

Interactive comment on “GAIA 5.0 – A five-dimensional geometry for the 3D visualization of Earth’ climate complexity” by Renate C.-Z.-Quehenberger et al.

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Received and published: 7 February 2021

Thank you for your comment. I have been invited to participate in this art-science project by the artist Renata, thanks to my work on the Gaia hypothesis. <https://www.sciencedirect.com/science/article/abs/pii/S030326472030188X> <https://royalsocietypublishing.org/doi/10.1098/rsif.2020.0503>

My first contact with Renata has been with a complete and finished version of the draft. Since then we have had many interactions. Of the various substantial modifications to the paper that I have suggested, one of my observations was and continues to be precisely the one you mention. However, because she is the correspondent author of

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the paper, I let her the freedom to accept them or not.

I agree that the paper requires direct its efforts to a clearer objective, reordering the flow of ideas and arguments and to strip away a number of unnecessary free associations that make the text impenetrable. I think this does not represent major revisions to the writing of the text, but a reordering of the content of the text so that it can be read plainly. This will be done in a new version of the manuscript that will be submitted in the next week by Renata.

However, I do not agree with your comment regarding the Gaia hypothesis. The fact that the Gaia hypothesis is controversial does not mean that it cannot be assumed in a scientific way. In general, and from my experience, I perceive that many people have a very superficial reading of the hypothesis. A more cautious review of the literature beyond Wikipedia is a good intellectual exercise. Let us remember that what we call Earth System Science has its direct origin with the Gaia hypothesis. Just to cite few you can see <https://science.sciencemag.org/content/292/5524/1965> <https://www.nature.com/articles/s43017-019-0005-6> <https://mitpress.mit.edu/books/scientists-gaia> <https://mitpress.mit.edu/books/scientists-debate-gaia>

Although the paper itself it is not about the Gaia hypothesis per se, nevertheless it opens the possibility from the art standpoint, that the climatic models could change their outcomes with a 5D geometric partition of the atmosphere and therefore approximate better to an integrating behavior of the Earth system as complex –living– system.

Interactive comment on Geosci. Commun. Discuss., <https://doi.org/10.5194/gc-2020-27>, 2020.