the Global South gains representation at the table of Open Science, they are never allowed to rewrite the rules of the game.

–Dr. Batool Almarzouq

[Rethinking Open Science Through Dependency Theory](#), Science For The People

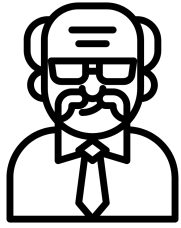


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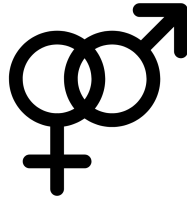
Open Science doesn't erase systemic oppression



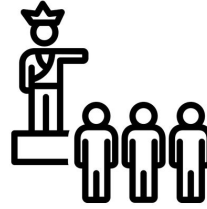
Image from pixabay.com 2016 CC0



Patriarchy



Heteronormativity



Colonialism

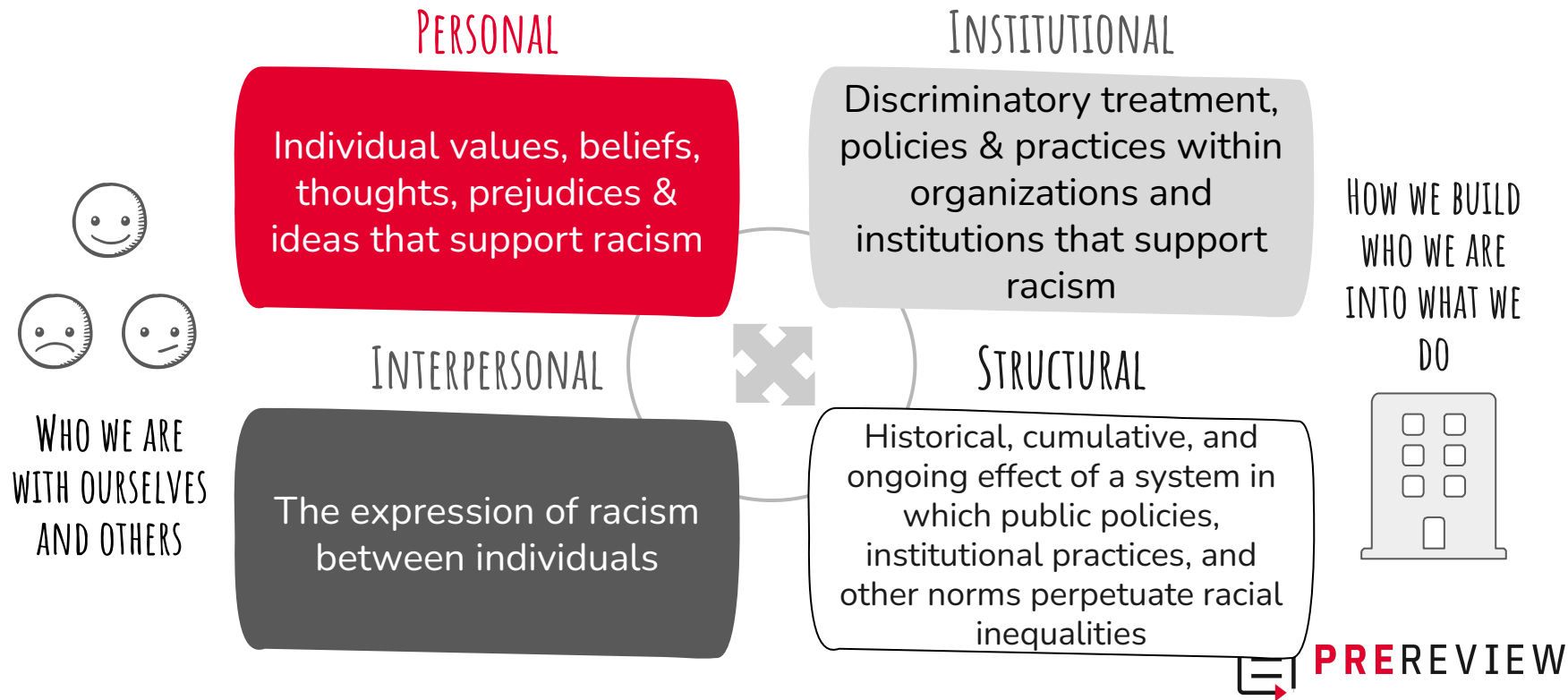


Capitalism

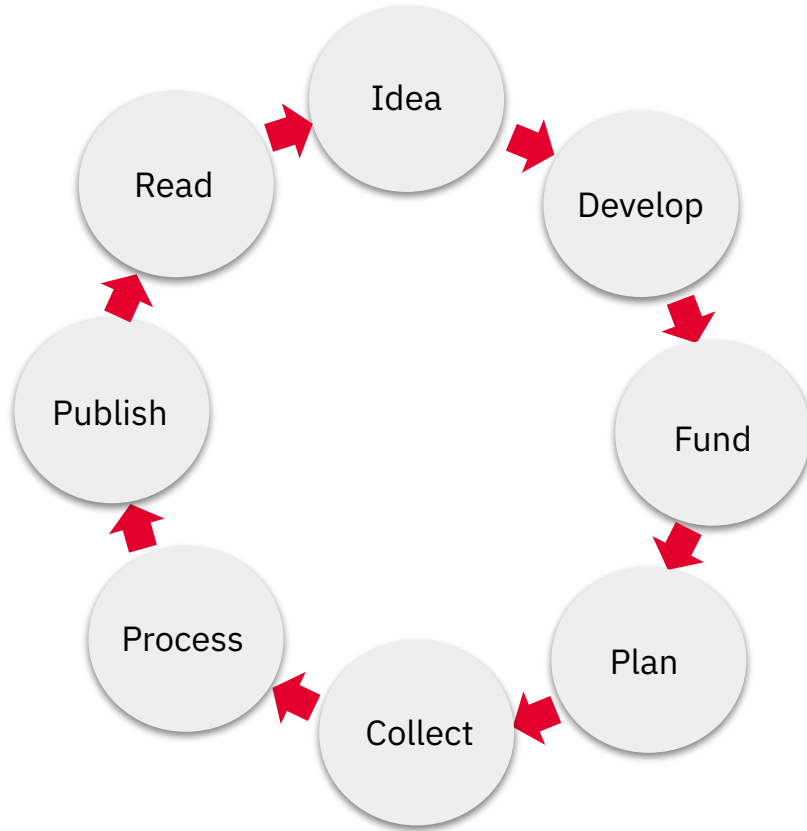
Systems of Oppression

Discriminatory institutions, structures, norms, policies, and practices embedded into our society used to oppress groups of people.

The anatomy of systemic oppression: The **system of racism**

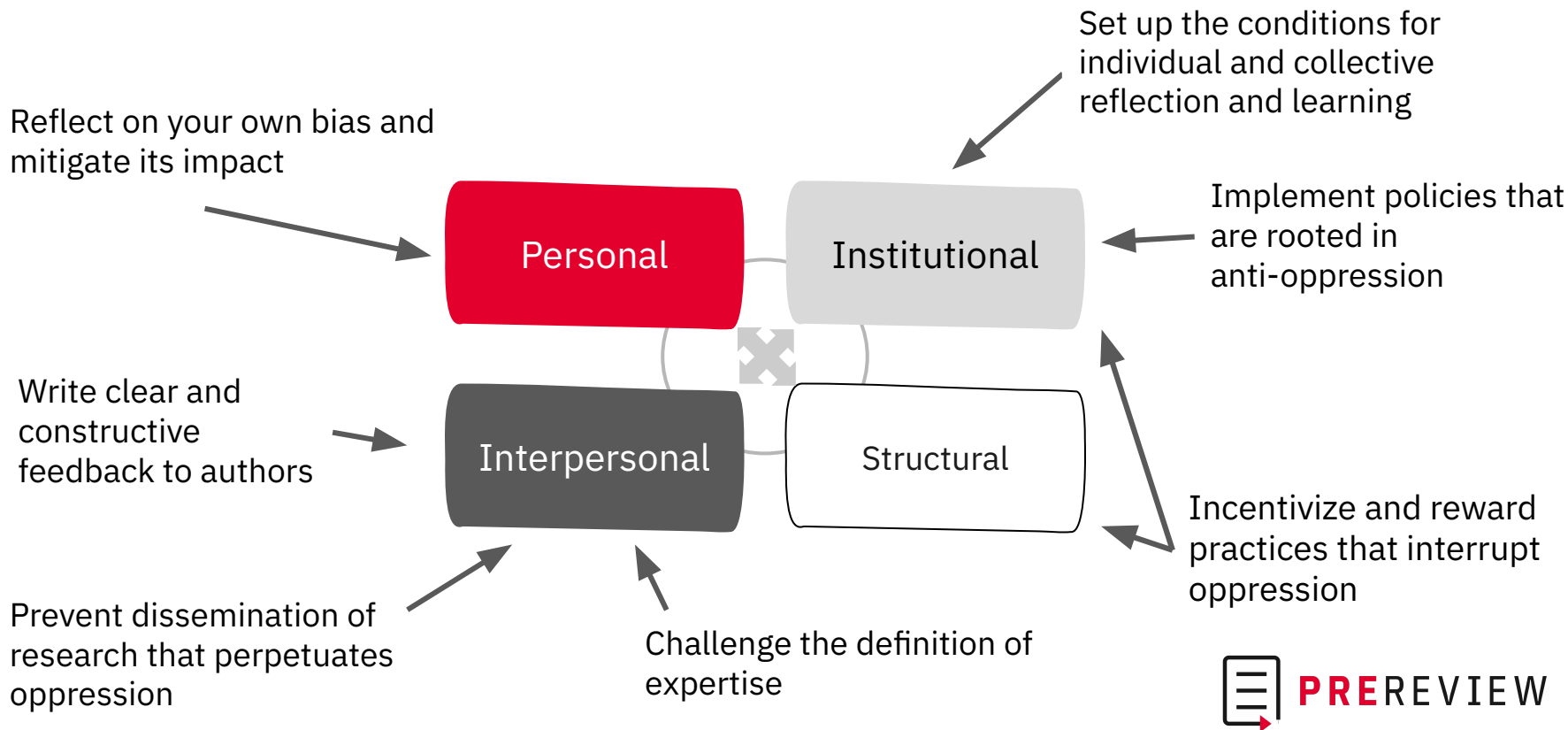


Our understanding of the world informs our research



- The questions we ask
- How we design the study
- Who we allow to participate
- How we collect materials/data
- How we interpret the results
- Who we cite
- How/where we publish
- Who gets to disseminate knowledge

How do we **interrupt oppression** in peer review?



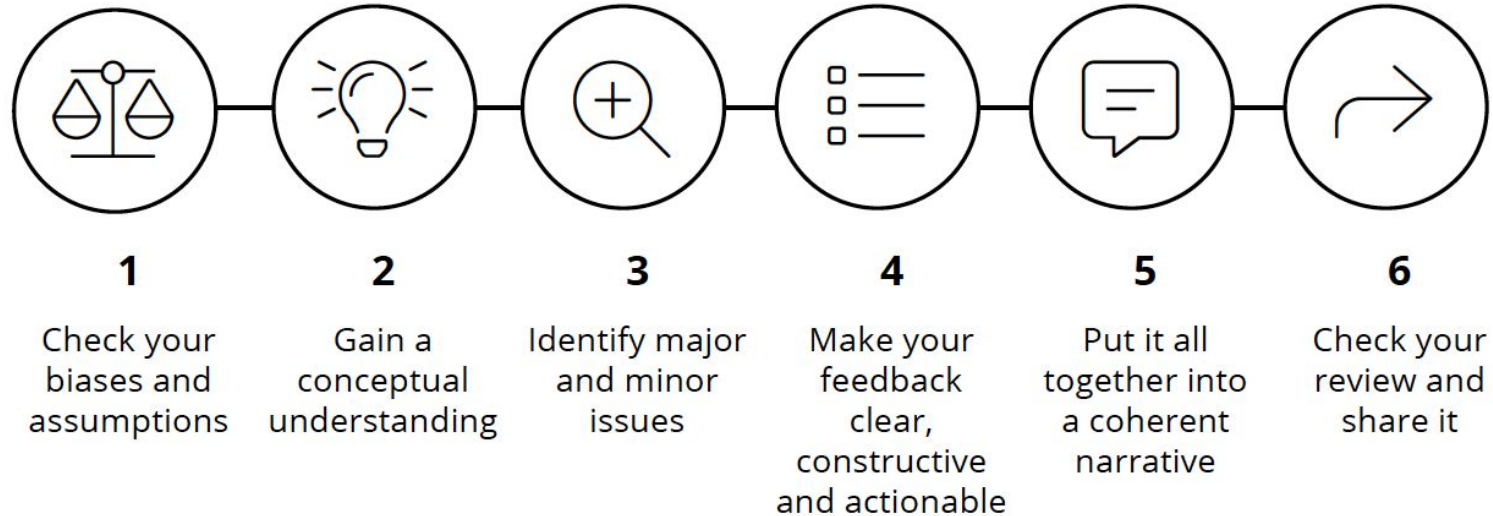
Open Reviewers Toolkit



prereview.org/resources

- [Reviewer Guide](#)
- [Bias Reflection Guide](#)
- [Review Assessment Rubric](#)

Writing a review **step-by-step**

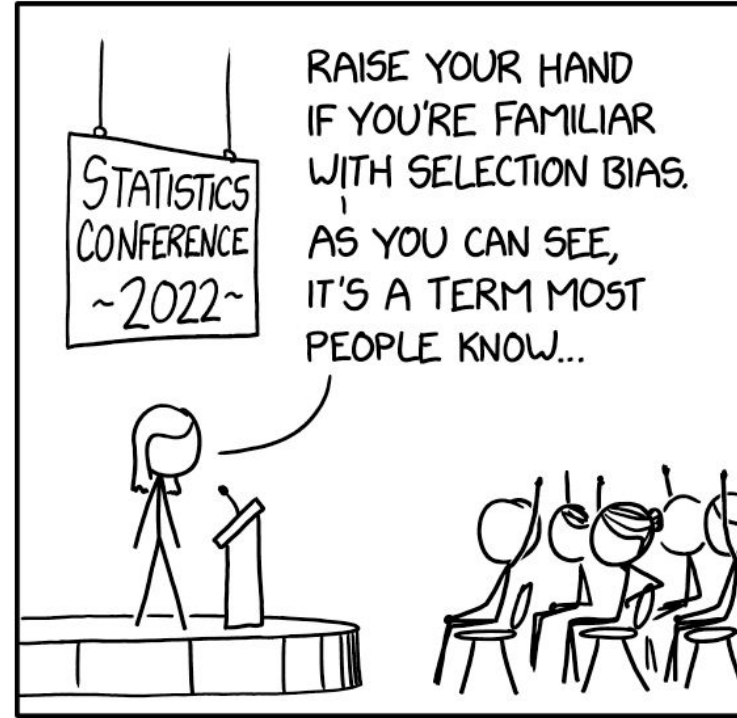


Source: Foster, Antoinette, Hindle, Samantha, Murphy, Katrina M., & Saderi, Daniela. (2021). **Open Reviewers Reviewer Guide**. Zenodo. <https://doi.org/10.5281/zenodo.5484086>

What is Bias?

Bias is a disproportionate weight in favor of or against an idea or thing, usually in a way that is closed-minded, prejudicial, or unfair.

—[Wikipedia](#)



Source: <https://xkcd.com/2618/> - CC BY-NC 2.5

An iceberg diagram with a horizontal line representing the water surface. The tip of the iceberg, above the line, is outlined in black. The much larger submerged part of the iceberg, below the line, is outlined in white. This visual metaphor represents the relationship between explicit and implicit bias.

EXPLICIT BIAS

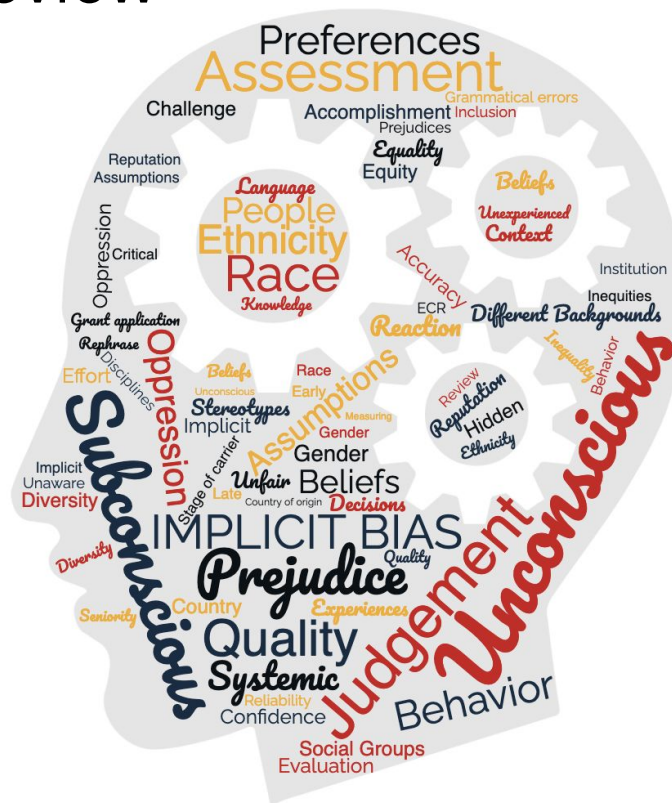
A prejudice that turns into an action that is conscious, it occurs within our perceptive awareness

IMPLICIT BIAS

A prejudice that turns into an action that is unconscious, it occurs outside our perceptive awareness

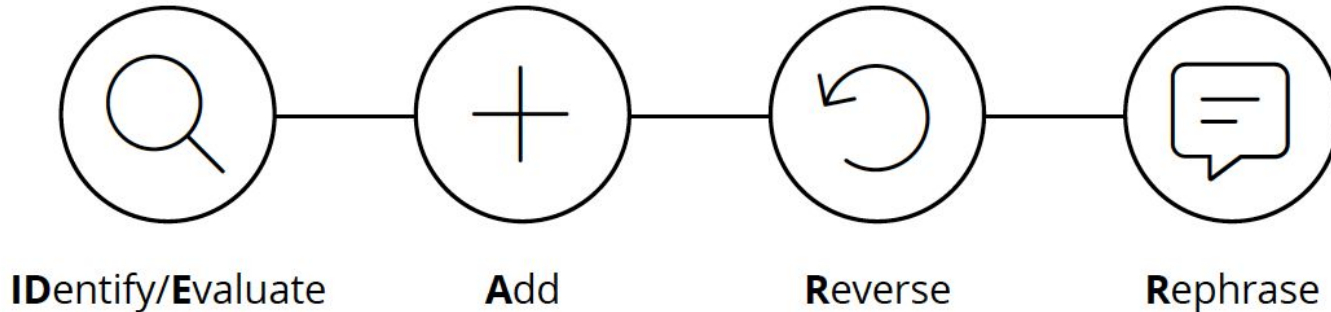
Some examples of “bias” in peer review

- ◉ Reputation
- ◉ Ethnicity & race
- ◉ Gender
- ◉ Primary language and writing style
- ◉ Reputation of author's institution
- ◉ Country of origin of author's institution
- ◉ Number of authors on the manuscript
- ◉ Scholarly record & career stage



STEP 1: Reflect on personal bias

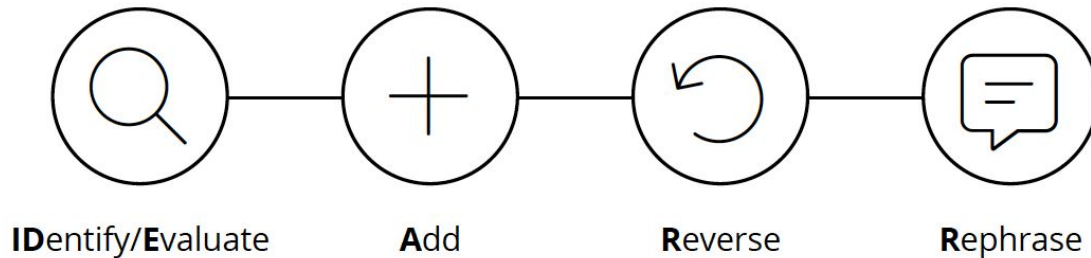
IDEA-R2



Source: Foster, Antoinette, Hindle, Samantha, Murphy, Katrina M., & Saderi, Daniela. (2021). Open Reviewers Bias Reflection Guide. Zenodo. <https://doi.org/10.5281/zenodo.5484051>

Example of a “biased statement”

The senior author is at a late stage of their career and therefore is likely to be very experienced. Knowing this helps me feel more confident in the accuracy and reliability of the data and conclusions.





Identify

Why do the author's years of experience lead me to believe that the anticipated results and impact of the research are more trustworthy?

I know this author is renowned in my field, so I think they probably do good science. They wouldn't let "bad science" come from their lab. Therefore, I think this work is trustworthy.



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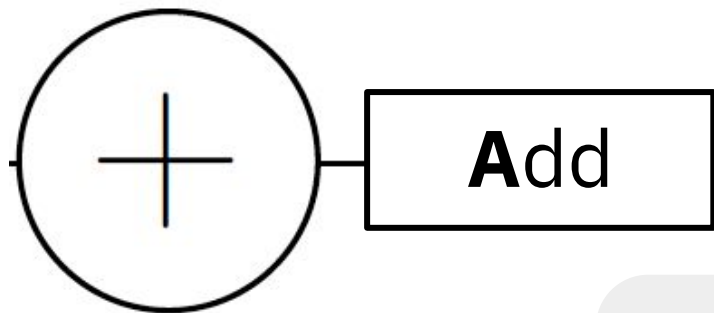
Evaluate

Is this logical? Is there a rationale that supports the notion that experience = trust in the quality of the work?

Their years of experience and them having gained the “respect” of the community may indicate that this study is likely good.

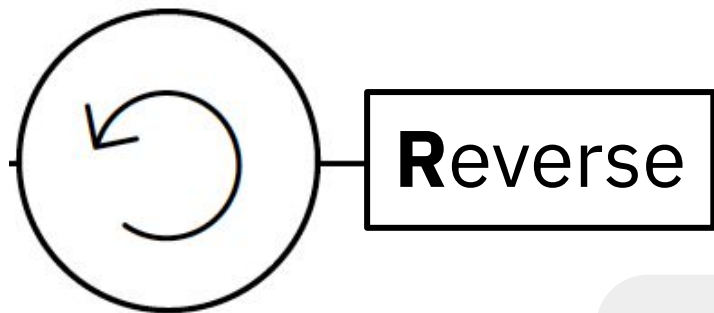


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Is this **always** true? Let's place "always", "guarantee", or "never" into the statement.

The author is at a late stage of their career and therefore experience means their research is **always** trustworthy, accurate, and reliable.



Are there situations I can think of in which the years of experience would not influence the quality of this manuscript?

The senior author may not have had time to revise the work, or this may be an unfamiliar technique so they don't have experience with how best to analyze these data.



Rephrase

Although the author's experience and recognition in the field may correlate with sound and rigorous experiments, data analysis, and conclusions, it is not something I can take for granted. There are many factors that could influence a manuscript's need for revision. I should remember that experience does not necessarily mean that the work is not questionable or that I can be quicker at evaluating the rigor of the work.



PREREVIEW



Activity: The IDEA-R2 Method in practice



Prompt belief: The country in which the authors' research institute is located makes me feel confident in the accuracy and reliability of the study.



Write in our shared Google doc



PREREVIEW



GROUP DISCUSSION



5-MIN BREAK



PREREVIEW

STEP 2: Gain a Conceptual Understanding

- In your **first read-through** of the manuscript, try to avoid evaluating and instead **focus on *understanding***
- Evaluative/judgmental thoughts will inevitably pop up, but understanding *before* evaluating can help us **mitigate the impact of our personal biases**
- **Write down questions and evaluative thoughts** so you can focus on what the authors are trying to communicate and come back to them later

**The goal during this step is not to look for flaws,
but to understand the content.**



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STEP 3: Evaluate, Appreciate, Raise Concerns

- ◉ In your **second read-through**, you can begin identifying:
 - ◉ **Positive aspects** of the research, as well as
 - ◉ **Concerns** you may have about the project goals, the research question, the approach, methods, the results, data visualizations, figures and tables, etc.
- ◉ Highlight them and/or write them down to help you organize these notes later.

Major concerns (issues)



Minor concerns (issues)

Points the authors need to address before the manuscript is recommended for journal publication. Concerns that if left unaddressed could compromise the interpretation of the study.

Concerns that the authors should consider addressing to improve readability and general comprehension of the manuscript. Concerns that if left unaddressed would not affect the interpretation of the study.

Examples of **major** concerns

- ◉ Unethical approach to research question, data collection and/or analysis
- ◉ Conclusions that are not supported by the data
- ◉ Contradictory conclusions
- ◉ Not accounting for and/or not appropriate discussion of study limitations and major confounding variables that can affect the results
- ◉ Issues with experimental design, including insufficient sample size or data, improper controls, inappropriate methodology, and/or statistical analyses

Examples of **minor** concerns

- Technical clarifications (e.g., the authors should clarify how a reagent works)
- Data presentation/visualization
- Typos, spelling, grammar, and phrasing issues*
- Missing/wrong references/citations

*While it may be tempting to focus on grammatical errors, sentence structure, and choice of words, remember that you are not a copy editor and **poor spelling and/or grammar ≠ poor research quality**

About reviewing citations

- ◉ **Whose voices** are represented? **Whose work** is cited?
- ◉ As reviewers, we cannot recommend a diverse citation if our library, our knowledge isn't “diverse”
 - This is a tool we can use to evaluate our own citation practices [Okune, Angela. \(2019\). Self-Review of Citational Practice. Zenodo](#)

STEP 4: Give **clear**, **constructive** and **actionable** feedback



CLEAR feedback is more likely to be interpreted correctly



CONSTRUCTIVE feedback is more likely to be well-received



ACTIONABLE feedback is more likely to be integrated

Concern: Inappropriate statistical method

UNCLEAR, DESTRUCTIVE,
NON ACTIONABLE

"The authors should go back to statistics 101."

🚩 Here the reviewer is attacking the author at a personal level and insulting their education, which is not only offensive and unprofessional, but it is also useless to the authors as it does not provide a way to improve the study.

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CLEAR, CONSTRUCTIVE, ACTIONABLE

"Statistical [test X] is typically used for data that is distributed normally. The data presented in this manuscript appear to be highly skewed to the left. This type of distribution requires a non-parametric version of [test X], which makes no assumption on the parameters of the distribution of data. I suggest the use of [test Y]. If the choice of [test X] is motivated by a particular strategy or other non-obvious analytical constraints, I recommend to explicitly mention that in the Methods section justifying the choice accordingly."



PREVIEW

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CLEAR, CONSTRUCTIVE, ACTIONABLE

Interpretation - Reason - Recommendation - Depersonalization

"Statistical [test X] is typically used for data that is distributed normally. The data presented in this manuscript appear to be highly skewed to the left. This type of distribution requires a non-parametric version of [test X], which makes no assumption on the parameters of the distribution of data. I suggest the use of [test Y]. If the choice of [test X] is motivated by a particular strategy or other non-obvious analytical constraints, I recommend to explicitly mention that in the Methods section justifying the choice accordingly."



PREVIEW

Unprofessional reviews disproportionately harm underrepresented groups in STEM

- ◉ Anonymous survey of international participants in STEM fields
- ◉ Investigated the “pervasiveness and author perceptions of long-term implications of receiving of unprofessional comments.”

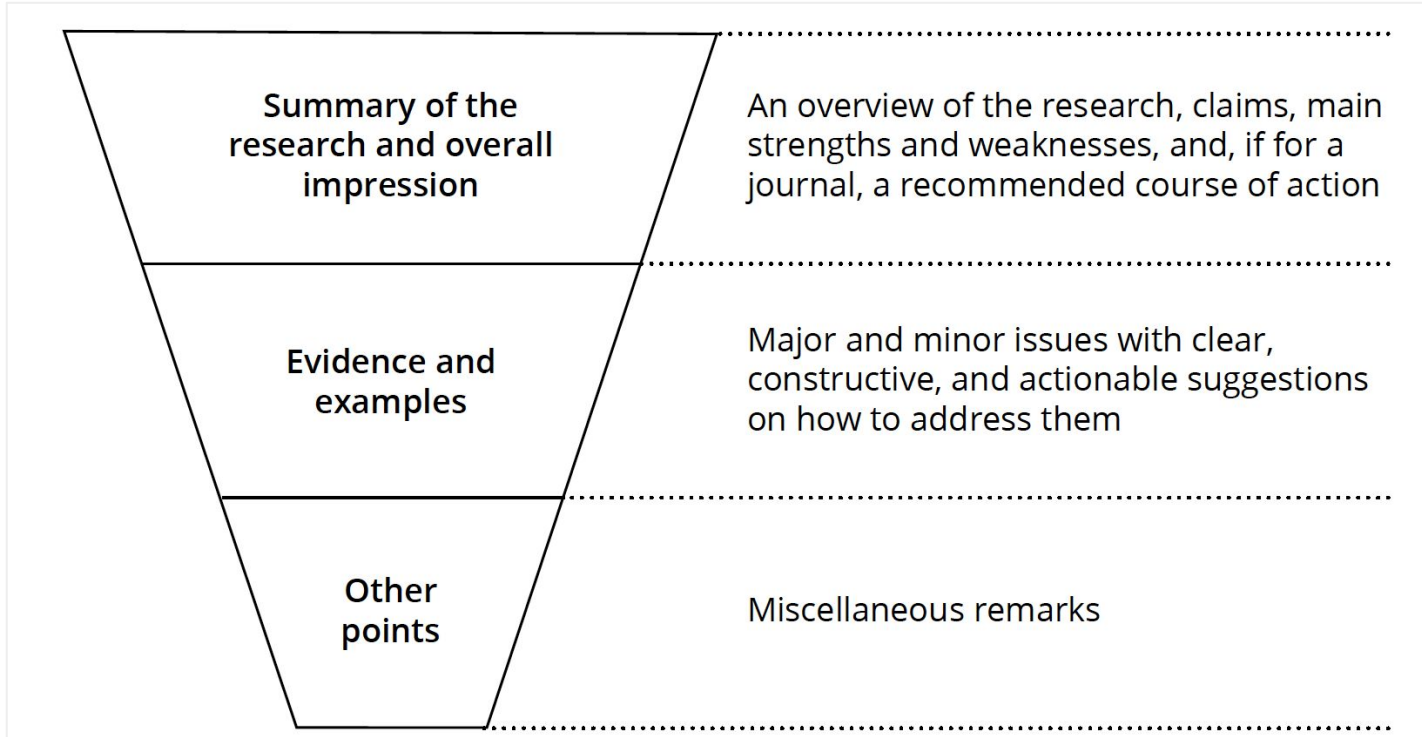
“This paper is, simply, manure.”

“What the authors have done is an insult to science.”

“The authors’ status as a trans person has distorted his view of sex beyond the biological reality.”

“The author’s last name sounds Spanish. I didn’t read the manuscript because I’m sure it’s full of bad English”.

Step 5: Pull it all together into a **coherent narrative**



Step 6: Check your review and share it

Re-read your review consider the following:

- Thinking about STEP 1, the beliefs and assumptions you identified in yourself, how did you do in your review? Did you manage to keep those in mind and mitigate how they affected your judgment?
- Thinking about STEP 3, does your review highlight strengths as well as weaknesses of the study?
- Thinking about STEP 4, does your feedback sound constructive, is it clear and as actionable as it can be?
- Does your review read well, from the summary to the end?



Alan Colin-Arce
2026 PRereview Champion



I liked that the training focused not only on how to use the PRereview platform or how to write constructive feedback, but also on discussions about power and social inequities in science.

While I am used to these discussions in the social sciences and humanities, I appreciated that we were addressing these issues in a space with several STEM researchers.

Read the full interview: bit.ly/Champions-Alan



Thank you!



bit.ly/PRreview-newsletter



bit.ly/PRreview-Slack

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