

Co-constructing 'third spaces' for engagement between minoritized community groups and environmental scientists

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Walking the Walk

Badger: Principal Investigator, Conceptualization, Funding acquisition, Investigation, Supervision, Project administration, Resources, Writing: Original Draft; Review & Editing.

Holliman: Conceptualization, Funding acquisition, Investigation, Methodology, Data curation, Formal analysis, Supervision, Resources, Writing: Original Draft; Review & Editing.

Warren: Conceptualization, Funding acquisition, Investigation, Resources, Writing: Original Draft; Review & Editing.

Khatwa: Conceptualization, Funding acquisition, Investigation, Supervision, Writing – Review & Editing.

Araya: Conceptualization, Funding acquisition, Investigation, Resources, Writing – Review & Editing.

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Landscape Stories

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Abstract

The demographics of environmental and Earth scientists are not representative of the UK's multicultural society. We sought to widen diversity through two related engaged research projects, 'Walking the Walk' and 'Landscape Stories'. This paper offers a critically reflexive account, based on the methodology of duoethnography, of how we co-constructed a 'third space' for these projects. We sought to create the conditions for inclusive leadership informed by connectedness, respect, humility and intentionality. We argue that for environmental and Earth science research to be more equitable and inclusive, members of project teams should be engaged and more representative of wider society. Following this, the work to create third spaces requires: respect for diversity and different forms of expertise, knowledge starting points, power dynamics and esteem; a willingness to make connections across disciplines and sub-cultures, actively listening and learning from different (knowledge) cultures; and a commitment to be respectful of hidden and manifest difference, exploring objectives and gaps in knowledge in more holistic ways.

Keywords

Environmental sciences; Earth sciences; Engaged research; Duoethnography; Critical Reflexivity; Third space; Representation; Geoscience communication and ethics.

Introduction

The UK's Natural Environment Research Council (NERC) acknowledges that "environmental sciences are not as diverse as we would wish them to be" (NERC, 2020: 3). Increasing inclusion for minoritized¹ people, in relation to race and ethnicity, highlights long-standing structural, educational, and cultural inequalities, and the need for ongoing systematic change to address them.

In a similar vein to arguments made about exclusionary practices in the informal learning sector (Dawson, 2018), the combination of unreformed university curricula (Anadu et al., 2020; Giles et al., 2020) and a lack of diversity among high-

¹ By 'minoritized' we mean groups of people that have been, and continue to be, excluded and oppressed by dominant sections of society (Milner and Jumbe, 2020).

profile environmental scientists and related organisations, reconstructs inequalities for minoritized groups by creating 'invisible' barriers to inclusion:

"The stereotype of a geoscientist as a White² man, compounded by the perception that geoscience is an outdoors-only activity [...] is particularly discouraging to those from minority ethnic backgrounds" (Dowey et al., 2021: 256).

For many people currently working in Earth and environmental sciences, their first spark of interest came from experiences in nature (Dowey et al., 2021). Whether walking, hiking, climbing or visiting the coast, immersion in the natural world can plant the seeds of curiosity that lead to a lifelong desire to know more about our Earth and the environment (Giles et al., 2020). It is therefore striking that Natural England (2023) recently reported that "...woods/forest were more commonly reported as being in easy walking distance by children and young people from White (39 %) or mixed/multiple (33 %) ethnicities than those from Asian/Asian British (18 %) or Black/Black British (15 %) ethnicities".

Inequitable access to nature is an ongoing problem: Office of National Statistics' (2017) data showed that people from minority ethnic groups are less likely to visit and engage with the natural environment. Financial, cultural and opportunity barriers to accessing the outdoors are also recognised by both environmental organisations and grassroots community groups (e.g., Anadu et al., 2020; National Trust, 2022). And when students, particularly those from racial and ethnic minorities, consider further study in the environmental sciences, financial, practical, and cultural barriers persist (e.g., Giles et al., 2020).

We argue that the lack of embedded diversity practices in environmental and Earth sciences presents a major problem for natural history and conservation, and for wider society, as: 1) environmental impacts such as those driven by climate change affect everyone; 2) homogeneity increases the potential for privileged, hegemonic groupthink, limiting broader, creative thinking with diverse voices; and 3) exclusion limits opportunities for minoritized groups to experience the health and wellbeing benefits of spending time in nature (e.g., Saraev et al., 2021).

² We have used capitals for White, Black and Brown to acknowledge the equivalence of these terms as identifiers of culture, race and ethnicity (Mack and Palfrey, 2020).

This paper offers a critically reflexive account of how teams for two related projects, 'Walking the Walk' and 'Landscape Stories', aimed to improve access to nature for minoritized ethnic groups. We have used duoethnography as a methodology to explore how we co-constructed our contributions to these projects, reflecting on our approach to collaborative working and inclusive leadership, and our efforts to revise-in-process our equitable partnership.

Duoethnography is described by Hestad Jennsen and Martin (2021: 61-2) as, "a collaborative methodology where two or more researchers engage, share, and draw from their life experiences to provide understandings of a social phenomenon (Norris and Sawyer, 2012)". It is a methodology that "invites researchers to act as sites of inquiry" (Burleigh and Burm, 2022: 1), whilst emphasising "the relational character of research across people and practices" (Valdez, 2022: 92).

Walking the Walk

'Walking the Walk' was funded by NERC³ as part of a programme to make environmental science more diverse, equitable and inclusive.

Through this project we:

- Co-developed resources with minoritized community group leaders to support walking in nature in ways that felt meaningful to them, sharing different forms of knowledge and questions about the environment.
- Produced a map of relevant 'publics' (Reed et al., under review; 2009) to represent the range of minority ethnic community groups currently walking in nature.
- Explored walk leaders' and walkers' perspectives of walking in nature through an interview study (Holliman et al., 2023).

Over the six-months of this project we collaborated on eight walks with three community walking groups led by minoritized (minority ethnic) people, engaging 10 walk leaders and around 50 walkers. We conducted 20 semi-structured interviews with walk leaders' (n=12) and walkers' (n=9) (Holliman et al., 2023).

Our approach was tailored to meet the interests and needs of different groups. We worked with walk leaders to negotiate bespoke approaches for exchanging knowledge, alongside co-development of resources. This included training in

³ NERC, 'Diversity, equity and inclusion research in environmental science', <https://www.ukri.org/news/diversity-equity-and-inclusion-research-in-environmental-science>.

practical skills, such as map reading and walking route planning, and knowledge about landscapes. We aimed to increase the number of trained walk leaders, and explored a wider range of walking routes, incorporating more inclusive routes for varying levels of difficulty. Some groups requested a more information-based approach to develop subject knowledge, covering processes of landscape formation and evolution, and information about the geology, fauna and flora.

Landscape stories

'Landscape Stories' was a public engagement project funded by NERC⁴, with the aim of training Earth and environmental science researchers to co-design and trial storied walks that highlight aspects of geology, landscapes and ecological evolution.

The project involved Dadima's Community Interest Company (CIC), an intergenerational walking community based in the Chiltern's Area of Outstanding Natural Beauty, a freelance expert in science communication, and academics (geologists, ecologists and social scientists) from The Open University.

Through this project we:

- Built capacity of walk leaders and researchers to engage innovatively through the co-design of walking routes to showcase simple examples of ecology/geology-landscape interactions.
- Co-created stories about the natural landscape to enable walk leaders (and community members where they felt comfortable to share) and researchers to share stories about the natural environment, exploring geology, soils, ecosystems, ancestry and heritage memories, culture, faith and spirituality.

Over the six funded months of the project, we collaboratively organised, promoted and ran three walks, each involving three linked stories. Three scientists: an ecologist and two Earth scientists, co-created stories for each of the three walks, e.g., exploring meadow species diversity from the traditional description of them as 'hospitals of the field' due to the healing properties of specific plants that grow there, connecting ecology with lived experience; explaining how chalk was quarried and incorporated into flour as a nutritional additive; and reflecting on the ancient Ridgeway in the Chiltern Hills as a place of celebration, commemoration

⁴ NERC, 'Engaging the public with environmental science: 2022', <https://www.ukri.org/opportunity/engaging-the-public-with-environmental-science-2022>.

and gathering over thousands of years. Through these storied walks, we engaged with one walk leader and around 40 walkers.

Methodology and methods

The seven dimensions of 'engaged research design' (Figure 1; Holliman et al., 2022), combined with a principled commitment to 'fairness in knowing' (Medvecky, 2018) as a counter to forms of 'epistemic injustice' (Fricker, 2007) experienced by minoritized groups, informed the conception and proposals for 'Walking the Walk' and 'Landscape Stories'.

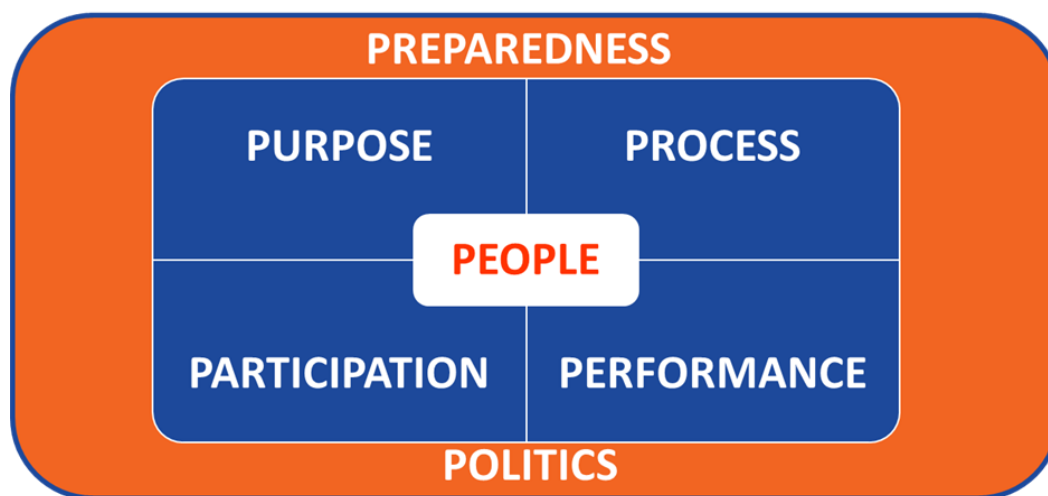


Figure 1: The seven 'dimensions' of engaged research design (Holliman et al., 2022).

Figure 1 description: Engaged research design involves seven dimensions, represented in Figure 1 as a rectangular schematic. The schematic can be read from the outside towards the centre or from the centre towards the outside. People, those who can and should participate, are at the centre of the schematic. The People dimension is surrounded by four further dimensions, which, from top left and clockwise, are: Purpose, the aims and objectives of the research, and how they are negotiated and agreed by participants; Process, the methods by which the engaged research is undertaken, and in ways that are appropriate for different constituencies; Performance, measures for exploring how wider constituencies have contributed to the research; and Participation, the changes, effects and benefits of the engaged research. Two further dimensions surround the other five, completing the seven dimensions: Preparedness, familiarisation with ontologies, epistemologies, theories, networking and partnership building, and horizon scanning for funding opportunities; and Politics, the wider 'political' context for engaged research, including local, regional, (inter)national, cultural and historical factors (adapted from Holliman et al., 2022).

Equitable approaches to engaged research design require the active involvement of interested and affected parties ‘upstream’ (e.g., Facer and Enright, 2016; Wilsdon and Willis, 2004). This paper offers critical reflections on how upstream (and downstream) engagement can co-construct a ‘third space’ (Bhabha, 1994; 1990)⁵ for engagement through negotiation of sub-cultural ‘borders’ between under-recognised (Nwangwu, 2023) and privileged groups.

One dimension of the engaged research design framework, ‘performance’, has particular significance for this paper. To undertake this critical reflection of ‘performance’ we employed the principles and practices of ‘duoethnography’ (Delacruz Combs and Cepeda, 2023; Al-Serhan and Ogbemudia, 2022; Burleigh and Burm, 2022; Valdez et al., 2022; Hestad Jennsen and Martin, 2021). Drawing on the principles of duoethnography, we sought to ‘meaningfully self-study in the presence of *others*’ (after Burleigh and Burm, 2022)⁶ by reflecting on the ‘performance’ of our approach to these projects. We were particularly interested in whether and how duoethnography could surface learning to inform our and others future practices in equitable approaches to engagement.

We recognised deep value in using this reflexive methodological approach because it offered us a way of reflecting: 1) on the work we undertook on the two projects as eight contributors with different forms of expertise, experience and disadvantage/privilege; and 2) in terms of how we addressed questions of positionality, power dynamics, etc. to co-construct the project teams. Significantly, we also saw similarities in the nine tenets of duoethnography (Norris and Sawyer, 2012)⁷ and how we began our work on the ‘Walking the Walk’ project

⁵ Bhabha (1994; 1990) conceptualised the ‘third space’ to represent the ‘mixing’ of post-colonial identities in the context of diaspora, “an unfamiliar location of differences, where lived experiences are shared, social and community interests are emphasized, and cultural values are negotiated” (Pathak and Melville, 2023: 14).

⁶ Our emphasis on *others*, as opposed to ‘other’ highlights that, whilst the literature on duoethnography emphasises the “polyvocal dialogic nature” of this methodology, the vast majority of published examples that we have identified focus on two researchers in dialogue. Our approach is different, involving eight co-researchers, therefore it is similar in practice to Valdez et al. (2022).

⁷ Norris and Sawyer’s (2012) nine tenets are: “1. Life as a curriculum; 2. Polyvocal and dialogic; 3. Deliberate juxtaposition; 4. Differences are articulated and discussed to interrogate and disrupt stories; 5. Question meanings held about the

which began with an exploration of disadvantage, privilege, purpose and power dynamics within the project team (see the section on Intentionality for more detail).

Duoethnography is a flexible and adaptable methodology. It offers contributors a degree of methodological pragmatism in its application (Morgan, 2014). Like Burleigh and Burm (2022: 3) we, “engaged in generative and critical dialogue across several modes of communication” to make meaning through our duoethnography.

To illustrate this point, we have sought to make meaning across varied sources: project meetings and notes generated through them; training in storytelling; co-developing equitable approaches for engaged research; preparations for walks, promotional materials and the stories ecology and Earth science researchers shared with walkers; collaboratively authored blog posts; online meetings; emails; contributions to social media; text messages; voice notes; and this collaboratively authored paper, which was co-constructed as a shared online document.

Making meaning from our duoethnography

Burleigh and Burm (2022: 3) argue that it is important to offer “a clearer definition of the roles and relationships of duoethnographers”.⁸

We, the ‘Walking the Walk’ and ‘Landscape Story’ teams, are eight people. We are five women and three men. Five of us are academics; one is a professional member of staff in a university; two are self-employed. We represent the academic disciplines of geology, ecology, education and sociology. Six of us hold PhDs in one of these disciplines, whilst a further member of the team holds postgraduate qualifications and expertise in communication, science engagement and environmental management. At the start of the project, five of us worked in the same academic department. As a result of working together on these projects, the other three contributors accepted visiting positions in this

past to invite reconceptualization; 6. Universal truths are not sought; 7. A form of praxis; 8. An ethical stance is a negotiated space; 9. Deep layers of trust grow over time and allow disclosure and rigorous conversation” (Burleigh and Burm, 2022: 2-3).

⁸ We have chosen to represent our duoethnography through collaborative authorship to offer a degree of anonymity to any one of the eight authors on this paper (Valdez, 2022). Contributions by different authors are represented by letters, A, B, C, etc.

academic department. Five of us represent the ‘cultural hybridity’ of diaspora (Bhabha, 1994) through UK citizenship allied with a rich understanding and/or lived experience of wider geographical locations and cultures. Two of us routinely commute to work together through a car sharing scheme. We all enjoy walking in nature.

We explored our contributions to the two projects through the ‘Contributor Roles Taxonomy’ (CRediT, 2024), “a high-level taxonomy, including 14 roles, that can be used to represent the roles typically played by contributors to research”. Whilst not all the 14 roles apply to the two projects, and a list such as this cannot adequately capture the depth or influence of individual contributions, this reflective exercise did demonstrate changes in how we cooperated and collaborated.⁹

Eight of us contributed to ‘Walking the Walk’, of which six returned to work on ‘Landscape Stories’. The reduction in the number of people contributing to ‘Landscape Stories’ was due to the smaller pot of funding available through the second call. From the outset of both projects, we were transparent about the funding allocated and paid collaborators for their contributions.

The issue of fairer payment for public contributors involved in research has been discussed in relation to public patient involvement (NHIR, 2022). Addressing this issue is essential to increasing diversity in engagement and improving opportunities to promote ‘fairness in knowing’. We acknowledge, therefore, recent initiatives by public funders, including NERC, to support co-creation of grant applications with funded contributions from public intermediaries, citizens, etc.¹⁰

Notably, contributions to the conceptualisation, funding acquisition and methodology of the second project, Landscape Stories, were more responsive to the needs of community partners (Raman, 2014; Seale et al., 2014), but remained largely cooperative in nature. We argue that this demonstrates a shift from project working to partnership working: the earlier project, Walking the Walk,

⁹ Dillenbourg et al. (1996: 190) cite the work of Roschelle and Teasley (1995) in making the following distinction: “‘Collaboration’ is distinguished from ‘cooperation’ in that cooperative work “... is accomplished by the division of labour among participants, as an activity where each person is responsible for a portion of the problem solving...”, whereas collaboration involves the “... mutual engagement of participants in a coordinated effort to solve the problem together.

¹⁰ For example, see Engaged Environmental Science, <https://www.ukri.org/opportunity/engaged-environmental-science>.

developed deeper trust relationships with Dadima's CIC, informed by greater knowledge and respect of individuals' expertise and lived experiences. Together, this supported cooperative approaches to upstream engagement in research design for Landscape Stories.¹¹

Our roles and contributions to the two projects and this duoethnography have varied, but we argue that each of us has influenced our partnership as equitable engaged practice. Through this reflexive exploration we have surfaced four inter-related concepts that have influenced and been influenced by our engaged practices: connectedness, respect, humility and intentionality. We document our reflections on these concepts in the following sections.

Connectedness

The work from conception to funded proposal on these projects (Figure 2, Points 1 and 2), required different members of the team to act as 'brokers' and 'intermediaries' for making connections across the team and with external partners (Knight and Lyall, 2013). We argue, in line with others, that this process needs to begin 'upstream',

"...the nature of a research programme is not simply determined by those who fund it and by its historic conditions, but also by those who enter a programme at its earliest stages" (Facer and Enright, 2016: 50).



Figure 2: A schematic, showing key elements in an idealised research cycle (Holliman, 2023).

¹¹ We also acknowledge that engagement with other minoritized community walking groups through Walking the Walk, did not engender the same level of ongoing partnership working. We explore the reasons for this through the concept of 'connectedness'; see below.

Figure 2 figure description: An idealised research cycle is represented as six numbered circles, one to six, each representing an activity in the cycle. The circles are linked in the order that they would typically be undertaken by researchers and research teams: 1) Conception, the identification of a new research project, information about it, funding sources, and the construction of a proto-project team; 2) Proposal, the codification of the aims, questions, methods, etc., typically submitted to a funder for peer review; 3) Publicity, communication of key elements of the proposal, adapted for particular constituencies; 4) Data collection and analysis, involving information gathering activities and analytical tools that are appropriate for the research to deliver valid findings; 5) Sharing findings and impact, involving forms of reporting, publication and socio-economic benefits, effects and/or changes that have been derived from the research; 6) Post-project activities, including wider sharing of learning, seeking new opportunities for further research, and other forms of partnership working. Point 6 may furthermore link back to Point 1, with the conceptualising of a new project or the development of a partnership.

We connected through several iterative stages to co-construct the Walking the Walk project team. Initially, this process involved informal office and corridor discussions within the same academic department.

A: "It was a serendipitous aligning of events and opportunities - Black Girls Hike was getting some exposure, so were Muslim Hikers, the Dowey, et al. [2021] report and the NERC funding stream just made it natural to think, Why don't we, as geologists and environmental scientists, go walking with these groups?"

B: "I think it was a casual discussion with A in the office amongst other things. I think, if I remember right, it was about the bid opportunities. [...] When A mentioned the Walking the Walk project and the inclusive aspects of it, it appealed me, and I was really keen to be involved. I think the follow on 'storytelling' was also something I was keen on."

The initial contributors, A, B and C, had a shared professional and departmental identity, whilst also representing different disciplines (geology, ecology and environmental sciences). The initial contributors then sought contributions from other university colleagues, bringing in theoretical and methodological expertise of equitable approaches, following discussions while car sharing (C and F), and through knowledge of practical experience in co-producing resources to support engagement (H).

F: "I get asked to join engagement projects all the time, but often after the big decisions about a proposal have been made.

Walking the Walk was different for two reasons: a) I was asked early in the design process and given opportunities to genuinely contribute; and b) the commitment to equity on the part of A, B and C was clear from the start".

H: "When I was invited to be part of the Walking the Walk project team, I was excited by the challenges as well as possibilities for cross disciplinary collaboration amongst the team and the community walking groups."

Shared values played an important part during the early stages of assembling members of the team; the university contributors were each committed to the principles and practices of equity, diversity and inclusion (EDI), and two of them represented the 'cultural hybridity' of diaspora. Each member of the team was therefore sensitized to the NERC call, and the need for positive change in relation to how minority ethnic groups access and experience nature.

With a nexus of academic staff in place, committed to exploring how to improve access to nature for under-recognised groups, planning turned to how to create connections with prospective external partners, minoritized community walking groups.

There are a range of strategic approaches to identifying 'interested and affected parties' for research (e.g., Reed et al., 2009; Mahony, 2015).¹² The addition of a social scientist to the team (F) led to the application of Mahony's (2015) guidance on 'creating publics' for engaged research.

D: "I was so pleased to see F's presence on the team. I was initially sceptical of him as a White male professor, but I welcomed the way in which he took on the role of learner and listener and posed gentle questions at the right stage without influencing."

By addressing questions of representation and utility this offered us a justification for making connections with minority ethnic community walking groups, to amplify different forms of (lived) experience, expertise and nature connectedness.

¹² We have used the term 'interested and affected parties' to reflect current discussions about the language of engagement in a post-stakeholder world (Reed, et al., under review).

One connection was of particular significance, involving an EDI and science communication expert (E) and an academic (C), both female and trained geologists. This connection was made through social media.

C: "I knew of E from Twitter™, and I reached out to her. We had a conversation and then she put me in touch with D, Mosaic Outdoors, Black Girls Hike, and a team in Scotland. I had conversations with D, [name of contact], then G, and passed on to A. I then joined a Dadima's walk because D invited me and met D and E there. The personal connection was absolutely vital."

E: "I was really pleased to be approached by C to advise on the project. I have seen and experienced tokenistic projects in the natural heritage sector, where minoritized communities are used to embellish the EDI credentials of organisations. Although well-meaning, these approaches create lasting damage through unequal power sharing and decision making. I was mindful of this as I began to connect the team to the walking groups. It mattered enormously that C showed interest and enthusiasm through listening and empathising with the minoritized experience in nature."

The connection between E and C was crucial to everything that followed in our partnership. E, a known, well-networked and trusted contributor among minoritized groups within the discourse of environmental equity, acted as a significant 'cultural broker' (Baas et al., 2023) in making connections, drawing on agreed text from the draft proposal to 'pitch' the possible of working together. (To a lesser degree, D, B and H also helped to make connections.)

D: "I was already connected with E and had met her before in person via walks. E and I hit it off from Day 1 and really connected at several levels."

A: "D was introduced to me via C, [name of contributor] via G and C, and [name of contributor] via H. As the project developed, we had a reasonably standard boilerplate describing it, which was largely taken from the text we used in the grant proposal."

The Walking the Walk project would not have been possible if we had not made connections with external partners through a combination of 'structured' (Palinkas et al., 2015) and 'snowball' sampling (Parker et al., 2019), supported by a 'cultural broker' with recognised symbolic capital (Pellandini-Simányi, 2014).

E's role in making initial connections with minoritized community walking groups cannot be underestimated. Her work in making connections was essential.

D: "It did matter that E made this connection/forwarded my details, as some vetting had already been done if that makes sense. I really trusted E and felt that she would only refer me if she saw merit/points of connection. Also, I made up my own mind when having an online meeting with C and A. It was an honest and open meeting where I shared any questions and concerns."

The White academics on the team were not connected to the thriving, if fragile, ecosystem of minoritized UK community walking groups. Black and Brown colleagues made meaningful 'insider' connections with community leaders on a timescale that would have been impossible for White contributors given the deadline for submission of a project proposal to NERC. (It is a moot point whether White academics could have made these connections if they had more time to do so.)

The degree to which connections were maintained in person and through cooperative working were key distinguishing features between Walking the Walk and Landscape Stories. Walking the Walk involved connections between university staff and three minoritized community walking groups. Connections with two of the walking groups were largely transactional, e.g., university colleagues provided advice on walking routes and resources on aspects of geology and ecology. Further, one of these groups was set-up to walk with members of these groups and not external contributors, including university staff.¹³

In contrast, the third group invites people from diverse backgrounds to cooperate in developing routes and resources, and to walk together in nature.

D: "It's not a 'them against us' approach, which is one of the reasons that at Dadima's - we haven't set it up as an exclusive South Asian space, and this rationale has opened other doors and tapped into creative intercultural knowledge. [...] I recognize that some spaces need to feel 'safe' just for Black only, or South Asian only, women only groups, for a whole wealth of valuable reasons."

E: "I have lived in the rural county of Dorset for over twenty years and have become accustomed to being perceived as an outsider."

¹³ It is important to highlight that no criticism is implied or intended in how connections were established, maintained or lapsed with these different groups. Engagement with each of the groups was productive, but also different.

These thoughts melt away with the warmth of companionship as I mingle with the Dadima's walkers. By the very act of walking in nature, we are taking control of where we are not expected to be but equally belong. [...] What is especially appealing to me about Dadima's is that the group attracts people from a wide variety of backgrounds, and that some of the walkers are elders in our community."

The opportunity for university staff to work together and spend time in nature with this community walking group established deeper connections, respect and empathy that informed our collaboration through Landscape Stories, and the connections which still thrive today. We continue to walk together in nature and support each other in new ways.

Intentionality

It is our contention that consideration of connectivity is insufficient to explore why aspects of the two projects worked productively with one of the community groups. In this context, intentionality emerged as another key dimension through our duoethnographic reflections, exploring issues of disadvantage, privilege purpose and power dynamics (see also MacGregor et al., 2024).

The primary aim of Walking the Walk was to engage with minoritized community groups to support walking in nature in ways that felt meaningful to them. This required a level of confidence on the part of minoritized community walking group leaders that the intentionality of university contributors to engage on equitable terms was genuine and not extractive.

D: "I didn't want 'parachute scientists' swooping in on short-term projects for personal gain".

In this light, we note that external partners conducted 'due diligence' on the university contributors and sought assurances before committing to working together.

D: "I did some basic online searches but warmed to them [A and C] and welcomed their willingness to listen to my concerns and they felt genuine. [...] We had honest and uncomfortable conversations at the start of our partnership. We discussed language, power operations, 'partnership' working and knowledge transfer hierarchy between us as White and Brown academics. [...] I raised how their White privileged positions could play out in this project - two senior White OU staff leading an EDI project? I didn't want another case-study that exploits our communities. I had to

feel confident that this partnership was genuine. I remember saying/requesting, probably insisting, that I look at a draft proposal before submission and add my feedback. They were both very open to this and welcomed/embedded my feedback into the submitted bid.”

This raises a pertinent question; how can privileged university contributors show that their intentions are virtuous and trustworthy when seeking to engage with new minoritized community partners? In the case of *Walking the Walk*, university staff demonstrated their commitment to equitable practices, in part, through previous actions, e.g., one as a departmental EDI Lead for Race Equity, one as an EDI Lead for a learned society, one as an academic lead for the co-development of equitable approaches to recruiting postgraduate research students, and another with experiences of conducting engaged research with a range of minoritized groups. Collectively and individually, these track records demonstrated an established commitment to, and practical experience of, ‘fairness in knowing’. However, we also recognise that track records on their own are not enough when engaging with external partners for the first time (see our points about the significance of cultural brokers under Connectivity).

The intentionality of university staff was also demonstrated through a willingness to engage in early and often uncomfortable conversations about academic White privilege before external partners agreed to participate.

A: “I was expecting there to be suspicion of our motives and of the Institutional nature of our institution. I was clear about my privilege and consciously reminded myself that even The Open University are not ‘the good guys’ as many within seem to think.”

F: “It was perfectly reasonable for external partners to question our intentions. I would encourage any external partner to do the same when they’re contacted by a university researcher, to record the responses, and to reflect on them as the project progresses.”

The intentionality of contributors continued to be explored through our engagement during these projects. For example, we explored questions of opportunity and disadvantage through the ‘wheel of academic privilege’ (Figure 3), “as a framework for reflecting on our intersecting identities across multiple domains” (Elsherif, et al. 2022: 8).



Figure 3: The Academic Wheel of Privilege (Elsherif, et al. 2022: 86). CC BY 4.0 DEED (Attribution 4.0 International; <https://creativecommons.org/licenses/by/4.0/>.)

Figure 3 figure description: “The Academic Wheel of Privilege is based on twenty identity types spanning seven categories: living and culture, caregiving, education and career, gender and sexuality, race, health and wellbeing and childhood and development. These identity types are shown as circles connected to three concentric rings (outer, middle and inner) of “identity” circles with increasing privilege as you go towards the centre. [...] The centre of the wheel of privilege shows a large circle with the text academic wheel of privilege. The identities listed here are a subset and are by no means exhaustive. Adapted from [Sylvia Duckworth](#)” (Elsherif, et al., 2022: 86-7).

Through this exercise, White members of the team and university staff acknowledged and engaged with how their privileged positions may affect the dynamics of the project partnership. Together, members of the team agreed that change was possible, but only if we work together with humility and respect to challenge deeply embedded structural inequalities. As a team, we were (and remain) committed to anti-racist approaches (Chaudhary. and Berhe, 2020), demonstrated through our actions, to promote greater access to nature. There was always a recognition that we may get things wrong, and we were all open to being challenged and questioned in respectful ways.

Respect

Each of us sought to translate our intentions into 'living our values' as the projects progressed, which we explore here through the dimension of respect.

D: "My initial connections with C and B felt kind and genuine. They built further over time as I got to know them better. The trust was built through seeing the actions they took, including going beyond the remit of the NERC projects. They are now both Dadima's Ambassadors. I'll never forget when C saw first-hand how a rural café didn't want to host the Dadima's group, approx. 15 South Asian walkers, for lunch. We looked very different to their usual customers and C was shocked; the café was pretty empty. I had experienced this before, hence always vetted countryside places ahead of a group walk. She hadn't this time. This, amongst other things, led to conversations around rural racism and microaggressions. As a result, I asked C to contribute to a panel discussion about her journey as a White ally, of learning and unlearning what White privilege means as a female professor when working in partnership with groups like Dadima's. I never thought that I'd have such great friends as a result of this research".

F: "The lack of egos on the team was refreshing, in combination with respect for the different types of expertise that each of us brought to the projects. No one contributor had all the relevant expertise to make the project a success. In cooperation, everyone made an important contribution."

H: "The bits I enjoyed most were informal sharing, critical thinking and reviewing progress. As a Black professional woman in academia, involved in both engagement and research, it was

refreshing to be involved in research where my personal perspective and cultural background were taken into account, having an impact and resonating throughout the different stages.”

Contributors to the projects each brought different forms of expertise and (lived) experience that had relevance to addressing the complexities and nuances of what it means to increase access to nature for minoritized groups. Finding connections between these forms of expertise and experience was important at the start of Walking the Walk, and we created space within the project timelines to acknowledge and discuss these.

A: “I think that [geology] also helped link E and me, as we both shared the common ground of geology. I think we all have a fairly common view of the world generally actually, and are all in the same sort of life stage? Each of those helped to cross the boundaries that might otherwise have been there. It was also a semi-active process building a team that wasn’t all bearded-White men, i.e., while nobody was asked to be involved on the basis of race or gender, we kept a vague eye on it and were pleased what had naturally come together.”

F: “Connecting with D was a pleasure as we have complementary interests in how epistemic justice can drive positive change for minoritized groups. She suggested duoethnography as a methodology of reflection, and it’s been a powerful tool.”

E: “Spending time in conversation with D about race equity in nature and intersectional feminism has given me a sense of consciousness that I have not had before. In addition, drawing on A’s vast knowledge and experience on Earth Science has given me a renewed passion for areas of geoscience I had previously overlooked. These interactions have impacted me immeasurably, enriching my professional work.”

In practice, we challenged pre-existing hierarchies of symbolic power and prestige (Pellandini-Simányi, 2014). Contributors were considered ‘equal partners’ in how we operationalised our research design, recognising that equitable partnership working needs critical engagement throughout the process. For example, the methodological design of the Walking the Walk project involved planning interviews with walk leaders and walkers, to rehearse potential concerns beforehand. Contributors representing minority ethnic groups on these projects

requested that interview protocols were designed to explore positive aspects of walking in nature, so that traumatic experiences such as racism and discrimination should not be the focus.

D: "Our connections and knowledge of/with nature are a lot deeper and richer than our racialised and historical traumas. My hope was that White members of the team would see and learn this as they developed relationships with Dadima's walkers and learnt through our stories in new ways."

F: "When I reflect on these projects I obviously think of the people, special people. But then I think of the food and drink we've shared, particularly on that really cold walk in January. 15 hardy souls, Brown, Black and White, walking in the Chilterns, amazing frost patterns everywhere and that wonderful chai. D's aromatic, warming chai. That memory conflicts in every way with the abuse that I've seen Brown and Black members of the team experience on social media."

In focusing on the positive (whilst always being mindful of the lived realities faced by racially minoritized groups), we adopted a principle that informed all aspects of our engagement on these projects: 'Do no (more) harm'. Through this guiding principle we acknowledged the historical harm that has been done (and continues to be done) to minoritized communities (Mackenzie et al., 2007).

Respect (and creating 'safe spaces') for different ways of knowing and learning was another significant aspect of how we included diverse contributions to the projects, and this added to the creative knowledge creation.

F: "I was conscious that the members of the team with PhDs in environmental sciences might not be comfortable with accepting different ways of knowing. Don't be afraid to 'loosen the straps' was my way of saying, 'give this a chance'. In practice, it wasn't an issue. In my experience they were always willing to listen and learn, as was I. E's and B's ability to weave together indigenous, cultural and scientific ways of knowing of geology and ecology blew me away. I have learnt such a lot from listening to them and reading their work."

D: "Humility is really important, because it's about not always centring that dominant academic or scientific narrative throughout."

E: "Existing in both worlds, as a minoritized Earth Scientist, I was conscious of a conflict within myself. That of disseminating scientific knowledge whilst recognising my spiritual and cultural relationship with the natural world. Through the project, I learnt that both can co-exist and complement each other, and I actively supported this approach as the work progressed."

The importance of integrating different ways of knowing, understanding and listening into projects that seek to make meaningful connections across multi-disciplinary teams and with minoritized groups cannot be overstated.

"We need to come to terms with pluralistic ways of knowing. [...] The very nature of co-construction is a recognition that cultural knowledge is different" (Tandon, 2023).

A pluralistic approach to ways of knowing offered each of us new tools to interpret and seek solutions to a complex challenge (Lawrence, 2020). This approach also offered opportunities for the interdisciplinary team to co-produce richer, more authentic stories, and to hear the stories of other walkers (Khatwa, 2019). As an example, on the 'festive celebration' walk, D made connections between a book quote from A's talk and the Panjabi cultural festival of Lohri where fire, the changing of seasons and harvesting are celebrated. Walkers welcomed this inclusive approach to storytelling, where could add their stories as a response. In this way, a pluralistic approach felt organic, authentic and richer.

We held joint planning meetings with the walk leader to discuss the nature and content of stories to be shared, and how they would better connect with the audience's lived experiences. A participatory approach to training, led by E, combined with ongoing support and 'dress rehearsals', helped the scientists to understand how inclusive stories could be told, offering constructive feedback for a more inclusive approach. D and E's contributions, exploring their lived experiences and D's knowledge of convening the Dadima's group, was key to making connections between culture, history, faith and science.

We argue that, by working cooperatively and respectfully through 'active listening', we surfaced and shifted power dynamics within the team. This was an ongoing process that required regular 'checking-in', in critically reflexive ways, throughout stages of the project. This weaving of knowledges helped us to make connections by embracing cultural hybridity (Bhabha, 1994) within the team, and with different people on the walks.

Humility

As we reflected on our contributions to the two projects, humility resurfaced as an important characteristic. We actively reflected on our positionality in contributing to different activities within the project. For White members of the team, walking with minoritized community groups offered a small, partial insight into being minoritized through reflections from walk leaders and participants.

F: "Once you see what it is like to be minoritized, you can't unsee it."

D: "Yeah, you can't unsee. But once you feel it, you can't unfeel it as well. The difference between me and C is that she will feel it differently as a dominant White woman of privilege. She won't have those historical lived experiences of racism or have experienced it growing up like I have, and still experience discrimination today. [...] The word trust is really important. I'll never forget a moment when we walked up a hill in the Chilterns. Me and C, it was on the second or third walk and C said: 'Thank you for letting me in and trusting me. This is your space that I've entered.' I am a 'safe space' holder and before letting C in I built a relationship with her to ensure that her motives and approach felt ethical, honest and kind. She showed a real sense of empathy and it felt genuine."

Whilst each of us was 'comfortable', at least to some degree within our 'home' contexts for these projects, and for some of us that notion of 'home' is obviously complex, we each made 'excursions' to 'territories' where our colleagues felt more at ease. Acknowledging when we were vulnerable, knowing that we did not know, or that we were in an unfamiliar space, exposed our humility.

D: "I was keen to learn more on the geology/landscape side and felt that the partnership would feel safe and non-threatening to me as a non-scientist. I did feel out of my depth at several points with the geology side but was equally fascinated and felt like I was going back to school in a way, but this time in a fun way with real purpose."

F: "I've spent most of my working life outside of my academic home. That has had its challenges and its rewards. Working on these projects has been similar in some senses to that, but the degree of difference has been amplified, and so have the rewards."

These excursions across 'borders' were significant in co-constructing a 'third space' (Bhaba, 1994; 1990) for these projects. This process of co-construction started with Walking the Walk, where we co-created 'safe' conditions for a third space. It was uncomfortable at times because the third space we co-constructed was challenged by our complex identities and by making explicit issues of power, privilege, and discrimination. It required courage and resilience for members of the team to make multiple 'border crossings' between (sub)cultures (Aikenhead, 1996) to perform 'the art of bridging' (Tandon et al., 2023) in a multi-cultural context. The work of co-construction continued through Landscape Stories, and through co-authoring this paper.

Creating a supportive environment for border crossings has required each of the contributors to be respectful of hidden, unspoken and manifest difference within the project team and to show generosity in how we supported each other when engaging in contexts that were unfamiliar to us. Importantly, this required consideration of positionality, humility and empathy (rather than sympathy). We acknowledge that the feelings of isolation will not be the same for a Brown or Black person in a space full of White people.

Sharing learning from our meaning making

This paper has explored 'partnership as practice' (Tandon, 2023) through duoethnography, a reflexive methodology that we applied to two related projects with the common aim of improving access to nature for minoritized groups.

We argue that our use of duoethnography in this paper illustrates what Tanden (2023) describes as 'action-oriented learning' through engagement, represented through forms of un-learning, re-learning and in combining ways of knowing to deliver positive change. The process of self- and collective reflection has helped us to understand the potential for greater 'symmetry' in how we conduct engaged research in more equitable ways (MacGregor et al., 2024). We argue that, if we are to operationalise epistemic justice through engaged research (Holliman et al., 2022), contributors should reconsider every aspect of the way 'they' plan and conduct research, with a particular focus on 'they'; the People (Figure 1) who are included/excluded throughout the whole process.

Having diverse representation in project teams is not sufficient to make the research process more equitable. This, for us, was simply the starting point.

C: "I distinctly remember arriving for my first Dadima's walk having only met E and F online. I think I was the only White person at that walk, and I suddenly really got what it feels like to be the visible

minority. I was really grateful for that experience so early in the project discussions."

Our critical reflections demonstrate that equity is embedded from 'conception' to 'post-project activities' (Figure 2) and beyond, where projects like this have today grown into embedded partnerships.

Whilst the teams for the two projects brought intercultural dimensions to the research, drawing on different forms of academic and lived experience, the influence of this cultural hybridity (Bhabha, 1990) would have been lost if there had not been uncomfortable upstream conversations and ongoing acceptance of different ontological, epistemological and methodological approaches. Diverse voices, (lived) experiences and interdisciplinary knowledge perspectives, offered a creative and meaningful third space, where there was a rejection of pre-existing, encultured ways of knowing. We accepted that new ways of making meaning allow for the co-creation of diverse knowledge.

D: "I think we underestimate friendships in research because it's always seen as clinical. Those friendships that emerge in that third space are where you can tap into each other's knowledge in a way that doesn't feel hierarchical."

Adopting the principle of 'Do no (more) harm' we crossed borders into shared learning territory (Aikenhead, 1996), co-constructing what Bhabha (1990: 211) conceptualised as a 'third space',

"The process of cultural hybridity gives rise to something different, something new and unrecognisable, a new area of negotiation of meaning and representation".

This was not an easy or straightforward process. Our 'third space' has been disruptive and uncomfortable, but a positive place of learning. Through cooperation, our partnership has become a 'safe space' for profound and deep learning. We have un-learnt and re-learnt as we have seen how connectivity can be enhanced through equitable practices, characterised through intentionality, respect and humility.

D: "It's also that third nuanced space - it will be created in different ways depending on the project and the partners, depending on their belief systems, values and ethics, the terms and conditions they draw up and what I/we agree to; we need to move away from a 'them and us' hierarchical approach. We can't give you a prescription for what your third space is going to feel like because

it depends on what you're willing to put in and your purposes for the research."

Whilst we look forward to continuing our journey across borders into our evolving third space, our hope is that these critical reflections resonate with 'allies'. We encourage those yet to make these journeys, to explore the rich possibilities when we challenge preconceived notions of what equitable engagement looks like for environmental and Earth sciences.

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