

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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Firstly, thank you very much for your feedback and your intention to help to improve our publication.

I am extremely grateful about being invited to publish in the GeoSciences Communications as a philosopher (art & science transfer) who works with media art and 3D digital geometry as visual tool for research and science communication. Therefore I am glad it intends to approach scientific knowledge from creativity and the arts.

My motivation is to show how can art can inspire scientific inquiry. Following your

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suggestions for a better flow of ideas to make the article better readable we will use this order :

- 1) Present meteorologic models and the GAIA 5.0 artwork with its 3D data visualization outcome
- 2) Discuss Gaia mythology and the pre-Socratic ether concept – identified as geometry of the 5-dimensional space (also used in quasicrystallography)
- 3) Introduce 5D geometry and its possible value for the Gaia hypothesis
- 4) Show that 5-dimensional geometry is self-moving; here we discuss the chiral formation of cyclones and Coriolis effect and present a dynamic icosahedral aerosol formation model
- 5) Discuss the higher dimensional cognitive framework and its possible value for the Gaia hypothesis from a philosophical point of view.

Our attempt to apply the higher-dimensional framework on the planet Earth in order to understand its complexities is relying on earlier works concerning light as 5-dimensional electro-magnetic disturbance, quantum geometry (qubits) and for the visualizing unified theories [see ref. below]. Therefore it is our aim to outline our research about a possible application of our 5D approach to the complex system of the Earth in a way that it appears plausible and not just like an "opinion".

As supplement I attach some paragraphs from our original article which was considered to be "too scientific" by the editors. This is a reflection on science history which shows many related ideas that were integral for concepts we have today and how it can be related to a higher dimensional framework we suggest. Therefore I will put this answer to the reference list of the full short article "for further reading".

I hope this intended improvement will meet your and the Geosciences reader's expectations. Many thanks again for your effort and support as referee.

C2

References:

Renate C.-Z.-Quehenberger: A reflection on theories of light. Quantum Theory: Reconsideration of Foundations 6 AIP Conf. Proc. 1508, 2012, 459-463; doi: 10.1063/1.4773164

RCZQ: A Proposal for a psi-ontological model based on 5-dimensional geometry, Workshop: Quantum Contextuality in Quantum Mechanics and Beyond, poster <http://www.psych.purdue.edu/~ehtibar/workshop/schedule.html>

RCZQ: A quest for an epistemic reset in higher dimensional space, Poster Entropy Best Poster Awards, Linnaeus Conference: Towards Ultimate Quantum Theory (UQT), <https://www.mdpi.com/journal/entropy/announcements>, <https://res.mdpi.com/data/1st-place-r.c.-z.-quehenberger.pdf>

Please also note the supplement to this comment:

<https://gc.copernicus.org/preprints/gc-2020-27/gc-2020-27-SC2-supplement.pdf>

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