

Reviewer 1

This paper is linked/an extension to a previous study, but it does have a novel aspect and there is a clear rationale for the study.

I feel there needs to be more discussion examining the decisions linked to expertise. I feel the findings need to be slightly toned down to reflect the lack of significant differences in decision making capacity relative to expertise as there was a difference at 50% but not 30 or 70%.

Response: Further discussion of the findings and links with expertise have been added to the discussion. Furthermore, the findings have been more explicit at this point and so toned down.

It may be minor but introducing someone else's results (line 238, 279) in your results section is quite confusing.

Response: This has been amended. Both this and a similar justification has been moved into the introduction to bolster the motivation for our research questions. There is now no direct report of results from previous papers made in this paper.

Also relative to the experts and non-experts, I would agree with the comments made in line 336 considering the recruitment of true experts in the area as a comparison. It would also help to link back to why expertise had little impact on eye movement behaviour (line 341)

Response: This has been added.

Reviewer 2

I enjoyed reading the manuscript, however there are some sections of the paper that need strengthening.

As a first comment, I would like to see this paper stand alone and most of the times the authors make reference to another paper (which is not yet published).

Response: The linked paper has now been accepted into this Journal and we would expect that this paper would be obviously linked to it via journal website. They would be more obviously companion papers than has been made obvious during the review process. We would much prefer to keep this arrangement and not have separate the two. They are both of a piece and length was the main motivating factor for separating them.

My specific comments are as follows:

1. L48 Not clear how Covid19 further impacted communication of uncertainty.

Response: We were alluding to the sharp increase in graphical communication about communication that occurred at that time. During the Covid-19 pandemic the public were

presented with a great deal of uncertain scientific data in various graphical forms, many of which they were unfamiliar with. These were used by governments to explain why decisions have been reached and why actions are being asked of them (eg stay 2 metres away from others, wash hands). From this perspective, it is important to understand how best to communicate uncertainty to the general public and how best to graphically support them to reach an appropriate understanding. We have added text to the first paragraph to make this link more explicit.

2. L56 The problem is not well articulated, and the readers would benefit from an extensive literature search of how end-users have struggled with communication of uncertainty. A lot of work has been done in the past and the authors can make reference to how some the challenges to communicating uncertainty (eg. Spiegelhalter, D., Pearson, M., and Short, I.: Visualizing Uncertainty About the Future, *Science*, 333, 1393–1400, <https://doi.org/10.1126/science.1191181>, 2011).

Response: A more extensive literature review of the communication of uncertainty has now been included at the start of the introduction.

3. L78-- L85 A lot has been done on this subject of using visuals for communicating uncertainty and this would be important to emphasize this in this section (see Milne, A. E., Glendining, M. J., Lark, R. M., Perryman, S. A. M., Gordon, T., and Whitmore, A. P.: Communicating the uncertainty in estimated greenhouse gas emissions from agriculture, *J. Environ. Manage.*, 160, 139–153, <https://doi.org/10.1016/j.jenvman.2015.05.034>, 2015; Zikmund-Fisher, B. J., Fagerlin, A., and Ubel, P. A.: Improving Understanding of Adjuvant Therapy Options by Using Simpler Risk Graphics, *Cancer*, 113, 3382–3390, <https://doi.org/10.1002/cncr.23959>, 2008)

Response: This has been folded in with our response to point 2 by changing the introduction to be a more extensive literature review of the communication of uncertainty.

4. L112-- L122 I don't think this is very necessary to discuss the relation between the two papers at length, I would focus on the problem this manuscript is focusing on and why it is important. The authors introduce the concept of eye-movement but quickly divert to another paper. Focus should remain on this paper. Again I would expand on the complex methods the authors mention in passing and why they are relevant. A supplement of the test methods would be useful.

Response: The brief digression has been removed. Methods have been expanded as requested.

5. L125 i dont see how these research questions analyse/capture the differences in the end-user groups

Response: We confess to finding this comment difficult to understand. The research questions each mention that the effect of expertise on gaze control will be examined. Each one of these directly addresses differences in the expertise of different end-user groups.

6. L147 Here again the authors mention the companion paper (which cant be found anywhere)- A summary of the methodolgy would be useful.

Response: We can only apologize about this – our intention was for the two papers to be reviewed together but this has not possible. The companion paper has now been accepted for publication in this journal the web links between the two can be made more explicit and cross checking by readers will be much easier. However, in response to this comment we have added further methodological information so that those details regarding the study reported in this paper are self-contained.

7. L153 a graphical illustration would be more useful here and an explanation why the Eye link II eye tracker is useful or important on L156 is needed.

Response: Further details about the eye tracker have been given as has a direct link to its manufacturers specification page which also has pictures of the head mounted system.

8. I agree with the first referee, why would you report results from another paper, this paper should stand alone and casually make reference to the other paper when needed.

Response: As stated in our response to Reviewer 1, this has been amended. This has been moved into the penultimate paragraph of the introduction as justification for motivating our research questions. There is no direct report of results from previous papers made in this paper.

9. L193 to 198 is the justification and it seems misplaced.

Response: As per the previous response, this has now been placed in the penultimate paragraph of the introduction.

10. The information presented from L199 to 204 should be presented in a table. Similar comment for L211 to 223.

Response: This would require multiple tables; 3 for each section. We feel that including these would not help and would be confusing for the reader. We did try this approach, but the tables needed seems excessive when the results are well captured and are clearer by placing them directly in the text.

11. L238 seems misplaced as well as it belongs to discussion

Response: As per the response to point 8 and 9, this has now been placed in the penultimate paragraph of the introduction.

12. L259 to 266 should be presented in a table.

Response: see response to point 10. This suggestion introduces the same issues with clarity of presenting the findings.

13. L290 A plot of the accuracies for the different clusters would communicate the research findings here!

Response: The data are presented in tabular form rather than a figure. This has the benefit of showing the data clearly as numbers. Replacing this with a figure would certainly show the same data but not give the readers explicit access to the numbers. We are keen to convey this information and reticent about readers having to estimate the actual numbers. One option would be to have the figure and then place numbers in the text but this would seem to introduce a further step into the results section that is not needed.