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Interactive comment on "The role of climate scientists in the post-factual society" *by* Erlend M. Knudsen and Oria J. de Bolsée

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"The role of climate scientists in the post-factual society," describes the authors' outreach efforts during the Poles to Paris campaign and their efforts to generate awareness about climate change leading up to the 21st COP in Paris. The authors' reflections on this experience and analysis of their social media posts are used to generate several recommendations for scientists on how outreach should be conducted and the role of scientists in society, particularly in the context of the polarized and politicized topic of climate change science. I commend the authors for undertaking such an ambitious outreach effort and for taking the time to assess and reflect on their efforts. I also commend the authors for using data - albeit limited - to further reflect on the effects of their efforts. Such commentaries are important for facilitating a broader discussion in the

scientific community about where the institution of science has been, and where it may be heading, and its ever-evolving role in society.

The most important finding in this paper, in my opinion, is that the climate action message - coming from climate scientists - was the most popular (among social media video viewers). This finding is not surprising, considering communication theories like the Extended Parallel Processing Model (Witte) suggest that increasing efficacy to cope with risk is a critical part of effective risk message processing. However, this finding (or reflection) is most interesting to me considering that many climate scientists are hesitant to venture past explaining the causes and effects of climate change, into discussing solutions, for fear of being seen as an advocate and losing credibility. The authors could strengthen this paper by spending more time reflecting on and discussing the content of their climate action messages and exploring where those messages sit on a spectrum from objective to advocate. Furthermore, these reflections could be more strongly placed in the existing literature about the role of scientists in society.

The authors say on page 1, line 13, "The role of climate science in the public sphere has changed significantly since the mid-1980s." I would like to hear more about this line of reasoning, and I recommend the authors explore some of the existing literature from science and technology studies that reflects on the role of scientists in society (i.e. The Honest Broker, by Roger Peilke Jr., recent work by John Kotcher et al. also explores scientists' advocacy messages).

While I appreciate the presentation of the data related to the campaign, I encourage the authors to be much more transparent about who exactly was engaged in the different elements of the campaign and where they have data and where they do not. On page 2, line 23, the authors said, "A conservative estimation is that more than one million people in 45 countries were reached through conventional and social media." If it is included, I would like to see a much more detailed description of how this figure was produced. Is this based on social media impressions? Is this based on traditional media circulation rates? The analysis of the social media videos is interesting, but the

authors should acknowledge the extent to which this audience is similar to or distinct from the audiences who participated in public lectures and those who engaged with the campaign through traditional news sources and the population as a whole.

To that end, I would strongly recommend the authors avoid the use of the term "general public." From the description provided, several distinct audiences were targeted and reached during the campaign (i.e. school children, people who attended a lecture, people who watched a video on Facebook) - and each of these audiences likely has unique characteristics that are relevant when considering the authors' final outreach recommendations. In particular, I encourage the authors to address the extent to which their campaign attracted people who already had a high interest in science or belief in climate change (see Besley, "Audiences for Science Communication" for further discussion from a US context).

This paper makes an important observation about the need for scientists to engage in dialogue, especially face to face communication. These recommendations are aligned with a recent report by Matt Nisbet, for AAAS (https://www.aaas.org/sites/default/files/s3fspublic/ content_files/Scientists%2520in%2520Civic%2520Life_FINAL%2520INTERACTIVE%25200827 which explains the need for scientists' engagement in civic life. Discussing this would also be valuable in the context of the role of scientists/science in society. However, I am not persuaded by the authors' assertion that their outreach efforts are the solution to climate change polarization, politicization, and the "post-truth" world. First, I think there needs to be stronger evidence of which audiences were reached in the campaign in order to make this claim. Secondly, I think these terms must be defined and explicated if they are to be used to generate recommendations for scientists. For example, what are the causes of politicization, and why do the authors think this particular outreach approach helped resolve it? Similarly, what are the causes of polarization (it is distinct from politicization), and do the authors think the campaign helped to overcome this? Why? How? Furthermore, due to the international nature of the campaign, it would be

useful to understand how the effects of the outreach varied between different nations because politicization and polarization likely vary widely amongst the different nations included in the campaign.

In summary, I feel that this is an important commentary and that the authors made a very good effort to describe their outreach activities, who was reached and provide useful reflections on the lessons learned. To that end, I think this paper is perfectly suitable for Geoscience Communication. However, the paper can be strengthened by further reflection on the role of scientists in society, and how the effects of this campaign align and diverge from prior research related to this role. The outreach recommendations are good, but the readers will be better able to assess the validity of the recommendations to their situation if more information is provided about specifically what audiences were engaged in the campaign's messages and activities, why the authors targeted these audiences, and what observations were made about the success of the campaign (without over-relying on the limited data available). In my opinion, the weakest part of this paper is the link to the post-truth environment, polarization, and politicization. While the campaign may have had positive influences in these areas, these are highly complex social processes that probably varied across the nations involved in the campaign. A much more sophisticated analysis would need to be undertaken to understand the effects of the campaign on these social processes.

In terms of the specific questions posed by the journal: 1. Does the paper address relevant scientific questions within the scope of GC? Yes 2. Does the paper present novel concepts, ideas, tools, or data? Yes 3. Are the scientific methods and assumptions valid and clearly outlined? No. Please see prior comments related to clearly articulating who was among the campaign's target audiences and where is data to support the claims for each audience. 4. Are the results sufficient to support the interpretations and conclusions? No. However, I agree with the online reviewer – that shifting the focus to the role of scientists and reflecting more on the experience, would remedy this. 5. Do the authors give proper credit to related work and clearly indicate their own

paper new/original contribution? As explained, I think the authors could rely more on prior work in science and technology studies related to the role of science in society and how this has evolved over time. 6. Does the title clearly reflect the contents of the paper? No. As I explained, delving into a discussion about the “post-truth” era, polarization, and politicization requires much more explication and a different kind of data than what is provided here. I suggest renaming the paper. 7. Does the abstract provide a concise and complete summary? Generally, it does, but this paper could evolve based on the reviews and I anticipate the abstract will change accordingly. 8. Is the overall presentation well-structured and clear? As it stands, I think this paper tries to do too many things at once and that makes the structure somewhat hard to follow. I anticipate that when the focus is narrowed, the structure and flow will also improve. 9. Is the language fluent and precise? It is okay, but the descriptions of the audiences reached through the effort must be more precise. In general, I encourage the authors to explore the meanings of terms like polarization and politicization if they continue to use them. 10. Are the number and quality of references appropriate? Generally yes, but I think this paper would benefit from a deeper literature review on the role of science in society and some references from science and technology policy studies.

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