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Comment on gc-2021-35

Anonymous Referee #2

Referee comment on "Geology uprooted! Decolonising the curriculum for geologists" by Steven L. Rogers et al., Geosci. Commun. Discuss., https://doi.org/10.5194/gc-2021-35-RC2, 2022

Dear Author(s),

I enjoyed reading this article and appreciated the politics that lead you to write this work. In particular, your call to make accessible to the STEM community (and very specifically Geologists) the importance of "decolonizing the curriculum" is noteworthy. You organize the article well and set out to outline how the field of Geology is deeply grounded in colonized knowledge production mechanisms, and the impact this continues to have on the current field. You focus on the 'decolonizing the curriculum' as a site from which you can imagine a new field – that it cognizant of its history, but also willing to make the change required to ensure that the knowledge produced is inclusive, accessible, and diverse. This seems quite laudable goals, and you end your writing with concrete ways in which the field of geology (with sustained efforts by current practicing and teaching geologists) can change. You provide 10 concrete ways to do this (with also a focus on climate justice as part of the 10 points suggested). The writing ends with a glossary, which I think non-specialists will find particularly useful.

While this is a well-intentioned article and writing, I'm afraid it also has a few vital flaws, which I outline below as way to possible encourage the author(s) to rethink/rewrite/reframe this writing.

- A collapse between decolonial/post-colonial/anti-colonial frameworks – This seems like a vital issue with your writing. Decolonizing as a political term comes from a long legacy of Indigenous scholars working to ensure that Indigenous knowledge and ways of knowing are recognized as vital ways of organizing our world – BUT it is also vitally about the land on which settlers live and thrive (including the University). Decolonizing work is then different from scholars who do post-colonial work and scholarship. While you cite Tuck and Young (Decolonization is not a metaphor), there is no engagement

with his scholarship – nor an attempt to resolve how decolonizing the curriculum engages with the larger politics of decolonization and IS NOT a metaphor (or is it?). A non-critical engagement with 'decolonizing the curriculum' is another form of privilege that you as authors need to interrogate – and then build your own analysis from for your future facing geology projects.

- Please remember, that diversity is NOT decolonization. I recommend a few bits of easy reading to help clarify this vital point in your writing:

- http://www.criticalethnicstudiesjournal.org/blog/2019/1/21/do-not-decolonize-if-you-are-not-decolonizing-alternate-language-to-navigate-desires-for-progressive-academia-6y5sg
- https://speakingofmedicine.plos.org/2021/07/29/its-time-to-decolonize-the-decolonization-movement/
- https://aninjusticemag.com/its-not-decolonize-it-s-desupremify-9b6e9ea02aae

- Open your article with the ways geology existed in pre-colonial/indigenous knowledge spaces: Currently in your writing, the structure situates "geology" proper as a science, as a field of knowledge – as a way of knowing the world. While you acknowledge this 'formation' came about because of colonization, you reinforce this privileging of 'Science' with a capital S by situating it above localized knowledge(s). Even as you set to situate Geology, you begin by citing Nicholas Steno. I recommend moving up section 4.2 first, and then outlining the ways geological knowledge existed in certain locations – and what colonization did to erasures of these knowledge(s) and ways of knowing the world. In your own writing, highlight the erasures and violence of colonization. This ensures that the scholars who read your work are willing to recognize explicitly the violence of their academic ancestors, and understand that geological knowledge existed long before it was formalized within and through colonial science (as an aside, you can critically engage with the science must fall framework – I do not sign up for that entirely, but it goes help me think through some vital points critically).

- Of the 10 recommendations you have for your field, point 7 is about the diversity of scholars in the field. However, at no point do you engage with a systematic analysis of how many Indigenous scholars are Indigenous – either in your own universities, nationally, or withing the leading Geology organizations. Is there no research on this – and if not, perhaps that is a gap you can address. Inclusion in 'teams' can sometimes be tokenistic. However, mapping out how many professors of Geology are Indigenous scholars or how many recent hires are Indigenous junior scholars might be a concrete way to highlight how the field of Geology continuous to be a settler colonial field – with ongoing violence both on the lands of the people on which the research is done and where it is taught (i.e. the physical space the Universities stand on).

- Situate yourself within this writing: This might be harder for you to do, as in the STEM fields we still want to believe in the ideas of 'objective' knowledge – when, our best bet is to work with 'situated knowledges.' Sandra Harding's work is truly helpful in this framing and given that you already draw on their work – I would encourage you to develop this a bit more (there is a recent sage research chapter on Sandra Harding's work would work well for your STEM audiences). It would be helpful for the readers to know how many of you are Indigenous scholars, and the experiences you may have within the field of geology. Also, maybe concretely outlining how you bring your ancestral knowledge to bear on 'traditional' geology curriculums.

In conclusion, I commend the authors for this work and encourage them to consider re-framing this article, so it sets out to fulfil its own political goals. I'd also encourage them to work closely with Indigenous scholars (which is different from working with/in diverse research teams). In your conclusion, you beautifully remind your readers that geologists need to remember that "[…] work we conduct is not apolitical, neutral, nor divorced from society – people, places, knowledge, power and the environment are interwoven with our science." Yes, indeed!!!

A pleasure to engage with this work and I wish the authors well in their pursuit to shape Geology for the next generation.