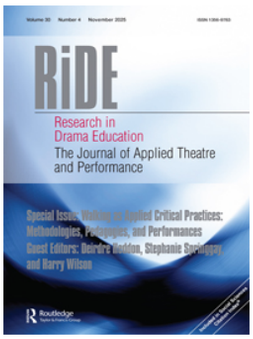

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Walking under dark-skies: sensing spaces of inclusion in national parks

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ABSTRACT

Walking Under Dark-Skies explores the transformative experience of walking within National Park Dark-sky Reserves, connecting women with the Universe as they seek to walk in spaces that have been historically and politically exclusive. This article shares the experiences of women who participated in dark-sky walks during the North York Moors National Park Dark-sky Festival in 2024 and 2025. By combining arts-based walking practices with Deep Listening, the study highlights, through sensory ethnography, how women perceive nocturnal environments. The significance of this research shows how sensory walking practices create inclusive spaces for women to walk under dark skies.

KEYWORDS

Dark-skies; women; walking-arts-practices; sensory ethnography; inclusion

Introduction

Struck by the lack of access to dark-sky places and the staggering statistic that less than 85% of the United Kingdom can access dark-skies (CRPE 2023), we wanted to explore how this impacted women. *Walking Under Dark-skies* began as an experiment between two scholars, one being a walking artist and the second a cultural geographer. Our practices coalesced on immersive and co-produced sensory field research. We designed two walks to explore our sensory experiences of walking at night in natural settings in the North York Moors National Park (NYMNP). Our study asks two questions: (1) How can dark-sky reserves create spaces of inclusion and challenge social and cultural perceptions, through walking with women at night?; and (2) what sensory practices and skills facilitate women walking in dark-sky reserves? Adopting a sensory ethnographic approach, the researchers designed an immersive walking experience to capture verbal and often taken-for-granted nonverbal experiences. We worked with Deep Listening theory: 'Deep Listening involves going below the surface of what is heard, expanding to the whole field of sound while finding focus' (Oliveros 2022, 38). Deep Listening is a practice that invites all the senses to be engaged as a listening process. We analysed the injustice associated with a lack of access and how experiencing dark-sky places can achieve a sense of inclusivity for women. Inclusive access to green spaces for women is crucial for addressing inequalities (Colley, Irvine,

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and Currie 2022). It requires the design of public engagement and management of public green spaces that address women's unique needs, safety concerns, and social barriers. Ensuring that women of all ages, abilities, and backgrounds can safely enjoy these spaces enhances their health, well-being, and social connections, making green spaces inclusive, particularly at night (Aylward and Mitten 2022).

In the United Kingdom (UK), seven internationally recognised protected dark-sky reserves in national parks exist, where the night-sky is unobstructed by light pollution. NYMNPA has established a dark-sky public engagement programme to facilitate visitor and community awareness in dark-sky conservation. NYMNP highlights the need for research that examines the social, environmental, and cultural understanding of the impact of light pollution and dark-sky conservation, with attention paid to visitors and community perspectives and perceived barriers to engagement (Galvin 2024).

The North York Moors National Park has a vision 'that everyone should be confident to visit and enjoy our National Parks' (1) and is working with the charity Peak District Mosaic to 'Support more people to connect with nature and enjoy the National Parks' (*Championing National Parks for Everyone | NYMNP* 2025). In 2025, the Dark-skies Festival celebrated its 10th anniversary with various activities and events, encouraging people to visit the national parks and experience them at night. Barker et al. (2023) emphasise that public parks are often perceived as unsafe for women, limiting their nighttime access to green spaces. Their research highlights that sexual harassment in public areas affects 71% of women in the UK, underlining the need for safer park designs for women and girls. Perceptions of safety restrict access to public urban and other green spaces for women and girls, who face unique concerns such as fear of rape and sexual assault. These perceptions are multi-dimensional and intersect with characteristics like race, ethnicity, sexual orientation, religion, and age (Barker et al. 2023).

Given the reality of women's experiences, which often includes fears of objectification, harassment, and violence while trying to enjoy recreation (Wesely and Gaarder 2004, 5), such perceptions are compounded by cultural history, which has instilled a fear of the wilderness at night (Dunn and Edensor 2024). Imagery and myths associated with darkness evoke fears of ghosts, frightening monsters, robbers, and the unknown (Winterson 2009).

Dunn and Edensor (2024) observe that contemporary fiction and films often reflect societal fears, where darkness serves to hide alien and unseen threats. Robert Macfarlane (2008) emphasises that experiencing the outdoors at night – whether in a forest, by a river, on a moor, or even in a city garden – allows one to perceive these environments differently. However, this unique understanding is seldom accessible to women, as they frequently lack the opportunity to explore these settings confidently (Barker et al. 2023). This lack of confidence may be linked to the underrepresentation of women in fields like astronomy, which are often viewed as dominated by white males and financially inaccessible (Schulte-Römer 2023).

Therefore, we suggest that our visibility as women sits within the bigger question – how can we confidently connect to nature, and the vast infinite space of the Universe, and understand dark-skies through walking experiences? Exploring women's experiences in dark-sky reserves is essential for enhancing our understanding of shared experiences. Other than Schulte-Römer (2023), scholars have yet to examine women's sensory walking experiences in dark-sky locations, and none have focused on reserves in national parks.

The purpose of this article is to provide deeper insight into women's experiences and how this may shape public policy and engagement. The research takes a novel approach by examining sensory walking practices through Deep Listening theory to analyse women's experiences in dark-sky reserves. A new immersive walking practice model was developed by combining artist-walking with sensory ethnography. The value of this approach helped researchers understand how women experience dark-sky locations and identify sensory practices that promote inclusion, nature connection, and equitable access to these areas.

Literature review: context

Dark-skies: creating inclusive dark-sky places

Light pollution has devastating effects on all living things, particularly human health. It is estimated that over 90% of the population in North America and Europe lives beneath light-polluted skies. The loss of dark-skies has become an urgent political concern, due to the impact on the climate crisis and loss of access for 80% of the global population who are unable to see the Milky Way (Falchi et al. 2016). Although dark-sky festivals can provide valuable opportunities for visitors to experience nocturnal environments, which are restorative, educative, improve well-being and shown to promote pro-environmental behaviours (Hall, Paddison, and Jones 2025); NYMNP recognises a significant deficit in those who can experience dark-skies within the reserve. Public engagement in dark-sky festivals is seen by national parks to begin to address the inequities (Hall, Paddison, and Jones 2025).

The injustice produced by the encroachment of light pollution means 85% of the population in the UK do not have access to dark-skies, and women are doubly disadvantaged by social and cultural constraints when accessing dark-sky spaces. Access to dark-skies is unequal, and people in urban and deprived areas may never experience dark-skies. Notwithstanding the environmental injustices impacting biodiversity loss, Artificial Light at Night (ALAN) has been shown to increase serious health conditions such as cancer and heart disease (DarkSky International 2023).

Injustice, disadvantage and disconnection go hand in hand, highlighting the critical nature of national park public engagement programmes in reconnecting human stakeholders with green, blue and dark landscapes. The challenge is to address the dark-sky poverty faced by those in urban areas, especially in regions of urban deprivation where residents seldom, if ever, encounter dark-skies. Public policies aimed at protecting nightscapes are primarily spearheaded by NGOs, which often struggle to combat light pollution beyond designated dark-sky reserves (Alva et al. 2025). This 'extinction of experience' (Soga and Gaston 2016, 94) means that only 5% of the population in the UK live in places with access to the Milky Way, severely limiting our ability to connect with dark-sky ecologies (CPRE 2023). Astronomer and Black Feminist Chanda Prescod-Weinstein (2021) advocates that we all have the right to the night sky and should engage, not in a dialogue of loss, but in a liberation discourse that ensures access to and justice for living environments.

Schulte-Römer (2023, 177) argues that the fear of violence in rural areas, often shaped by urban experiences (Shewry 2023)[1], creates a misguided perception that dark-sky

locations are dangerous. This fear restricts women's ability to walk at night. Building on Schulte-Römer's (2023) insights, expanding our perspective to investigate the injustices related to access experienced by women and girls provides an opportunity to consider social and cultural perceptions of fear associated with darkness and the threat of male violence (Schulte-Römer 2023). Our study examines these fears and suggests that sensory practices through walking together were important to creating a sense of safety (discussed later). As such, our experiment proposes a solution, by organising dark-sky walks for women, promoting both access and inclusive engagement with nighttime environments.

Researching dark-skies in National Parks

National Parks are raising awareness of light pollution by improving access to dark-skies and the ecosystems they support through public engagement programmes like dark-sky festivals. These festivals and events increase ecological awareness among visitors and local communities, extending their impact beyond the national park. Through public engagement, National Parks aim to create just nocturnal places that reorient human stakeholders within the ecosystem. Their vision is to encourage human stakeholders to 'give back more than they take away' from protected landscapes (Galvin 2024).

However, knowledge about how stakeholders, including women, experience dark-sky reserves is limited. Previous research has focused on dark-sky designation (Collison and Poe 2013; Loveridge et al. 2014), Indigenous People's socio-cultural experiences of dark-skies in Arctic Circle, Australia and New Zealand – although this research is not led by the Indigenous communities (Mathisen 2017; Noon et al. 2023; Shewry 2023), outdoor adventure, night walks and cycling (Beeco et al. 2011; Cook and Edensor 2017), and astronomy tourism and well-being (Derrien and Stokowski 2020; Jacobs, Du Preez, and Fairer-Wessels 2020; Petrevska, Bjelajac, and Djercan 2021). Moreover, research demonstrating the extent to which dark-sky public engagement events and festivals facilitate reciprocity for the dark-sky ecosystems is lacking (MacMillan et al. 2023), particularly research exploring barriers to access through a Deep Listening lens.

Scholars have examined art events after dark to understand how nighttime enhances sensory perception and alters our sense of self in dark landscapes (Morris 2011). Edensor and Lorimer (2015, 1) refer to the experience of moving through darkness, shaped by human and nonhuman entities, as 'landscapism.' Ellen Jeffrey (2023) highlights how dance in woodlands fosters connections with nonhuman entities, aligning with Sarah Pink's (2009) idea of sensory emplacement, where the mind, body, and environment merge. Such collective experiences in dark art installations can create nostalgic connections to night skies and inspire pro-environmental behaviour (MacMillan et al. 2023). However, women's sensory experiences through Deep Listening have yet to be explored and nor have scholars combined sensory ethnography with walking arts practice in dark-sky places.

Sensory emplacement in ethnography

There are two distinct approaches to sensory ethnography; firstly, one that focuses on the modalities of individual sensory experiences (sight, sound, taste, smell, touch); and

secondly, one that considers senses as interrelated and interconnected as a 'knowing as you go' that produces emplaced bodily knowledge (Ingold 2000, 228). The latter emplaced approach was adopted in direct connection with our creative engagement activities. Pink (2009) conceptualised emplacement to advance notions of embodiment, recognising the interrelatedness of mind–body-environment and how it is productive of space and place. We interpret emplacement to include the political forces and their entanglements produced by, with and beyond the body, such as gender's impact when walking at night.

Artist walking practice

In the field of walking arts, a growing array of resources offers sensory exploration walks and highlight artists who integrate walking into their work. In *Ways to Wander* (Hind and Qualmann 2015), various Wander Scores invite readers to engage their senses while walking and to connect with the landscape around them. Helen Frosi's *Walk with Me* invites readers to walk 'when the earth hums, and you hum back,' guiding the reader through a poetic experience of night turning to morning (Hind and Qualmann 2015, score 9). Emma Welton's *Following Your Ears Recipe for a Sound Walk*, in The *Walkbook: Recipes for Walking and Wellbeing* (Heddon et al. 2022), invites the walker to 'Go outside … Let the sounds come to you … ' and offers a 9-phase sensory sound-based walking experience. These examples highlight creative possibilities of tuning into a natural environment through the senses and with the self as part of the narrative experience of that sensing. It is these experiences we aimed to capture through sensory ethnography.

Yet Nina J Morris (2011) reminds us that our sensory orders are recalibrated when faced with the reduced illumination levels of the night (p.315). Her research on night-time landscape installation illustrates how the loss of 'visual acuity' draws on 'the other senses'. Indeed, the practice of Deep Listening works in tandem with the whole body's senses and is an ideal practice for walking in the dark; 'the skin listens too. In fact, the whole body listens in this heightened state of awareness' (Oliveros 2022, 54). The artist Ellen Jeffrey (2023) has been moving in the dark since 2011; 'To dance in the dark is to experience not the body's motion meandering along the ground or page but rather the contours and alterations of a ground meandering through the body's motion' (89). Her practice began by walking in Helsinki woodland at night, observing the dark, which is a distinctive experience from the day. Spending two years nightwalking allowed her to understand what 'the night felt like'' and to feel 'an exhilaration characterised as much by fear as freedom' (86).

Gail Burton, Serena Korda and Clare Qualmann (2025) hosted *walkwalkwalk;* participatory public walks twice a year often aligned with midsummer and midwinter nights (Heddon and Turner 2016). In their Night Walk Midwinter 21st December 2010, participants were invited to respond through photos, thoughts, and recollections of the walk to share with others. Indeed, sharing experience within walking arts practice is fundamental to a community experience and exploring the multifaceted individual connections we have to the environment. Hind and Hall's focus of being 'with' the night to appreciate the dark, invites the participants to reflect upon their sensory experiences, through conversation and mark making; poems, written responses, and sketches, in situ with site and from within the experience of *being* in the dark as an active sensory listener, to dissolve 'limiting

boundaries' (Oliveros 2022) and materialise their experiences so they can make meaning from them.

This paper discusses the recce walk between Hall and Hind during their initial research to design walks conducted between February 2024 and March 2025. It then shares the verbal and written responses from four walks with groups of women that explore how sensory experiences produce inclusive ways of engaging women in dark-sky places so that the multitude of experiences, emotions, and feelings are captured in the context of sensory activity.

Methodology

Combining sensory ethnography with walking arts practice, we created an immersive experience with nature. Following Sarah Pink (2009), Hall's approach to sensory ethnography enabled the capture of a diversity of expressions that explicated the social and political implications of emotions in creative nature-based research. The methodological design focused on creating walking art experiences that fostered a connection with nature at night. The goal was to capture the sensory narratives of participants through these experiences. All participants, including researchers and walkers, had the opportunity to 'walk and think,' allowing them to reflect on their thoughts and experiences. Participants were encouraged to explore new ideas, tackle various issues, and construct arguments, musical scores, or poems based on their reflections during the walk (O'Neill and Roberts 2019).

Being mobile with research participants positions researchers as co-producers of empirical data, facilitating sense-making or 'knowing through practice as a sensual human in the world' (Crouch 2000, 68). For instance, walk-along participatory methods allow for the co-production of experiences and understanding of various phenomena between researchers and participants (Kusenbach 2003). The walk-along approach highlights spatial contexts over chronological ones, aiming to 'replace' researchers with participants in the act of mobility, thereby generating spaces and places (Spinney 2015, 232). In situ immersive techniques, where researchers participate in walking, provide fleeting, unique, and detailed access to the physical experiences of both researchers and participants, shaped by their individual biographies (Kusenbach 2003).

Ingold and Vergunst (2016, 69) consider 'field work on foot' to express how the sociability creates a 'rhythm of walking' that can lead to a 'particular closeness and bond between people' and new understandings of lived emplaced experiences. Ingold (2000) uses the phrase 'knowing as you go', where the body, in connection with ground, weather and companions, produces an individual sense of emplacement and therefore the meanings attached to place (Ingold 2000, 28). Importantly, we experienced 'ethnographic intimacy' *with* research participants (Frohlick and Harrison 2008, 16), which enabled sharing personal stories, histories and sensory biographies. For example, Hind's artistic process includes walking in coastal environments and connecting to the landscape by moulding her body to the earth to evoke Deep Listening and sensations of deep time (Oliveros 2022). Deep time is the concept of geological time that spans billions of years, far beyond the scale of human experience and through Deep Listening, we invited our bodies to go 'beyond what is heard … to connect with the acoustic environment' and 'all that inhabits it' (Oliveros 2021).

Methods

Our emplaced approach to walking focused on deep time, connecting to the geological terrain below and the cosmos above through a process of Deep Listening (Oliveros 2021). Our bodies became field recorders, collecting the sounds of the natural environment, interpreting what the body felt as it touched, and writing electronic dance poetry from the experience. These experiences were captured using a GoPro Hero 9 body-mounted camera and post-walk field notes.

Hall and Hind established a data collection framework through two UK reconnaissance walks: one from Helmsley to Rievaulx and another at Cawthorne Roman Camp. These walks, chosen from routes promoted by the North York Moors National Park (NYMNP), aimed to develop walking scores for future participants.

Utilising their experience in the Dark-sky Reserve, they created invitations that reflected the landscape, including designated periods of silence to engage participants' senses. The walks also encouraged sharing amateur astronomy knowledge, night navigation, and personal stories. Participants were invited to write Japanese Haiku poems and partake in creative readings, inspired by the opportunity to pause and connect with the nocturnal world.

Four walks were promoted through the NYMNP Dark-sky Festival website, two in 2024 and two in 2025, in the UK, exclusively for the York-based charity Kyra. To capture sensory data, mobile video ethnography using a GoPro Hero 9 body-mounted camera was used. Depending on the group's needs, video capture was used sensitively and only at key moments, and in some instances, not at all, to preserve the privacy of the women. In these instances, post-walk field notes captured the experiences.

Participants

The walks were advertised on the Dark-skies Festival website, inviting women to experience a 'Sensory Wander', as a gentle, steady-paced dark-sky walk. Across the four participant walks, we engaged a total of forty women, most were from a white Western middle-class background (although one was from Calcutta, India and one from Iran), and varied in age (25–75 years), class, ethnicity and disability, all identified as women. The walks were also offered exclusively to UK-based charity, Kyra, whose purpose is to help local women make positive and lasting improvements to their lives by providing non-judgmental support and information (Kyra 2025). The walks were supported through public funding from the National Lottery through Arts Council England. Before each walk, informed consent was secured, and the walks were purposefully small to facilitate prolonged collaboration (between 2–4 h). Data was anonymised to protect the identities of participants. Twenty-eight participants had never been on a creative rural night walk before. University ethics approval was secured to conduct the research.

Data analysis

Key thematic findings were identified and triangulated using NVivo 15 by analysing data from field notes, semi-structured interviews, and film footage, to ensure the trustworthiness of the findings. Twelve codes were grouped into themes: nature connectedness, climate anxiety, health and well-being, and access/inclusion/exclusion.

Findings and discussion

Walk 1 was a recce between Hall and Hind from Helmsley, to Rievaulx (8th April, 2024). It was an opportunity to discuss our shared interests in Dark-sky walking practices and design the walks for others

Our conversations related directly to what we were experiencing together as we walked in nature and reflected upon our fears and experiences as women. We reflected upon how safe we felt walking together and how important future walks would be in supporting all women to feel safe. The recce walk was also a key moment in understanding how we each contextualise sensory activity in direct connection with the observations we were making and the desire to listen and tune into the natural environment. The night felt alive, and the smells were strong. We noticed how our bodies adjusted to accommodate the lack of light and we tested how long we could walk without using a headtorch. From the experience of witnessing the colours fade and the stars coming into view, we told each other stories related to our interest in the night sky, and shared our astronomical knowledge. Our experiment combining walking art with sensory ethnography allowed us to create an immersive experience in the dark. We examined the challenges of walking at night. We found that the body's adaptation from twilight to darkness heightened our awareness of the nocturnal landscape, fostering a sense of confidence and connectedness. This deepened our sensitivity to the transition from day to night, such as the shift from daytime to nighttime bird calls. By avoiding artificial light, we reduced our environmental impact and embraced a just way to experience dark-skies.

As we walked, various themes emerged related to sensory experiences, emotions, gender, behaviours, and nature connection. Walking in silence fostered nature connections and a physical discourse between human and non-human bodies, allowing us to access the sensory aspects of our experiences (Kusenbach 2003). Silence helped us appreciate touch, sound, and smell while recalling physical skills for navigating challenging terrain.

The reconnaissance walks revealed key sensory practices, such as using night vision and feeling the ground beneath our feet, influencing our movement and perception of smells, sounds, touch and emotions. We also observed how the transition from day to night prepares the body for darkness, alleviating fears related to movement, falling and perceptual dangers lurking in the shadows.

Our methodological experiment helped to determine a framework using walking arts practice to capture participants' sensory biographies through sensory ethnography. Our reconnaissance walks helped us identify how periods of silence and walking without artificial light facilitated sensory reflection. To promote Deep Listening, we included verbal and non-verbal creative sensory experiences, such as touching and smelling, which encouraged the mind, body, and environment to connect. We decided to introduce creative practices like writing Haikus and engaging in unstructured writing and drawing to capture experiences creatively. This approach produced rich data that demonstrate how walking at night in rural landscapes can be empowering for those who have previously felt excluded.

Walk 2: (14 participants). The captured conversations below, offer a snippet of what was discussed across the participants, in walk 2 from Helmsley to Rievaulx, 9th May, 2024

> I am named after a constellation. So, I'm grateful to mommy for giving me such a lovely name. And I think that is really what began my fascination with the night sky. And now I'm all about constellations and everything. […] This walk has prompted me to think about when I was a little child, and I used to go to the planetarium with my parents [who] would point out my name in the night sky.
>
> I was very interested when you pointed out the light in the house over there, as it reminded me of when I was a kid and summer evenings, you'd play out late and you'd think it was still light, and then you go inside and you realise it's dark. And I think that's exactly what you were saying, you don't notice it's dark until you – because it's so gradual and your eyes get used to it, and that sort of magic feeling of realising 'gasp' we were out in the dark, even though it felt like it wasn't.
>
> Back in Calcutta, which is one of the safer cities in India, I love flâneuring and there is an element of flâneuring in this walk itself. And the exercise that you asked us to think about, and just being mindful and hearing the birds chirping, […] is just really overwhelming for me. I was feeling […] the multi-dimensional sense of […] the moss and hearing things, […] how that relates to constellations.
>
> My philosophical background is Chinese medicine. And it talks to your discussion on the naming of things. I was taught that man stands between heaven and earth. So, the Yin and Yang is the heaven and earth. We call it the heavens, it's the translation from the Chinese, and man is the three, it's the middle. And we transmit the Chi from heaven to earth and earth to heaven, like a sort a lightning rod or whatever. So, your question, 'where would we be without the night sky,' is, well, we wouldn't be.
>
> Scale can be quite extraordinary or it can put fear into us, but I think if we talk about these things and have an understanding of them, then we're a little bit more connected.
>
> I think the scale feels really amazing like that. Like, it does scare me
>
> I have been really struck this evening about what you were talking about in relation to light pollution, you know – the people in cities who can't see the dark-sky, I was imagining them as sort of marooned in light islands – that they could never find a way out.

Walk 2: discussion – walking stories, histories and biographies

The women periodically paused to connect with their surroundings through silence, which fostered Deep Listening and a deeper bond with nocturnal ecologies. This silence was complemented by poetry readings, discussions on navigating the night sky, and opportunities to express feelings through Haiku poetry. Participants who shared their names and childhood memories felt a thrill in connecting with the cosmos during their walks and were eager to share their experiences with others. The stories shared during the Haiku activity poetically captured the nighttime environment, enhancing the experience of being in a dark-sky setting and fostering a sense of inclusion among women. Inspired by childhood memories, these emerging personal narratives express a desire to reclaim nocturnal sensations, reflecting a heightened ecological awareness of the night-sky landscape.

All participants referenced their senses, especially when encountering something new. They called out upon seeing a bat or hearing an owl, allowing others to engage their

senses as well. Many participants were new to natural night vision, and their confidence in moving in the dark increased as they enjoyed the transition from dusk to darkness. When Hall invited them to use artificial light, many resisted, preferring to be immersed in darkness. Being enveloped in darkness fostered a feeling of anonymity – of belonging to the nocturnal world – while artificial illumination instilled a sense of exposure and even fear of being seen.

Conceptually, a continuous time frame relating to the ground below (deep time) and the sky above (cosmic time) was foundational to the walks. This focus led to a more in-depth discussion among participants about their past, their identities, and how these connect to memory as they walked and talked about concerns for the future – while acknowledging the colonial power that remains beyond our reach.

Concerns surrounding the troubling power that resides in space colonisation intermingled with the more sensual experience, thus, our reality, politics and immediate environment settled together; we were not simply romanticising the night sky. The concept of mind–body-environment evolved into a just way to engage with the nocturnal worlds.

Walk 3: (4 participants). The captured conversations below, offer a snippet of what was discussed across the participants, in walk 3 Cawthorne Roman Camp, 23 May 2024

My sense of smell, was like wow, I can smell different things for sure, very sweet smells.

The senses kicking in, or is the elderflower producing more smell because it's night?

I'm listening more carefully now, paying more attention to what I hear, because there are less details visible. I also felt that I'm walking slower and my feet are like doing things that I don't normally do. I'm examining things with my body rather than just seeing things and just moving on quickly.

I like how I feel more like an animal.

That's what I was thinking as we were pacing, there is something interesting about this pace, because we're hiking, and then it stops, and something else takes over. And it feels quite animalistic, I noticed there were sounds that you wouldn't normally hear, I couldn't identify one of them.

Drops of rain. Rain on the leaves

It's impossible to hear that in London. And it's such a nice thing. Maybe rain would be more pleasant if you could hear that.

I was thinking this -because I didn't want to trip over, I think I was like, subconsciously or unconsciously, paying attention to how you two were moving in front of me, and as soon as you there was a change in your rhythm, I knew that there must be something there.

Without saying anything, just pointing, watching out, loving the silence of this experience.

[…]. It's rare that we get that space.

I just felt like it took the pressure off.

And then when we sat down, and I had my hand on some moss, and then I just felt really, really calm. […], almost like de-stressing my body. And it was nice. I didn't expect that feeling.

I do find these experiences of touching nature in the dark meditative. I was feeling the textures of the bark, it felt extraordinary as it is rare to connect to nature in this way.

I can smell something different that I've not smelled before,

It's really earthy.

I've never been, and here I am in the middle of dark. I love it.

I feel safe.

There is also this unknowingness, so you don't really know; the dark means you feel like you don't know what's there.

Yeah, there is this mysterious feeling.

You can't see, so you assume the worst, don't you?

I think we're less accustomed, we're less and less used to the unknown, that's the thing

The reality for women is we don't feel safe walking alone at night.

Historically, I think all cultures, our bodies are not the norm for public spaces. We are always associated with domestic space, with staying inside, and men – they've been ruling public spaces forever. So, I think we feel apologetic for being out in public space alone at night, we feel like ashamed, maybe, a little scared that we're taking that space.

I also think it is very much morally loaded, you know, a woman alone at night it just, it sounds out of place. Historically, when you look at it, it's just not a normal thing or accepted or approved.

Yeah, you have to justify, if not to your parents, if not to your family, even, to the shopkeeper who's around the corner.

Hind invited the women to write haikus on blank cards to reflect on their walk. They wrote these in the dark forest, using head torches near a dead tree covered in fungi.

Haiku example by participant Saba Zavarei
There, further away,
fox and owl, and deer
are staring at me through the dark

نجا
آن دورتر
روباه و جغد و گوزن
از دل تاریکی به من خیره شدهاند

Walk 3: discussion – silent walking practices, deep listening and nature connectedness

Once the participants felt comfortable, they were invited to practice being silent. The moments of silence encouraged an experience of Deep Listening and shaped our discussions. Silent walking encouraged Deep Listening, allowing us to stargaze together while enjoying the sounds of birds, owl calls, the wind in the trees, and the fading colours of the sky. The participants' silent reflections were closely tied to the site and how the

environment, especially at night, stimulated their thought processes. Our pace naturally shifted as we moved through time and space at night. We move slowly and silently, staying aware of potential dangers, allowing our bodies to feel and adapt. Silence was fundamental to our experiences.

On this evening, misty wet weather obscured the night-sky but awakened other senses that were attuned to the rain landing on algae and mosses and many observations were made on the sense of smell. These observations were shared through discussion at key points and creatively when producing Haikus. Deep Listening allowed us to explore the deeper layers of our consciousness and helped us change or dissolve limiting boundaries (Oliveros 2022). It heightened our awareness, evoked feelings of wonder, and fostered a sense of connection with nature and our place in the world. We felt safe in each other's company and experienced a harmonious alignment of mind, body, and environment.

Walk 4 & 5: Kyra women's groups (two groups of 12 participants).

The captured responses below are a snippet of what was observed and shared across the participants, in walks 4 and 5, Cawthorne Roman Camp, 25 February 2025 and 25 March 2025.

Participants in both walks expressed their feelings by writing a word or drawing on a blank card after a five-minute silent walk. A sensory exercise in a woodland clearing encouraged them to connect with the environment through touch. No rules allowed for free expression, and their responses were collected immediately afterward. Their responses are written out here as an example.

> Tranquillity, peace, happiness, ability to star gaze, connected with new people and feeling confident.
>
> Cool air. Bird song. Fading Light. Joy. New friends. Stars. Peace.
>
> Freedom. Peace.
> Stars ignite curiosity.
> Nature feeds my soul.
>
> Inspiration, peace,
> Passion, connection.
>
> Tonight, I felt harmony between the Heavens and the Earth.
>
> Getting outdoors and realising what's important.
>
> Memories of walking on my own.
> Now, walking together with nature and amazing friends.
>
> Mental health ready to explode: Calm. Peaceful. Alive. At Ease. In control. Chilled. Mindful. Tranquil. Wind blowing through my hair.
>
> Looking up in the trees.
>
> The clear night sky showed the stars and planets in their magnificence.
>
> They twinkled like fair lights hanging on the branches.

The pheasant calls. Memories of Roald Dahl's Danny Champion of the World.

Connecting with my inner person was awesome.

Made me feel like a child again.

Connecting to darkness was a wonderful experience.

Walks 4 & 5: discussion – inclusive dark-sky walking practices

Walking as a group removed barriers to engaging in rural landscapes at night. All women were surprised at how long they could walk in the dark without a headtorch and found this a liberating experience. Barriers of accessibility, fear of the unknown or being hurt from falling were allayed through shared experience and learning new skills, such as navigating rough broken ground in the darkness, using and trusting night-vision and employing little-used senses such as hearing to walk safely. This created a sense of inclusion and social justice for women who had not previously experienced or felt safe to walk in rural locations at night.

Hind gave prompts that encouraged participants to share their physical stories, which emphasised often taken for granted movements, such as a shifting of weight to navigate rough terrain and how this changes when walking at night. Many of the women lay on the ground, embraced trees, and reached toward the sky. They moved their bodies *freely and at ease with the space*, as their bodies adapted to the environment. Their practice of Deep Listening was shaped by engaging with nature through practices such as touch and silence, but then shared in detailed verbal and Haiku descriptions of their experiences of connecting with nature.

The growing connections the participants experienced also raised ecological awareness and a desire to protect dark-sky environments. This was a tentative move toward social and ecological justice. Being connected in an inclusive space produced a sensation of empathy, care and a desire to protect dark-sky ecologies.

Conclusion

Our dark-sky sensory walking practice, analysed through a Deep Listening theory, provides a unique way to connect women inclusively with the natural dark-sky environments. This experiment shows that shared and co-created experiences make dark-sky places more accessible to those who fear darkness.

Through a walking arts practice captured via sensory ethnography, we have demonstrated how Deep Listening generates feelings of inclusion and ecological awareness, as Pauline Oliveros aptly expressed (2022, 38).

> We listen in order to interpret our world and experience meaning. Our world is a complex matrix of vibrating energy, matter and air, just as we are made of vibrations. Vibration connects us with all beings and connects us to all things independently. (…) Deep listening takes us below the surface of our consciousness and helps to change or dissolve limiting boundaries.

Through engaging in sensory practices, such as walking in silence, touching trees, the ground, stones and the grass, and practicing Deep Listening, together we made a

shared emotional connection with dark-sky places to explore our place on Earth and the Universe and with atoms, minerals and all living things. We invited others to engage in creative activity in situ *with* the dark-skies, to move the body, welcome in silence, and listen to consciousness. Hind and Hall's ethos within these practices aimed to recognise an equality with nature, respecting the more than human, and understanding our place within a deep time to achieve justice for all living things and natural entities.

A practice rooted within music, Deep Listening is a sensory experience. It conveys that all the senses (including touch) are part of the listening process, allowing room for internal thoughts to come to the surface with the imagination, too. When applied to walking activity, this practice offered a novel way of being with and connecting to the earth and the cosmos.

Participating in walking arts demonstrates that dark-sky areas, previously seen as inaccessible by some women, can become inclusive through collaboration. To promote inclusivity, public engagement must focus on creating safe spaces for skill development. Deep Listening during dark-sky walks fosters a sense of belonging and strengthens connections between people and nature that dissolve limiting boundaries.

Note

1. Teresa Shewry (2023, 125) urges us to take a critical and cautious view of the 'wondrous qualities' of dark-skies and the consequences of their loss, particularly by acknowledging the colonial injustices faced by Indigenous Peoples, such as Maori communities in Aotearoa, New Zealand. Shewry (2023) examines how Western 'conditions of darkness' have shaped injustices, including methods of mapping and navigation, as well as police raids on Maori communities at dawn (Shewry 2023, 125).

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