

## ***Interactive comment on “Earth System Music: the methodology and reach of music generated from the United Kingdom Earth System Model” by Lee de Mora et al.***

### **Anonymous Referee #1**

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Comments on: “Earth system Music: the methodology and reach of music generated from the United Kingdom Earth System Model”.

The article is well written and very interesting. Below we provide feedback to the author’s that we hope is useful. This was co-reviewed by myself and a colleague, and we ourselves are a science-art collaborative team. This co-review of the article was agreed by Editor Sam Illingworth.

1. As this is a pilot study, it is clear why only one tool was utilised to gather and analyse data towards the reach, engagement and audience of the channel and the videos. Nevertheless, it would be very useful for readers and those who might like to expand

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on this methodology and methods if the choice to not triangulate the data was stated as one of the limitations, and discussed. You could highlight in the introduction that this is a pilot study, stating it explicitly, and then follow-up with a brief discussion about the experimental character of the research and why in this instance the focus was not on triangulating findings, but to present the study. If you are planning additional evaluation and analyses it would be useful to highlight that, even if briefly, in the discussion.

2. The authors’ choices for tempo, genre, and scale of each composition (allegro, vivace, aria etc.) adds to the “emotional connection” mentioned in line 213. There is value in the authors elaborating on these choices, and to explain if the reason of each choice is due to the feeling that the data are expressing. For example, for Earth System Allegro, one can notice that the authors describe it as “[. . .] a future scenario in which the anthropogenic impact on the climate is at a minimum” (line 225). This could be perceived as a happy scenario, and is potentially why the authors aligned it with the allegro rhythm, because allegros are usually lively and merry tempos, able to express and communicate positive and happy scenarios. It would add richness to the methods and explanation of data interpretation for the reader if more details like those that I expressed above could be included in the descriptions of all the pieces.

3. More specifically, in the Quantification of Reach section more detail could be provided to support the evaluation component of this work. We recognize this is a pilot study, but even then there is the potential to include perspectives shared by others (qualitative data), and to use these data as a starting point to build a stronger understanding of how this work is ‘reaching’ others. For example, you didn’t include data on shares or people’s comments or shared perceptions (qualitative data) about the project as shared through particular social media platforms. While I agree it can be useful to have demographic data, it wasn’t clear from the start of the paper that you were interested in the demographic of people that this work reaches. Equally, you report on the nation that YouTube viewers were from in your results, which is fairly limited demographic data, and don’t include other data despite having noted its availability in your

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methods section. From a reader's perspective it isn't only interesting how many people the work reached or who those people are, but also what their perspectives of the work was and any messages that emerged from viewers that could inform our broader understanding about what people took from viewing and experiencing this work. It would help readers to know more about the 'experience' in addition to the 'reach' and the authors could begin to form this with a content analysis of the comments or perspectives shared, and even brief quotes of feedback and perspectives shared by others to offer some insight to people's perspectives.

4. We include a few more specific questions about the quantification of reach below. p2 line 52 "provides additional contextual clues to aid the interpretation" Please elaborate on why this happens e.g. the animated graphs provide information usually not available or not attractive enough to read for the general public. p7 line 159 "The conversion from model data to musical pitch is performed in two stages. First [ . . .]" Please clarify what is the second stage. p7 line 154 "[ . . . ] is an artistic choice" Is there a concept behind that artistic choice each time? Does something trigger the composer to choose a specific scale and not choose another? It help the reader to know if there are any creative or conceptual reasons behind these choices or if it is mostly due to the desirable harmony or aesthetics of the final composition. p14 line 355 How was the playlist shared? P14 line 341 Note that the authors highlight that most views occurred after the first few days, and this is also presented again in the results. It would be better to highlight this as either an element of the method or as a result, but not as both. p14 line 355-57 Please provide reasoning for why broader networks were not engaged and why press releases weren't used to disseminate the research or playlists. This is a primary stream of sharing research, and media teams are trained in helping to guide how research and outputs are shared and delivered to others. Could your reach have been greater had you employed / utilized the resources available through those existing networks? Equally, paying to transmit the research and outputs would likely increase the number of people the work 'reaches', why was this avoided? If the goal was to get the research to different people then using those tools would assist, and it is then not too surprising

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that the research was primarily viewed only in the first few days; this could potentially have been overcome by having invested more into the transmission of the research and working with different traditional and social media tools. More explanation is needed as to why different tools weren't used, and potentially for the authors to consider if the approach used to evaluate 'reach' might be better removed from this particular paper that is heavily focused on the methodology and method, and included in a subsequent text that explores evaluation, reach, and viewer experience in greater detail and in a more robust way. p18 line 420 "[ . . . ] Sea surface temperature aria" Consistency note: The titles are presented in italic and with the initial letter capital throughout the article. Please change to: *Sea Surface Temperature Aria*.

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Interactive comment on Geosci. Commun. Discuss., <https://doi.org/10.5194/gc-2019-28>, 2020.

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