

Interactive comment on “Agnotology: learning from mistakes” by R. E. Benestad et al.

R.E. Benestad

rasmus.benestad@met.no

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Thank you for your comments! I think I'd like to emphasize our main point in the paper is about why there still are disputes in some areas of science where there is not need for it. Hence, the point you ranked as number 3 is our number 1. The cases are there to be specific and provide concrete evidence. They are provided in the appendix (I think I'll move the two cases in the main paper into the appendix for the revised version of the paper) and are intended to provide specific examples - hence they should not be seen as #1 point of the paper. I believe in the importance of being to the point and being specific about this issue, and hence we can learn from mistakes.

I disagree with the view of being "appears to be rather superficial and using a too broad brush" - the selection we chose do indeed have some form of common denominator, however, I agree that these problems probably are common beyond the 'sceptical' part

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of the literature.

The list of examples that we chose was a selection based on simple clear-cut cases. For instance, there is no doubt that the results in some papers were based on analysis where part of the data had been removed. Mixing up error estimate for the mean with sample range is too an obvious flaw. The same goes with 'curve-fitting' or the analytical design in one of Scafettas paper.

One does not have to write long articles to expose such shortcomings. Short accounts are not the same as being superficial, but it requires that the reader has a good understanding of statistics and analytical design. However, I see that questions regarding the hockey stick shape of a principal component may require a familiarity by the reader in terms of how the principal components are used and of the linear algebra involved in order to grasp the concepts.

I agree completely that replication is as or even more important for high profile publications. Our paper does not just look at the science, but is also addressing a real concern regarding the different views on climate change between publishing climate scientists and the general public. We want to stick to that, and therefore I think that our list of cases are OK for this purpose. However, I hope this inspires similar papers with a more general view on replication.

Again, I disagree that the paper is superficial. Why do you think so? And who decides what is "more suitable manner"?

The important aspect is whether the science is correct: the empirical evidence, theories, and the logic. One flaw can topple a theory or falsify a hypothesis, and this is what we show with our cases. The list cases make our paper specific, rather than superficial. Which of the cases do you not find convincing?

Our paper is trying to do something new and make a break from traditional set of expectations. I read the comment as if the paper has to fit within some predefined

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structure. That is not science, but dogma.

It would be great if the commentary could be more specific on what is regarded as "weak". So far, I feel the commentary itself is very general.

Regarding the point "restructure their paper around common themes (e.g. logical fallacies or common methodological mistakes), write it clearly and concisely, avoid snarky comments against denialists (irritating though these characters might be!) and work on a coherent presentation, instead of publishing a laundry list of replication studies and wrap it in dubiously written philosophical verbiage. This will make for a much stronger contribution to the scientific literature." - we are working on a revision. Hopefully, you all will think it's better than the original version. If you can point to those "snarky comments", please show us where they are - we do not want to be seen as being snarky.

Interactive comment on Earth Syst. Dynam. Discuss., 4, 451, 2013.