

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 Melissa Reidy

Thank you for reviewing and commenting on our manuscript, we find your advice constructive and will incorporate your suggestions into our revision. We responded to each comment individually below.

This manuscript introduces an article type titled LESSONS, which is to be included in some EGU publications moving forward. LESSONS are actually two types of articles but both types aim to overcome the bias towards positive-results publishing. The manuscript details the motivation behind this initiative as well as outlining article scope and format and guidelines for writing, editing and reviewing LESSONS articles. In the introduction, the authors provide some compelling reasons as to why this type of article will be valuable to researchers moving forward. It is clear that there is definitely room, and need, for LESSONS articles in the scientific publishing sphere. Well done to the authors for this optimistic initiative and I look forward to reading some of the LESSONS articles in the future.

Thank you!

I've provided some comments below as suggestions for very minor improvements to the finished manuscript.

Section 1.1: Have the authors considered whether certain groups of researchers are more likely to benefit from writing and reading LESSONS articles than others? For example, LESSONS articles might be more adopted by early career stage researchers, or researchers operating within limited resource environments since they are less likely to be able to 'afford' mistakes and errors compared to senior researchers or those with stable funding. And from this, are there certain groups of researchers that will be more likely to submit LESSONS articles compared to others? The authors could speculate on this using abstracts submitted to the BUGS session later mentioned in the article. I do understand that this information might not be out there to include in this section, but it could offer useful insight if that's possible.

Nice question — and one where the likely direction is genuinely unclear to us. One could argue, as you do, that early-career scientists and researchers in resource-limited settings have the most to gain, since they can least 'afford' unproductive errors. But the opposite case is just as plausible: early-career researchers are under particular pressure to build a publication profile, and because academia still rewards 'positive' results, they may in fact prioritise those over LESSONS contributions. Because we have no data to adjudicate between these competing intuitions, we would prefer not to speculate in the manuscript.

What we can say is that the BUGS sessions have drawn a real mix of career stages — from MSc students through postdocs to senior professors — so an appetite for reporting errors does not appear to be confined to any one group.

Line 111 – 113: The inclusion of the BUGS sessions at the General Assembly provides good context for the need for LESSONS articles. The authors could include some basic information such as number of abstracts submitted to BUGS sessions in previous years, or number of posters/presentations etc to strengthen this context.

Thanks for the suggestion — we'll add some basic statistics about the BUGS sessions for context.

Line 117-124: I agree with the comment from another reviewer here. As well as offering some reflection on why this topic has not been adopted successfully in previous attempts, it could be useful to include some details as context. For example, if the 'Black Swans' manuscript category received no submissions, how many submissions did other manuscript categories receive in contrast? Is there any information about whether the submission process for this category was different in any way to other categories?

This overlaps with Reviewer 1's comment on these lines — please see our response there. We'll add a short statement. Generally, the submission process was the same. However, what was different was that the 'Black Swans' were only offered in one of the EGU journals and their initial advertisement was by far not as broad as it has been done so far for LESSONS articles.

Section 4: I'm curious about the review process for the LESSONS articles and it's great that the authors have a specific section on this. One of my concerns about the LESSONS articles is not the articles themselves, but that a positive result bias may also translate to a positive result review bias. Can the authors speculate as to whether it would be more difficult to attract reviewers for LESSONS articles compared to other research articles? Perhaps there is information about this from some of the other publications previously mentioned earlier in the article. Given that one part of peer review may be to suggest to authors different ways of analyzing data or improving methods, is there a risk with LESSONS articles that during the peer review process, the 'error' that the article is based on is actually solved? And how does that affect the relevance of the article submitted? All of this is just to say that the section on editing and reviewing could be strengthened by the authors having a bit of a discussion about how the peer review process for a LESSONS article may differ and how these differences will be tackled by reviewers.

Both are good points and we're happy to expand Section 4.

On finding reviewers: it's hard to say, and reviewers are scarce in general, but we're cautiously hopeful — LESSONS Reports are screened first and appear in established journals, and the BUGS sessions show real interest in negative results (Relatively few submitted abstracts, but way more came to listen to the presentations so maybe this also

holds true for review: few people submitting but much more being interested in being part of the publishing bias revolution and thus helping with reviews?).

On an error being solved during the review process: we would see this as a win rather than a problem. In most cases the resolution would form the basis of a separate, regular research article, while the original LESSON still has value as a documented record of the problem and the route to its solution. The documented lesson therefore retains its worth regardless of whether the underlying issue is later resolved.

EGU journals also offer the possibility for its journals to tailor review forms to specific manuscript types. While this has not yet been done for LESSONS Reports specifically, it represents an option for guiding reviewers toward the characteristics most relevant to this format. This is kept open for future discussion, once sufficient experience has been gathered on how to improve reviewer reports for LESSONS Reports. We'll add a brief note on both.