

Clim. Past Discuss., referee comment RC2
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Comment on cp-2021-9

Anonymous Referee #2

Referee comment on "Milankovitch, the father of paleoclimate modeling" by Andre Berger,
Clim. Past Discuss., <https://doi.org/10.5194/cp-2021-9-RC2>, 2021

The paper is a helpful corrective of the place of M Milankovitch in the history of paleoclimatology. It clarifies the issue of originality and relevance of MM research in the field, providing a robust summary of MM's contribution that dispells misattribution and misperception of his research interests. The originality of the paper lies in providing an authoritative account of MM's research as a form of elementary climate modelling, avoiding unnecessary claims about the relevance of MM's work in areas in which he was neither the first nor in which he had no interest. The article belongs to the genre of 'internal history of science' and is a readable and effective addition to the study of MM's work.

My only concern is the choice of words to describe MM's work. It is a long tradition to use filial terminology to bestow priority in scientific discovery (eg father of ...). While it conveys the importance of one's research, it does not entirely make it clear whether the scientists in question is an *originator* of an idea, the *first* to use the idea (or method of research approach), the most important *contributor* to the idea. This raises the issue if Milankovitch actually thought of himself as someone doing the climate 'modeling,' or if he used the term to describe his work as such (for example, not many GCM-based paleo-climate modellers think of MM as relevant to their work). These points could be considered in a more theoretical paper at some other time, and I do not think that this would be a place to resolve the questions. However, it does raise the issue of whether, for example, Croll could also be called a climate 'modeler,' or whether Arrhenius, with the claims about the increased atmospheric CO₂ leading to an atmospheric warming, was also a proto-modeller? Ditto Fourier. (Interestingly, Darwin cannot be called the father of evolutionary theory, because he was not the first to speak of the possibility, nor was the first to propose the mechanism -- nonetheless, Darwin is recognized as a momentous phenomenon in the history of science).

I would suggest that the paper is edited with attention to lexic and grammar issues, many of them are just too minor to be listed here, and the journal copyeditor would be perfectly competent to fix these.

Overall, this is a clear, concise and edifying piece that would benefit both scientists and general educated publics in getting an accurate sense of MM's importance in palaeoclimatology and a corrective to misreadings of his climatological investigations.