

Referee 1

We want to thank the reviewer for their comments.

Thank you for the opportunity to read your work “The shadowlands of science communication in academia — definitions, problems, and possible solutions.” Working in the science communication space, I agree that the “shadowlands” is a great way to represent the elements of the field that are so central to our work and yet so ambiguous or unclear for those trying to navigate research and meaning in science communication. I think that this piece will shed light on the unwritten and often muddy spaces that dictate a lot of our work, but are often not explicitly taught, accounted for, or made clear. Thinking through shadowland spaces will be helpful for both current and future science communicators, in geoscience, but also more broadly.

I appreciated the introductory material that offers a brief history of where science communication has been and where it is going next. Something that I found myself wondering about was the connection between the science communication definitions offered, the specific Geoscience Communication definitional spectrum, and the taxonomy that followed. I thought that outlining the elements of geoscience areas was helpful, but thought there could be a bit more clarity situating this very specific definitional framework against the larger definitions of science communication, particularly since the section that follows offers another set of categorizations. I wasn’t always sure how to connect the three different definitional frameworks. Once the shadowlands section began, I was more clear on the trajectory.

We will condense and streamline Section 1.1 and 1.2 to address these points (similar suggestion by Reviewer-2).

Figure 1 offered a really clear overview of the project and goals of the piece in terms of framing science communication. One question I had for further consideration is: what are the distinctions between training science communicators and viewing science communication as a valued professional activity? There seems to be overlap in these two solutions, but perhaps an example or a bit more detail could differentiate the two.

"Training science communicators" pertains to the individuals engaged in communication efforts, whereas "viewing science communication as a valued professional activity" focuses on the broader institutional recognition and support for science communication within academic circles. This distinction is elaborated upon extensively, with accompanying examples, in Sections 3.2 and 3.3, respectively. We will use the figure caption to redirect readers to the individual sections where they can find information.

I really appreciated the discussion about responsible use of uncertainties on page 9, and wondered if it might be worth mentioning that public audiences are also equipped to handle uncertainties as decision-makers are (unless decision-makers in this case was meant to represent both public and expert audiences). Overall, I thought the discussion about unidirectional risk communication was really timely and important.

We will review the text in Section 2.2 to draw a distinction between the public audience (individuals making personal decisions) and decision-makers (making decisions for the community/public).

In terms of the first recommendation regarding Clarity and transparency, I think the term clarity could be explored in a bit further detail. Clarity can mean a lot of different things depending on context, which might be worth discussing. I do think, though, that the focus on audience in this section is key and does a great job of highlighting that cultural and social backgrounds impact audience interpretation and interaction with the information.

We will provide definitions of "clarity" and "transparency" in this context at the start of the section. As suggested, we will review the use of "clarity" throughout Section 3.1.

The authors did a great job of discussing specific organizations that could modify their practices with regards to science communication to offer a way forward, and the level of detail constitutes a great first step towards these ends. If anything, some information about first steps that readers could take towards implementing or advocating for these goals could make these goals more actionable for those in the field who may not be in direct positions of power to influence these decisions. Overall, though, I thought these ideas were great, and geoscience communicators can really benefit from considering these alternative ways of valuing and incentivizing science communication in our diversity of roles.

We will add a paragraph in Section 4 that details the initial steps readers can take. These steps will be distinct from the broader changes needed within the academic ecosystem.

Other considerations:

- In line 211, "some scientific discipline" should read "scientific disciplines"
- In line 272, should "action" be "actions" based on the multiple recommendations (drop, cover, hold on)?
- There appear to be a few extra spaces in line 392

We will make the three corrections listed above.