Peer Review Report

Review Report on Co-constructing 'third spaces' for engagement with and for minoritized community groups and environmental scientists

Original Research, Earth Sci. Syst. Soc.

Reviewer: Bethany Fox

EVALUATION

Q 1   Please summarize the main findings of the study.

This paper presents a critical reflection on the process of creating an equitable and respectful working relationship within a publicly-engaged research project. The social aspects of geoscience have increasingly been highlighted in disciplinary discourse in recent years, with a number of funding calls by relevant funding bodies for socially-engaged projects. However, many if not most geoscientists have limited training and experience in carrying out such projects, and so this paper serves as a timely and detailed consideration of ways to successfully approach such research and in particular how to build relationships of trust within a research team where some members are from minoritised groups and others are not. The use of a specific case study (or two case studies) of a socially-engaged Earth science project helps to ground the conclusions with concrete details relevant to the audience of ES Cubed. The authors use a duoethnographic approach to elucidate key themes of connectedness, intentionality, respect and humility as prerequisites for building successful relationships within and beyond the research team.

Q 2   Please highlight the limitations and strengths.

The paper is well written, with a clear command of the literature and an engaging set of findings. Although the broad findings in terms of the necessary components for avoiding "parachute science" and extractive research practices have been discussed elsewhere in social science and humanities literature and best practice guides, this in-depth polyvocal dialogue allows these considerations room to breathe while also allowing an equitable balance between members of the team. Particular strengths are the grounding of the discussion in a specific discipline-relevant project with a highly self-reflective team and the use of a duoethnographic method that allows the equitable representation of all voices with clear recognition of individual contributions. In addition, the fact that the team of authors includes not just the academics on the project but also representatives of the "public" side of the project is a great strength, especially given that it is dialogue between the author team that constitutes the data of the study.

There are two main ways I see in which the paper could be revised. First, because the audience is likely to include geoscientists with little to no background in the frameworks and theories included in this study, and because practitioners and critics of the methods in question have been calling for more transparency in exactly how they are conducted, I would recommend being more specific about the actual procedures involved. Second, the concept of "third spaces" is foregrounded in the title and abstract, but then receives little attention until the last 50 lines or so of the paper. I recommend reframing some of the intervening material to clarify how it interacts with the concept of a third space and/or why/how the team found the concept of a third space to be a useful framework. I will elaborate on both these comments in the detailed report.

Q 3   Please comment on the methods, results and data interpretation. If there are any objective errors, or if the conclusions are not supported, you should detail your concerns.

Duoethnography works well as a method for this paper, permitting detailed critical reflection with an equitable balance of voices. The authors have also used a number of other established frameworks to help them approach the creation and interpretation of their data. The choice of the four themes is well supported by the

discussion provided under each one. My only comment here would be that the use of the "standard" scientific headings of introduction, methods, results, discussion sometimes feels artificial in a paper of this kind, and the authors might consider a more bespoke set of sub-headings to more easily lead the reader through their argument.

Q 4 ▸ Check List

Is the English language of sufficient quality?
  Yes.

Is the quality of the figures and tables satisfactory?
  No.

Does the reference list cover the relevant literature adequately and in an unbiased manner?
  Yes.

Are the statistical methods valid and correctly applied? (e.g. sample size, choice of test)
  Not Applicable.

If relevant, are the methods sufficiently documented to allow replication studies?
  No.

Are the data underlying the study available in either the article, supplement, or deposited in a repository? (Sequence/expression data, protein/molecule characterizations, annotations, and taxonomy data are required to be deposited in public repositories prior to publication)
  Not Applicable.

Does the study adhere to ethical standards including ethics committee approval and consent procedure?
  Yes.

If relevant, have standard biosecurity and institutional safety procedures been adhered to?
  Not Applicable.

Q 5 ▸ Please provide your detailed review report to the editor and authors (including any comments on the Q4 Check List):

Main comments:
1. Because the audience is likely to include geoscientists with little to no background in the frameworks and theories included in this study, and because practitioners and critics of the methods in question have been calling for more transparency in exactly how they are conducted, I would recommend being more specific about the actual procedures involved (this is also the reason for my choosing "no" on the replication question in the checklist, although I acknowledge that replication is not necessarily a useful concept in qualitative studies of this type). The types of material used as data are listed in lines 166–172, but as a reader I would have liked to have been given more information to understand exactly what was done, both in terms of the production of the data and its analysis. For example, in terms of production of data, was the duoethnography a retrospective method using materials that had already been created earlier in the project, or was it planned from the start? Were the conversations from which quotes in the paper are drawn specifically framed as contributions to this paper? Were they conversations amongst the entire research team or subsets thereof? When in the project timeline did they happen? Were there initial guiding questions posed, was there a planned framework, did the conversations include review of materials mentioned in lines 166–172? (I am not suggesting that all these questions need to be answered, they are just examples of questions I had as I was reading.)

In terms of data analysis, I think it would be useful to talk a little more about how the four themes emerged and how the team worked their way through the data. Was there a process of coding, for example? Did the themes emerge organically or were they understood from the start? How did the team communicate about the data analysis, and did all team members see the same themes in the data?

2. The concept of "third spaces" is foregrounded in the title and abstract, but then receives little attention until the last 50 lines or so of the paper. Assuming that the authors consider "third space" to be one of the key framing concepts of the study, I recommend reframing some of the intervening material to clarify how it interacts with the concept of a third space and/or why/how the team found the concept of a third space to be a useful framework. In particular, the concept of third spaces is not mentioned at all in the introduction – I would have a section in here explaining exactly what a third space is and how the concept has been used in relevant studies in the past. Third space is mentioned in the methods section, but again this could be elaborated, especially considering the intended audience may have little sociological background. How have third spaces been constructed in similar studies in the past? Did you set out intentionally to create a third space and if so, how did you go about it? It would also be good to see third space appear woven through the results section. In particular, I would be interested to read about whether you conceptualise all the encounters you discuss (amongst the research team, with the walkers etc.) as occurring in one or more third spaces, or whether some of these encounters took place in the "space" of one party or other, as suggested in some passages in the results section? If the latter, how did that affect the encounter? Was all of the material for this duoethnography produced in a third space?

Related to this, I found myself wondering about the other walking groups. Dadima's is clearly the focus of the paper, is the only walking group named and the only one where the minoritised community around which the group is centred is identified. Also, of course, one of the authors is affiliated with Dadima's. The existence of other groups is mentioned but no detail is given. I wondered if the third space(s) you created only existed with Dadima's and whether, if that were the case, there could be a statement in the introduction that although you did work with other groups, this study is [chiefly?] about the work with one particular group.

3. In some places, I found the structure of this paper a little confusing. In the line-by-line comments below, I have highlighted some passages that I think may work better in a different place (obviously these are suggestions only). However, as mentioned above, my overall comment here is that the paper might benefit from a less standardised set of subheadings to allow the ideas to breathe.

4. I found myself occasionally confused in this paper because it seems to me there are a number of different sets of methods discussed: (1) the methods for the original projects; (2) the methods for creating a third space in order to develop the methods for the original projects; and (3) the methods and frameworks used to reflect on the methods for creating the third space (i.e., duoethnography and the concept of (a) third space(s)). For example, lines 89–101 fall under (1), 129–133 under (2), and 142–150 under (3). To my mind, only (3) should be included under the "methods and methodology" section, since those are the actual methods used for the results presented in this paper. The other sets of methods are important because they are part of the material presented for critical reflection, but I would suggest they be more clearly delineated. Again, I think here a more detailed set of subheadings would help.

Line by line comments

L36 – I recognise and am fully on board with the use of initial capitals for White, Black, Brown etc. However, I note that in this case this is an alteration of the formatting of the original quote. I don't have a problem with doing this, but I think it is worth noting in the footnote.

L56 – This reference is to a comment piece – is there original research/data that could be cited? I believe there are a number of recent reports from learned societies etc. presenting surveys covering these kinds of questions. See also the reports on the Equator school (https://equatorresearchgroup.wordpress.com/equatorresources/) and the GAIA project

(https://geoaccess.org.uk/wp-content/uploads/2022/11/Making-Geoscience-Degrees-a-Place-of-Belonging-for-All.pdf).

L59-60 – Important to note here that, although environmental and climate changes do affect everyone, they disproportionately affect members of minoritized groups.

Lines 59-62 – The first two points in this list could do with references.

Line 65-70 – I think this is a little unclear. The first sentence indicates that this paper presents an account of how your projects improved access to nature for minoritised ethnic groups. However, the paper as I read it is about how the teams went about creating an equitable third space for cooperation and collaborative discussion, not about the actual work of improving access to nature (although of course the former is necessary groundwork for the latter). The statement in lines 137-140 seems to fit better with the content, title and abstract as an encapsulating statement for the end of the introduction.

Line 71-77 – I would move this to the methods section or to a dedicated section on duoethnography.

Lines 78-127 – I would put this into a separate subheaded section to clearly demarcate general background information about the projects from detailed information about the work you did for this paper.

L92 – No apostrophes on walkers and walk leaders.

L95 – "This included" – clarify what is meant by "this"?

L111-117 – These two bullet points are quite wordy and unwieldy – can they be simplified?

L136 – Explain what is meant by 'upstream' here.

L135-140 – I think the second half of this paragraph would work better in the intro.

L154 – in terms of -> on

Footnote 7 – Is there a reason why the nine tenets are quoted from a secondary text rather than the original source?

L193-199 – Are these contributions listed somewhere? How did this exercise play into the duoethnography process/results? This exercise does not seem to be mentioned again, unless I missed it somewhere.

L207-237 – This feels like it belongs more in the intro or methods

Figure 2: This figure needs to be higher resolution (this is the reason for my choosing "no" in the question about figures on the review checklist).

L234-235 – See above re: more explicit discussion of how these themes were surfaced.

L268 – Knowledge of practical experience – should be knowledge and practical experience?

L300-301 "By addressing questions of representation and utility this offered us a justification for making connections with minority ethnic community walking groups" – given that both projects were framed from the beginning around work with minority ethnic walking groups, it wasn't clear to me why you need a justification for this here.

L343 – see -> she

L352-353 – this is an interesting point. Perhaps there is no space here but it might be worth explicitly making the point that if funding bodies want this kind of community-oriented work to be done they might think about

their proposal timescales and whether they are conducive to meaningful, equitable work that avoids parachuting and tokenising.

L385 – delete "which"

L388–390 – This question has not been explicitly raised before, but it strikes me as potentially a key question given the overall structuring of your results and the focus on Dadima's over the other groups. It is not raised explicitly again unless I have missed it. I recommend either foregrounding this question from early (or at least earlier) in the paper, or at least giving it a more detailed introduction here and a resolution at some subsequent point. (Or alternatively removing it all together if it is not that important!)

L550 – Does the word "indigenous" here refer to Indigeneity in the sense of Indigenous peoples? If so, would it make sense to capitalise it as you do with Black, Brown etc.? If a different meaning is intended, perhaps a clarifying footnote would be useful given the context of talking about minoritised communities.

L576 – Something is missing in this sentence.

L661–665 – This is an important quote but I'm not sure it's in the right place? It doesn't seem obviously to lead one from the preceding two sentences.

L675–676 – Rejection of ways of knowing – did you fully reject all previous ways of knowing, or was it more a rejection of the claims to exclusivity of particular ways of knowing?

Figure descriptions – are these intended to only be alt-text descriptions? I think the information from the descriptions for Figures 1 and 2 should go in the captions as well.

QUALITY ASSESSMENT

		Rating
Q 6	Originality	▮▮▮▮▯
Q 7	Rigor	▮▮▮▮▯
Q 8	Significance to the field	▮▮▮▮▯
Q 9	Interest to a general audience	▮▮▮▮▯
Q 10	Quality of the writing	▮▮▮▮▯
Q 11	Overall quality of the study	▮▮▮▮▯