

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

O. Bothe

ol.bothe@gmail.com

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This short comment isn't meant to be a full review. It mainly repeats some points which have already been mentioned, e.g. by anonymous reviewer 2, in the open discussion of “Agnotology: learning from mistakes” by Benestad et al. submitted to Earth System Dynamics Discussions. I think these points need highlighting.

The manuscript tries to achieve three goals. Firstly, it provides commentary on a number of recent papers which express sceptical views on the scientific assessment of anthropogenic factors of climate change. Secondly, by trying to replicate these ‘controversial’ studies, the authors apparently wish to reduce “a gap in the understanding of the climate between experts and the lay public” (Benestad et al., 2013, page 454, lines 14,15). Thirdly, the manuscript tries to fit this commentary in a philosophy-of-science framework on replication, ignorance and the public reception of scientific knowledge.

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As a preliminary note: if I above correctly identify the three aspects of the paper, I agree with all three intentions. The following only criticises their unsatisfactory realisation.

The following short paragraphs comment separately on these three aspects.

1. I welcome every published exchange highlighting failed replications of results in the literature but such comments should be identified as such and published using the appropriate paths. If one manuscript can highlight problems with multiple papers, it's an asset. However, the provided commentary in Benestad et al. appears to be rather superficial and using a too broad brush.

I agree, some shortcomings are common to a number of the mentioned publications, but these problems are unfortunately also common beyond the ‘sceptical’ part of the literature. Thus, I think, it would be more useful to publish methodological notes, e.g. comparable to the manuscript by Wilks (2006) that Benestad et al. reference. Similarly, the literature indeed lacks a thorough and open review of planetary or lunar influences on climate but the manuscript does not provide one either.

If replication, open data and open methods are the topics at heart of the manuscript, a relevant commentary should extend beyond a rather narrow group of papers. One could accompany the negative examples by positive ones. Furthermore, one could search for publications whose methods have been criticised but with which one personally agrees. Replication is as or even more important for high profile publications. Possibly there are surprises? That would not be a case of false but rather of correct balance. It is rather unfortunate irony that some people may ask some of the co-authors to lead by example with respect to open methods and open data.

2. I doubt whether a rather superficial paper helps in closing the gap in understanding. This holds especially if the two “sides” of the gap are classified in such a binary and close to condescending manner. This aspect of the manuscript in its current form should take place in the media, in the blogosphere and possibly in everyday exchanges (e.g. in a real-world or a virtual pub). I guess, it may be possible to rewrite this aspect

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in a more suitable manner.

However, from my point of view, this aspect is best served by providing thorough commentary and discussions on the supposedly controversial topics within the scientific literature (see above).

3. I would welcome a study or a commentary on agnotology in climate (change) science (e.g. in *Climatic Change*), a commentary or essay on replication (e.g. in *Climatic Change* or *Nature Climate Change*), and also philosophical essays on either topic (in a suitable philosophical journal). But the present manuscript doesn't fit any of these categories.

Nevertheless, I agree with the authors that it is not necessary for a manuscript to be strictly scientific or philosophical. However, if authors mix both aspects, their writing has to be strong on both accounts. The present manuscript is weak on either.

In addition, since the paper is apparently conceived as a review article it requires a much clearer structure.

In the end I just second the final comment of anonymous reviewer 2:

I recommend that the authors 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.

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