

Final Author Comments for „Editorial: Introducing a new article type: Limitations, Errors, Surprises, Shortcomings and Opportunities for New Science (LESSONS)”

Answers to comments made by Daniela Brito Melo

We appreciate your review and comments on our manuscript, your feedback is valuable to us, and we will make the recommended revisions accordingly. We provide detailed responses to each of your comments below.

The manuscript presents a new article type (LESSONS), dedicated to scientific errors, limitations and null results - topics frequently absent in classic scientific literature. It refers to several peer-reviewed articles addressing these topics, which showcase the impact of a positively biased publication culture, as well as the scientific value of reporting errors, limitations and null results. The article properly states the need and advantages of this type of article. I warmly congratulate the authors on this initiative.

Thank you!

Before publication, I would recommend considering the following suggestions:

L.117-124: In this part of the text, the authors give examples of discontinued journals dedicated to the same topic. In my view, it would be helpful to reflect on the potential causes and to state what will be done to avoid a similar ending for the LESSONS article type.

Good point. The reasons for discontinuing journals seem to differ: the HESS "Black Swans" category was quite narrow in scope, which likely limited submissions, while the Journal of Negative Results in BioMedicine gave no clear reason. Larger journals, like the Journal of Trial and Error and PLOS ONE, are still going. We think LESSONS avoids these pitfalls by design: it isn't a separate journal but an article type across many EGU journals and EGU's preprint server, with a shared compilation for visibility — a much wider net and a lower bar to submit. Ultimately, success depends on the community submitting articles, which we can't force, but the broad community-driven setup gives it the best chance. We'll add a short note on this.

L.222-223: the authors highlight that limitations, errors, etc. (i.e. LESSONS) have been published before in "regular research articles", together with "substantial new results, advances". In my view, the advantage of publishing this type of results in a LESSONS article type in comparison to a "regular" article type is not clearly stated. Are LESSONS articles a temporary need while the publishing culture does not change? If not, this should be clearly stated.

Yes — we see LESSONS as a fix that will be needed until publication bias fades. The advantage over a “regular” article, however, is a real and distinct one rather than merely a

matter of format. Limitations, errors and null results can of course already be reported in regular articles — but only as long as they are accompanied by some ‘positive’ result or substantial new advance. What the LESSONS article type adds is that we welcome exactly these contributions even when they are not accompanied by such positive results; a discussion of how the failure, limitation or error helps us advance science is enough. Beyond this, the short format makes negative results much easier to publish, the clear label removes the stigma and signals that they are welcome, and listing all LESSONS articles in a separate compilation gives them higher visibility — all of which we hope will accelerate uptake within the scientific community. We will make this distinction explicit in both our response and the revised manuscript.

Chapter 3: I think it would be worth adding to this section the answer to "When to write a LESSONS article". In my perspective, a researcher will continue investigating a problem until the "substantial new result" is found. At that time, they might prioritize writing a "regular research article" in comparison to a LESSONS article. There are sufficient arguments in the manuscript supporting the writing of a LESSONS article. However, current career incentives might pressure researchers to move on to the next finding instead of documenting the LESSONS from their just published work. I think it would be useful if the authors could acknowledge and elaborate on these challenges and motivate the need to timely document the discovered errors and shortcomings.

Thanks for this suggestion. We agree the question of *when* to write a LESSONS article is worth addressing, and that career pressures can push people to move on rather than document what went wrong. We'll add a short paragraph to Section 3 noting that the best moment to write a LESSON is usually while it's still fresh — often when a related result is being written up, or when a line of work is set aside — and that the brief format (and the Post option) is meant to make this easy even when time is short.

L.240, 258, 358, 360, 362: capitalize "report(s)" for consistency.

We will fix this in the revision

L.240-241: introduce ACP after "article processing charges" just for clarity.

We will change that.

L. 250, 359, 361: capitalize "post(s)" for consistency.

Will be changed in the revision.