

Experiencing the Forest: The Impact of Embodied Perspectives on Ecological Awareness

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Abstract

Nowadays, the impact of climate change is worse than ever, and there is an increased need for innovative methods to promote ecological awareness and pro-environmental behaviours. This study targets the effects of an embodiment-based workshop paired with a 7-day diary study, to investigate the workshop effects on the participants' connection with nature, perceived responsibility and behavioural change. Imagination and embodiment methods engage participants in sensory and perspective-taking exercises, focusing on emotional connection with nature beyond cognitive understanding. These approaches support deeper ecological awareness through experiential learning. The sample was formed by six university students who participated in this 2-hour workshop in the forest next to the campus of the University of Twente. The diary study consisted of two questionnaires administered during the week, once a day. The main method of analysis was thematic analysis, and a total of four themes were extracted from the codes. These themes were emotional connection to nature, sense of responsibility, behavioural or thought change, and other personal reflections of the participants. While most participants reported increased awareness of their surroundings and a greater desire to spend time in nature, only a minority expressed deeper emotional engagement or behavioural change. The workshop's effectiveness also seemed to depend on the participants' predispositions and openness to the imagination-based approach. This study gives insight into the use of imagination and embodiment to be able to use these methods to tackle problems like ecological awareness. In addition, suggests the importance of pairing these methods with the personal views and philosophies of the participants to make them comfortable engaging in specific exercises.

Introduction

Among the variety of ecosystems on our planet, forests cover approximately 31% of the land area, but they face increasing threats from the consequences of global warming (Reed et al., 2017). Trees are essential in protecting biodiversity, regulating climate and supporting us by producing oxygen (Turner-Skoff & Cavender, 2019; Reed et al., 2017). About 4.05 billion hectares were covered by

forests in 2021 (Erick Burgueño Salas, 2024). Climate change seriously impacts forests and trees by increasing wildfires, climate anomalies and the spread of new diseases. The change in temperatures stimulates the drying of organic matter in forests. This matter is the material that burns and causes the spread of wildfires (Wasserman & Mueller, 2023). Due to global warming, between 1984 and 2015, the number of wildfires has doubled in the Western United States (Wasserman & Mueller, 2023). Temperature rise in America affects forests across North & South America, Europe, Russia, Australia, and beyond, making this a worldwide problem (Munday et al., 2025). Further consequences of climate change are the constant migration of different species (Weiskopf et al., 2020). Indeed, Trees migrate to new locations with favourable conditions as a result of changes in climate zones. However, not all species can move quickly enough, which causes growth to decrease. For example, Boreal Forests are one of the world's largest land-based biomes, covering 11% of the surface (Ruckstuhl et al., 2007). Their habitat is located in the northern parts of Canada, Asia and Europe. They need cold temperatures with harsh winters and short, mild summers to survive. These types of forests are warming rapidly and lead to drier conditions for their habitat (Ruckstuhl et al., 2007). As a result, they are migrating to colder climates, but some species are not able to migrate fast, which might lead to extinction in the near future (Ruckstuhl et al., 2007). In their article, Robbins et al. (2021) explain that in warmer winters, forest pests increase, leading to forest infestations and tree mortality. Temperatures being warmer during the winter led to a 30% increase in tree mortality caused by the survival of bark beetles in California (Robbins et al., 2021). Conditions of dryness in the summer also stimulate bark beetle infestation. Indeed, the lack of water causes the trees to grow more slowly and absorb less carbon, which weakens their resistance to insect attacks (Robbins et al., 2021; Whipple et al., 2019). However, the abundance of water can also harm the tree's life and well-being. If the roots of the tree are constantly placed in water, this will cause the plant to suffocate and eventually die (Yamauchi et al., 2017).

Considering the described challenges trees face, it is essential to make people realise the importance of this species for our survival and the planet's well-being. With stronger awareness and

emotional connection to trees and forests, human motivation for climate action, protection, and forest renewal becomes more likely (Mayer & Frantz, 2004). This study aims to explore whether ecological awareness, specifically connection with trees/forest, can be increased with embodied methods that go beyond purely cognitive-rational approaches that rely on providing knowledge on the topic.

Theory and Research on imaginative, embodied approaches to ecological awareness/human-nature connection

In this paragraph, the role of imagination and the body in creating and adopting new perspectives will be described.

Imagination can be explained as a dynamic process of having new perspectives. A good definition for imagination can be the act of “temporarily distancing our awareness from the current moment of a developing proximal sphere of experience in order to investigate past, future, or alternate distal present experiences before reconnecting to our social proximal experience” (Zittoun & Gillespie, 2015). Jones and Schoonen (2024) describe imagination as a basic element that enables us to acquire more knowledge about "close-by" possibilities that come from experiences that we are familiar with. Imagination happens to be shaped by our physical interactions with the world, which means that the more we experience something, the easier it is for us to imagine it (Jones & Schoonen, 2024). The results presented by Jones and Schoonen (2024) indicate that using imagination may help us understand physical actions and personal thoughts in everyday situations, but it should be used with caution when pursuing more abstract philosophical questions. Since Jones and Schoonen (2024) underline the fact that abstract topics are difficult to imagine, Zittoun and Gillespie (2018) explain how abstract topics like future situations can be generated through imagination. Zittoun and Gillespie's (2018) model highlights how imagination enables people and groups to move between the present and possible futures, influencing behaviour and societal development (Zittoun & Gillespie, 2018). To connect this study to the research, the process of mentally taking the perspective of another entity would move someone from their own frame of

reference to a different one. This connection between imagination and change in frame of reference is particularly relevant when considering ecological consciousness, which is defined as “the awareness of the situation of the natural environment, fostering responsibility and care for the ecosystem through the feeling of being connected to the planet, in this specific case, to the trees” (Pearce, 2024; Rufo, 2024). The process of imagination paired with embodied practices can help in building a connection and foster behavioural change (Rufo, 2024).

Embodiment is the process of engaging the body in ways that increase awareness of the senses and the connection with the environment (Pearce, 2024; Rufo, 2024). For instance, Jacques Lecoq's movement-based approach is characterised by its emphasis on movement, the body in space, and direct engagement with the environment (Pearce, 2024). The main characteristics of this method are the connection of physical and sensory aspects with sensations and rhythm that, all together, should create an emotional connection with the entity embodied (Pearce, 2024). Lecoq also stressed the importance of observation and the connection with the external environment over relying solely on internal psychological experiences (Pearce, 2024). This approach makes it possible to embody different perspectives to foster a deeper understanding of the more-than-human world (Pearce, 2024). Pearce (2024) used this model to get a deeper understanding of ecological awareness by exploring dramatic scenarios of the environmental problems. Pearce (2024) found that participants felt more connected to the environment and more engaged with their surroundings. The necessity for further knowledge of how cultural backgrounds impact new perspectives was made clear by the fact that not all participants have a positive relationship with nature. According to interviews after the experience, the approach caused some changes in the attitudes and knowledge of the participants about nature (Pearce, 2024). They reported better mental and physical health as well as a greater understanding of their place in the ecosystem. Although further research is required, this shows that using Lecoq's method can help foster pro-environmental attitudes and a possible behaviour change (Pearce, 2024).

While the presence of physical and sensory components is conducive to the embodiment process, there are conditions and techniques that can support this process. Watfern et al. (2024) presented two main types of exercises in their workshop: Sensory Engagement Exercise and Body Mapping with Natural Materials. Participants had to explore the environment using their senses in the Sensory Engagement Exercise. They were encouraged to use as many senses as possible, such as listening, smelling, and touching. In this exercise, Watfern et al. (2024) aimed to have a deeper connection between participants and trees. Thanks to this type of exercise, participants developed a personal bond with the trees through creative and physical engagement with nature, which promotes empathy that is not simply observation of a shared experience (Watfern et al., 2024). Secondly, participants drew their bodies on a piece of paper and used natural materials found in the surroundings to decorate them (Watfern et al., 2024). With this practice, they could also express their feeling and thoughts towards nature. This kind of activity provides a safe space to reflect on complex emotions regarding environmental problems, which can reinforce awareness and appreciation for the trees (Watfern et al., 2024). Gibson (2019) also underlines the importance of mindfulness and meditation when experiencing new perspectives (Gibson, 2019). The main functions of meditation are detachment and decentering, as well as meta-awareness. Meditation can make it possible to enter a state of detachment from habitual responses to focus more on emotion and sensation (Gibson, 2019). By doing this exercise in nature and combining it with others like the aforementioned ones, it becomes easier to adopt and understand better the perspective and life of non-human organisms (Gibson, 2019).

To sum up, the condition of living organisms like trees is in danger due to global warming. That is why people's awareness is of extreme importance to remedy the already critical situation. Knowledge-based approaches to ecological awareness, while valuable, may not be enough to inspire meaningful behavioural change. That is why this study aims to test a new approach that combines imaginative processes, body practices and exercises to create an emotional connection between people and nature. A workshop, based and adapted from the Council of All Beings,

designed by Joanna Macy and Molly (Work That Reconnects Network, 2023). Their methods involved inviting participants to step out of their human identity and speak *as* another life-form—plant, animal, insect—to foster ecological empathy. While Joanna Macy and Molly created the workshop specifically for and used by environmental activists, this study wants to tailor this design to students. The change in target group and population is a step towards bringing this type of ecological awareness activity to a broader public.

This research contributes to understanding how embodied imagination can impact ecological awareness.

Now, the research questions that this study is focusing on are the following:

How do participants perceive their connection to nature after experiencing the workshop? In what ways, if any, might they express greater responsibility toward nature? And are they expressing any type of small but meaningful shifts in environmental behaviours, such as reducing waste, engaging in activism, or spending more time outdoors?

Methods

The study used the qualitative approach of a diary study, paired with an experimental workshop in the forest. This method mainly helped in exploring the potential psychological and behavioural changes in relation to nature. The workshop design was developed by a group of two Psychology bachelor's students, three project supervisors and an external expert on deforestation and the condition of the local forest.

Participants and recruitment

For this study, a total of 6 participants were recruited through a convenience sampling method in the network of one of the researchers. The resulting sample is made of 5 females and 1 male, with an age of 21 to 26, and a mean age of 23,5. The nationality of the participants was mixed with 2 Germans, 1 Canadian, 2 Italians and 1 Taiwanese. All were students from the University of Twente; the majority of them were from the Psychology Bachelor Programme, with a total of 4 out of 6.

Meanwhile, the other 2 were from a Bachelor of Industrial Engineering and a Master's degree in Health Science. Four participants were third-year students in their bachelor's major, while 2 participants had already graduated from their studies. Since it was not designed for students, this version of the workshop was created to help them gradually become comfortable with the type of sensory state of being required for the Council of Being. This was due to the different audience and the perceived difference between their everyday experiences and the workshop's unfamiliar methods.

All participants voluntarily agreed to take part in the study and digitally signed an informed consent before the experience. The study was also approved by the Ethics Committee of the University of Twente, application number 250371.

Materials

For the forest workshop, the main materials used were: a guide on paper for the facilitator of the workshop and a digital consent form (Appendix A). On top of that, to facilitate the execution of the exercises for the workshop (Appendix B), various materials were provided by the researchers. Paper sheets, coloured pens, scarves to be used as blindfolds, clay and paper with specific questions to make the participants reflect. Lastly, a phone was used to record the focus group session at the end.

To create the questionnaires for the diary study, a computer with an internet connection was used to connect to the website Qualtrics. Qualtrics is an online survey platform for creating personalised surveys and automatic data collection. Its main features are the possibility of randomisation of the questions, logic flow, feedback and restriction to one response per participant, as well as automatic storage of the data. These aspects together improve the quality and the reliability of the survey. For the participants is also possible to answer the questionnaire anywhere and at any time, making the website very accessible to everyone. Lastly, Qualtrics ensures great anonymity and data protection for the ethical necessities of the researcher.

For the diary study, the researcher created two different questionnaires, an initial post-workshop questionnaire and a follow-up daily diary questionnaire for the rest of the week

(Appendix C). The first one includes nine open-ended questions and 15 questions where the participant had to evaluate the exercises engaged in prior to and during the workshop (for an explanation of every exercise, please read the procedure section). These evaluative questions focused on the degree of engagement, perceived utility of the exercise and impact. The open-ended questions invited the participant to a reflection on their personal workshop experience.

The second questionnaire only contained four open-ended questions to be answered every day for the rest of the six days. Since answering the questions every day could be too demanding for the participants and lead to dropouts, a total of four questions appeared appropriate.

Each question targets one of the research questions: perceived connection to nature, sense of responsibility, and changes in daily behaviour. The first focuses on cognitive and emotional changes in how participants perceive nature; the second asks how the life-form they embodied continues to influence the daily life of the participant; the third is about concrete examples of pro-environmental behaviour; and the fourth directly addresses shifts in environmental responsibility. Together, these questions aim to capture meaningful changes in perception and action following the workshop experience. These questions were generated by using as inspiration the Revised Scale for the Measurement of Ecological Attitudes and Knowledge from Maloney et al. (1975).

With these two questionnaires combined, the diary study was formed and created also based on Bolger et al. (2002), who proved the relevance of this method in tracking within-person changes. Bolger et al.'s (2002) study also explains how the diary study method is relevant in tracking psychological changes over time, by giving the participant a space and time to reflect on the experience.

The timeframe of the data collection consisted of a week, since it allows the participants to vary with their routine and interactions with nature. This makes it possible to capture a bigger variability of behaviours and reflections.

Lastly, Atlas.ti, was used for the analysis of themes and codes. Atlas is a qualitative data analysis software that makes it possible to organise, code and interpret large texts. This tool is

useful in creating codes from fragments of text and grouping similar responses. The use of ATLAS.ti guaranteed a systematic, transparent, and accurate approach to managing complex text that was essential to this investigation.

Procedure

Workshop

Before the actual experience, the participants received by email a consent form and an information sheet with all the main information summarised. The informed consent form explained the nature of the study, including the workshop's experiential and potentially emotional elements. Participants were informed that the activities—such as perspective-taking, sensory exercises, and meditation—might push them out of their comfort zone. However, it was clearly explained that all exercises were voluntary and adaptable to their needs. For example, participants could choose not to be blindfolded or choose to do the exercises alone rather than with a partner (Appendix A). They signed the consent form before taking part in the experience and conducted an exercise in preparation, called “sit-spot”.

The workshop took place in the forest, where participants were first reunited in a spot which was described in the consent form. Once all the participants were present, they and the researchers walked to the spot for the workshop. The workshop consisted of five main exercises designed to foster embodied connection with nature. It began with a Sit-Spot practice, where participants spent time in a natural setting to increase sensory awareness. On the day of the workshop, meditation was followed to help participants open their senses. In the Blindfolded Exercise, they explored the forest in pairs, with one person blindfolded to deepen non-visual perception and trust. During Being Chosen, participants allowed themselves to be chosen by a non-human life-form, which they then embodied. The final activity, the Council of Beings, invited participants to speak from the perspective of their chosen life-form, expressing its experience, ecological concerns, and messages to humans, encouraging reflection on environmental responsibility. (see Appendix B for an overview of all the exercises). After the workshop, participants took part in an audio-recorded focus

group session, where they could talk about their experience. The focus group data fall outside the scope of the current study.

Diary study

From the day after the workshop, the participants received a questionnaire once a day by email to fill up and submit on the Qualtrics website. The survey was sent every day at 7 pm, because at that hour the day is coming to an end and there is a lot of time to develop new reflections. According to Ohly et al. (2016), writing in the evening improves recall accuracy while keeping participants' routines as normal as possible.

The first day, the questionnaire received was focusing on the personal relationship of the participants with nature and the environment, their subjective experience with the workshop and their demographics. From the second day until the end of the week, they had to answer four open-ended questions related to the research questions. Once all the data were collected, to better conduct a thematic analysis on the questionnaires, the results were copied and pasted into different Word documents, one for each participant. At this point, the researcher saved all the Word documents and the data from Qualtrics into a drive. This made it easier to analyse and organise the results.

Data analysis

The documents got uploaded into Atlas.ti and were analysed thematically by highlighting the most critical information about the individuals' changes in emotional connection to environmental problems, feeling of responsibility towards climate change and behavioural change.

Thematic analysis, the method of analysis used in this paper, is the process of identifying, analysing and reporting themes, also intended as patterns, within the data (Braun & Clarke, 2006).

As a starting point, the researcher created deductive codes from the research questions and the paper. This made it easier to start with the analysis, while also keeping in mind the aim of the research (Fife & Gossner, 2024). Following this logic, a total of 4 themes were created.

“Behavioural change”, “Emotional connection to nature”, and “Responsibility” are the main ones that were derived from the research questions, while “Important personal views” cover all the codes

that were relevant to understand the perspective of the participants, but not directly connected to the research questions. Following the logic of the themes, any type of behaviour or thought that was considered eco-friendly was coded and divided into each relevant code. For behavioural change, the main codes of this group were on: awareness of the surroundings and willingness to spend more time in nature, and pro-environmental behaviours like recycling or paying attention to food waste. The theme of emotional connection was first labelled as personal ideas and connection to nature, but it seemed too broad and general, so it was tailored into the personal connection with nature. In this theme, not only are emotional connections underlined as important, but also the new perspectives and what the participant learned about nature. Lastly, responsibility not only covers the degree of awareness of the own impact on nature but also the bad feelings that the problem causes, as well as the absence of responsibility; since this was considered as connected to the general topic of responsibility. The last group was entirely created by reading the responses and grouping the most relevant aspects.

All of these groups of codes were created while reading and analysing each important sentence, making this process inductive (Bingham, 2023). With this process, the researcher aimed at gathering the most important aspects of each main theme, for a proper answer to the research questions.

Afterwards, the researcher analysed the frequency of the codes and the similarities or differences between the participants' experiences. The analysis had the aim of finding shared results between each participant's reports or important patterns of analysis generated for their experience.

Results

The results consist of the main themes found in each participant's diary during the week of data collection. A total of four themes were collected: three related to the research questions (emotional connection, responsibility, and behavioural or thought change) and a fourth theme not connected to the research questions but still relevant to understanding the participants' experiences.

Participants' experience

After collecting the data and analysing it, it is important to understand the different perspectives that the participants brought to the workshop. A total of three main perspectives were identified, with two participants representing each group. For convenience during the explanation, these three groups were named “Open approach,” “Closed approach,” and “Decrease with time.”

Open approach

This group of participants expressed great commitment to the workshop from the beginning, saying the experience was inspiring and interesting. They explained that it was also enriching because, thanks to the workshop, they learned new things about the environment and explored their relationship with the embodied non-living entity.

As a central theme, the relationship with nature emerges, as these two participants reflect on their connection with the plants and develop empathy towards nature. As an example, participant 6 gave a detailed explanation of the message her tree was trying to communicate to her.

“... In his way, he told me how uncomfortable he was because the moss was covering all of his entire branches, blocking out the sun, and making him unable to grow, no matter how hard he tried. Also, he hoped the crows would stop sitting on him because he was so weak, and the branches kept breaking under their weight” (Participant 6)

Another common theme is the increased sense of responsibility for the environment, which triggers in this group also a sense of anxiety and fear for the problem. As an example, participant 2 explains that she feels anxious and powerless when thinking about the problem.

Lastly, these groups expressed good examples of pro-environmental behaviours and the intention to change for the good of the planet. Here is a good example of this concept:

“Another thing that I found myself thinking about is the fact that the workshop increased my motivation to stop eating meat and fish.” (Participant 2)

To conclude, it is important to specify the view of this group related to the workshop approach and methods. Here, participants saw the experience as stimulating, and they enjoyed the

activity presented and the overall approach. This can be seen in Table 1, where are summarise all the scores that every participant gave to each exercise. For this specific group, please see participant 2 and participant 6 scores, which appear to be very high on the majority of the activities. (See Table 1). Here is a quote related to the concept:

“I found yesterday's workshop very interesting! I haven't been in touch with nature for a while, and even giving myself a few hours without touching my phone or social media, just using all my senses to feel everything around me, and it made me understand the wonders of nature even more” (Participant 6)

Closed approach

Participants who were categorised in this group were less prone from the beginning to engage in the project modalities. They expressed their view in two different ways. Participant 5 reported that from the start, her difficulties in connecting with nature and her embodied entity. Participant 4 started by giving short and positive responses to her experience on the questionnaire, but never tried to give more insights into her thought process and always used short responses. On the third day of the questionnaire, one of her answers was unrelated to the question of the day. To have a complete idea of these participants' perspective, please also read their exercise evaluations in Table 1.

Participant 5 also said:

“I didn't like the 'being chosen 'from something in the forest part. In my opinion, it is too spiritual and does not give any benefits. It also felt forced. ” (Participant 5)

To give context to Participant 5's experience, her quote refers to the focus group session at the end of the workshop. The intention was to provide the participant with a free space where they could express themselves, but talking wasn't mandatory, and was something they could choose to do freely. The session was divided into two main moments: a discussion about the group experience and a final moment where they could talk individually about their own experience. Here, personal opinions were encouraged to stimulate a discussion together, and several participants also shared with the group some vulnerable topics, which underline the safe space that the researchers tried to

give to the participants. However, this triggers an interesting perspective on the fine line that someone can perceive between invitation and perceived expectation. Even though the moderator underlined the voluntary participation, the dynamic of the group setting can make someone feel forced to participate. This was an isolated case for this specific participant, while others didn't report any similar feelings.

The participant 4's quote on the first day was about the fact that she forgot how nice it was to spend time outside, but from the next day, most questions were answered by a "no", "not really", and "nothing changed".

Participant 5 also explained her struggles with the workshop by explaining her relationship with nature and how it is impossible for her to feel connected, but it is more of a respect and acknowledgement relationship, which also connects to her concept of responsibility. A possible interpretation is problem is that she feels like having no power to do anything to change the situation, and because of that, she doesn't feel responsible.

Related to responsibility also Participant 4 reported no changes in that regard, as well as the experience being too short to change her perspective and connection to nature.

"No, I don't, it didn't impacted me cause it was only one time, so it's easy to go back to your normal life."

Lastly, both of the participants reported some behavioural changes during the week. Participant 5 indicated that these changes were not influenced by the workshop, but the fact that this person behaved in a pro-environmental way and reflected on it thanks to the diary study is something in line with the workshop's aim and still relevant to mention. Participant 4 reported behavioural changes across all questions throughout the week. This could be attributed to either her uncertainty about how to respond or her lack of focus on the questionnaire.

Decrease with time

The last two participants are Participant 1 and Participant 3, who belong to this group named "Decrease with time". This name is attributed to the development of attitude both participants had

during the week of the diary study. They both started by paying great attention to their answers and tried to share as much as possible about their personal view and development.

Participant 1 explained the act of being in nature, not for external purposes, but only by spending time there. Participant 1 attributes the rise in awareness and desire to spend time in nature to the workshop, making it impactful for his experience. Even though the workshop had this effect, participant 1 still mentioned reasons why some exercises, like the embodiment exercise, were not sufficiently impactful to make them change their perspective on the topic and remarked on this concept almost every day.

“The workshop reminded me that being in nature just to experience nature is very pleasant and has left me wanting to go back into nature at the nearest moment of convenience...”

Also, participant 3 started by expressing a view on her perspective and provided some reasoning behind the creature she embodied and great interest in her relationship with nature.

“I always add a strong attachment to nature even though I don't spend that much time on it as I could, so I take from this experience my precious time in that nature that I got to enjoy for a long time.”

The different views of these participants regarding their relationship with nature relate to the issue of environmental responsibility. Participant 1 sees nature as something to respect, but he showed an absence of any responsibility for change. This does not mean that the participant has zero responsibility for the problem, but that the problem is perceived as too big to make him feel motivated to do something, like participant 5. This indicated a complex relationship with environmental responsibility and not a simple rejection. The participants' words reflect the concept of “shared responsibility” in Peeters et al. (2019). In his research, shared responsibility happens when the problem is recognised by a single individual, but it is paired with a sense of powerless feelings when large-scale problems arise (problems caused by a great number of individuals). He also expressed feeling bad when thinking about the trash dumped in nature, showing an emotional response and awareness.

Participant 3, on the other hand, already had a strong connection with nature and a great sense of responsibility before the workshop. She also expressed the need to connect with nature in her daily life to have a balance and overall well-being.

Talking about responsibility, the participant felt that the workshop wasn't relevant in changing anything on that topic since she already had a strong sense of connection. But helped in making her think more about this relationship

“The workshop lasted a bit longer than 2 hours, it reminded me of the importance of growing this relationship, but it didn't have the depth of a life change experience” (Participant 4)

Both of them also expressed a greater desire to be in nature after the workshop, thanks to the experience. Both of them found it difficult to engage with the entity or lifeform they tried to embody. For example, Participant 1 also underlined the absence of feeling connected to the plant embodied and the inability to find something to learn from it. And participant 3 says that the life form wasn't so impactful.

“I don't feel like I've been impacted by the lifeform I embodied as I chosen it already because I felt similarities with it.” (Participant 3)

But this group is different from the others since the participants, over time, lost interest in the answers, since nothing more came to mind. For this, the answer became less complete or repetitive. Participant 3 also forgot twice to answer the questions during the week.

“No, I have not, mainly due to the reasons I mentioned yesterday. I am being asked this question every day, but nothing in this context changes on a daily basis since my sense of responsibility towards society doesn't just change every day” (Participant 1)

Table 1

Here are presented the overall scores that the participants gave to each exercise. Each score goes from a range from a minimum of 0 to a maximum of 10.

Evaluation questions	Participant 1	Participant 2	Participant 3	Participant 4	Participant 5	Participant 6
How easy was it for you to engage in the sit-spot exercise?	3	7	8	7	5	7
To what extent did you feel connected to the environment during this exercise?	6	7	7	6	3	8
How helpful was this exercise in preparing you for the workshop's goal of taking the perspective of another life-form?	0	6	2	6	2	9
How easy was it for you to focus and engage in the meditation?	2	3	5	8	4	6
To what extent did the meditation help you feel connected to the environment?	1	5	8	8	6	5
How helpful the meditation was in shifting your perspective of nature	4	2	9	7	5	7

How comfortable did you feel during the blindfolded exercise?	1	6	8	9	4	5
To what extent did you engage with the sensory experience of sounds, textures, and movement?	8	8	8	7	7	9
How helpful was this exercise in allowing you to connect with the environment in a non-visual way?	6	6	7	5	6	9
How easy was it for you to embody your chosen entity?	0	6	8	8	0	7
To what extent did you feel immersed in your role as a non-human entity?	0	9	3	8	0	8
How engaging was this exercise in helping you explore a different perspective?	2	9	1	7	1	9

How comfortable did you feel during the council of beings?	6	9	7	7	3	9
To what extent did you feel immersed in your role as a non-human entity?	0	8	1	8	1	9
How engaging was this exercise in helping you explore a different perspective?	3	9	2	9	2	9

The four themes

The results of Atlas.ti are now presented with each explanation and frequency per participant. The order of the themes to be presented follows the numerical order, from the largest number of codes to the smallest. This logic was applied to the main themes and the codes in each table.

Behavioural or thought change

The behavioural or thought theme includes all the behaviours or thoughts that are related to nature that the participant expresses on the days after the workshop. It is important to specify that the changes can be generated by the workshop experience, but also something that the participant might have experienced or done in the past. The section is divided into: “Awareness of the surroundings”, “Buy green products”, “Diet change”, “Food waste”, “Going more into nature”, “Influencing others”, “Taking care of domestic plants”, “Taking the bike”, “Waste”, “No behavioural change”. “Awareness of the surroundings” consists of the ability of the participant to be aware of nature when he or she is outside. The section “Buy green products” is intended as the thought or the actual behaviours of buying and using green products, while “Diet change” expresses the intention of the

participant to change their diet for the environment. The “Food waste” refers to the thoughts of not wasting food, or reducing food waste by, for example, paying attention to how much food is bought and trying to eat it without letting it expire. “Going more on nature” resembles the willingness or the actual moments spent in nature by the participant, while “Influencing others” means the reported episode of the participant to influence people he or she knows to become more aware of the environmental situation or influence them to spend more time in nature. “Taking care of domestic plans” explains the intention of the participant in taking care of their plans. To continue, “Taking the bike” and “Waste” express the decision of taking the bike instead of the car or bus to move, and the intention or behaviour of producing less waste or sorting the waste. Lastly, “No behavioural change” covers the participants' view on the fact that nothing changed after the workshop and that the eco-friendly behaviours are already part of a personal view, and the workshop didn't cause any behavioural or thinking change process.

Table 2

Division and description of each sub-code with an example provided.

Behaviour or thought change codes.

Behavioural or thought change	Code Description	Code example	Code frequency	N. of participants that mentioned the code
Total content			80	
Going more into nature	The participant expresses the desire to spend more time in nature or go more often.	<i>“Planning to go into a green environment in the back of my head today.”</i>	21	6
		<i>Participant 1</i>		

Awareness of the surroundings	The participant declares that he or she pays more attention to their surroundings while being outside in the presence of nature.	<i>“I was more aware of my surroundings while biking.”</i>	17	6
		<i>Participant 4</i>		
Waste	The participant actively tries to sort the garbage or express the intention to start.	<i>“I just am more careful regarding recycling.”</i>	17	4
		<i>Participant 5</i>		
Food waste	The participant reported being more careful in not wasting food or trying to reduce food waste.	<i>“I do not want to waste my food.”</i>	8	4
		<i>Participant 6</i>		
No behavioural change	The participants express no behavioural change after the workshop as the experience was not sufficiently impactful.	<i>“not been any noticeable change in my day-to-day behaviour.”</i>	6	4
		<i>Participant 1</i>		

Influencing others	The participant reported trying to influence others to have more contact with nature or talk about the environment.	<i>“I found myself suggesting to my boyfriend, for example, to have more dates in nature.”</i>	5	2
		Participant 2		
Taking the bike	The participant reported taking the bike instead of the bus or the car.	<i>“I tried to bike today instead of taking a bus!”</i>	2	2
		Participant 6		
Buy green products	The participant reported buying or thinking of buying eco-friendly products.	<i>“buying less cleaning products/stop using disposable pads when I have my period...”</i>	2	2
		Participant 2		
Diet change	The participant reported changing their diet or thinking about changing their diet.	<i>“increased my motivation to stop eating meat and fish.”</i>	1	1
		Participant 2		

Taking care of domestic plants	The participant reported actively taking care of their own domestic plants.	<p><i>“I took care of my avocado plant, but this is something I do every day: water it and talk to it. But you could tell that the care I take resembles a bit the workshop.”</i></p>	1	1
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Participant 3

Personal and important views of the Participants

In this section, all the codes that are crucial for understanding the participant's situation and experience are presented. The main codes of this section are: “Culture”, “Impractical procedures”, “Negative view” and “No changes at all”. With “Culture/ education”, the cultural and educational background of the participant plays an important role in their view of the environment and nature. In “Impractical Procedures”, the impracticality of the workshop organisation is explained. For example, the participant expressed feeling not involved in the exercises or the difficulties in remembering the actual exercises in the week after the workshop. This is divided into “Impractical procedures of the workshop ” and “Impractical procedures of the diary study”. “Negative view and no changes at all” covers the incompatibility between the workshop approach and the participant's view. This is intended to suggest that the modality and type of exercise weren't effective in making the participant feel comfortable. It is important to specify that there are no codes about participants feeling comfortable because this was not specified by the people who felt stimulated and comfortable with the experience. The unconventional exercises and the need to feel and connect with the surroundings might have triggered this discomfort.

With no changes is also intended that, according to the participant, the workshop did not cause any change in any part that was analysed, either behavioural, related to responsibility or connection with nature. To conclude, “Sensations during the workshop” lists all the sensations and feelings that the participants felt during the workshop. These are not necessarily related to nature but more of a sensation felt during a specific exercise.

Table 3

Division and description of each sub-code with an example provided.

Personal Views of the Participants codes	Code Description	Code example	Code frequency	N. of participants that mentioned the code
Total content			54	
Resistance	The participant was resistant to certain aspects of the experience, or the workshop was perceived as not impactful.	<i>“It's impossible to 'be chosen' by some entity in the forest and I don't think anthropomorphism of plants is really the best way”</i> Participant 3	26	5
Impractical procedures of the workshop	The participant reported problems during the workshop's execution/organisation	<i>“The blindfold exercise was probably too short and didn't give me</i>	9	5

		<i>enough time to feel connected.”</i>		
		Participant 2		
Impractical procedures of the diary study	The participants expressed problems/ recall issues occurring in the diary study methodology.	<i>“It's been long after the workshop, and I'm already forgetting what was the message of my life-form”</i>	6	3
		participant 3		
No lasting or large changes	The participant reported that the workshop didn't cause any type of change towards nature.	<i>“I think the workshop didn't have a lasting impact.”</i>	12	3
		Participant 5		
Culture/education	The participant reported a connection with nature thanks to their cultural background.	<i>“I feel very comfortable and at peace surrounded by nature as it reminds me of my childhood in Canada.”</i>	3	2
		Participant 1		

Sensations during the workshop	The participant reported specific sensations and feelings during the workshop	<i>“left me a very warm sensation”</i>	2	1
		<i>Participant 3</i>		

Emotional connection to nature

This category refers to the degree to which participants reported a natural emotional connection to nature and the environment. This section's codes were divided into four sub-groups: “enjoy/appreciate nature”, “feeling represented/ empathy”, “learning/having new perspectives” and “not interested in nature”. “Enjoying nature” includes the feelings and the positive sensations that spending time in nature causes in the participants. “Feeling represented” is centred on the idea of relating the condition of a tree to one’s own experiences. In this context, a connection is established between the participant and nature, drawing parallels between the state of the tree and the participant's life or mental state, which also includes the empathy the participant feels towards plants. “Learning /having new perspectives” is intended as the reported learning concepts after the workshop experience or the new perspectives acquired afterwards. As a final point, the “not interested in nature” sub-group refers to the absence of changes in the connection with nature or perspective on it.

See Table 4 for a clear division and definition of each code.

Table 4

Division and description of each sub-code with an example provided.

Emotional connection codes.

Emotional connection codes	Code Description	Code example	Code frequency	N. of participants that
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				mentioned
				the code
Total content			40	
Learning /having new perspectives	The participants report knowing new things or having new perspectives on nature thanks to the workshop.	<i>“I also learned about the woods”</i> Participant 4	14	6
enjoy/ appreciate nature	Expressed appreciation of nature and positive emotions while spending time in nature.	<i>“It made me feel really peaceful and connected with nature“</i> Participant 2	12	5
Feeling represented/ empathy	The participants report that a plant condition or situation represents their own life or feelings.	<i>“The tree with which I connected during the workshop was the concept of leaning on someone for help”</i> Participant 2	7	3
Not interested in nature	The participant underlined the absence of interest in nature or	<i>“The workshop did not help me feel connected with the environment.”</i>	7	3

changes in **Participant 5**
perspectives.

Responsibility

Responsibility is determined by the awareness of one's impact on nature and the degree of responsibility felt for one's situation in nature. This section is divided into five total sub-groups: “already responsible”, “bad feeling”, “not responsible”, “own impact on nature” and “awareness of the condition”. The first subgroup covers the feeling of responsibility already present before the experience. To follow, “bad feeling” refers to the feelings of fear and anxiety that the nature problems trigger in the participant. The "not responsible" group is aware of ecological problems, but they remain indifferent to addressing their own impact on behaviour or attitude change, since their change is irrelevant in the resolution of the problem. To continue, own impact refers to the ability to understand the person's little but relevant impact on the nature, well-being and situation. To conclude, the last subgroup covers the concept of awareness of the environmental situation, but not necessarily the need to address the problem on their own responsibility.

To have a clear idea of the code division and description, please see Table 5.

Table 5

Division and description of each sub-code with an example provided.

Responsibility codes.

Responsibility codes	Code Description	Code example	Code frequency	N. of participants that mentioned the code
Total content			27	
not responsible	The participants recognise the problem	<i>“Wouldn't make much of a difference</i>	8	2

	but don't feel the need to change, since the problem is too big to just be solved thanks to one person's change.	<i>for nature if I were to start being super eco-friendly."</i>		
		Participant 1		
awareness of the condition	Recognition of the environmental problem, but no mention of own responsibility.	<i>"Now look at nature as a finite that isn't indestructible."</i>	8	4
		Participant 1		
own impact on nature	The participant is motivated to change since he/she recognise their effects on nature.	<i>"more aware of what I can do, little things and have an impact."</i>	7	4
		Participant 4		
already responsible	The participant already felt responsible for the environmental condition before the experience.	<i>"I had a strong sense of responsibility towards nature since before the workshop."</i>	2	1
		Participant 3		

bad feelings The environmental “It gives me a really 2 1
situation and the *bad feeling of*
human consequences *anxiety and*
on the environment *powerlessness.”*
trigger into the **Participant 3**
participant feelings of
anxiety and fear.

Discussion

This paper aimed to answer the research questions on how participants perceive their connection to nature and the environment after the workshop. The workshop design was based on the work of Joanna Macy and Molly. The research questions focused on three main areas: Emotional Connection to nature, Responsibility towards nature and behavioural or thought change. An emotional connection is intended as the bond that the participants developed after the experience, by enhancing their relationship or emotions towards nature. Secondly, the focus was on the topic of responsibility towards ecological problems and how people perceived it during the week. Lastly, a small but meaningful shift in pro-environmental behaviours.

To start with the emotional connection topic, all participants reported feeling more connected with nature. This became evident in their desire to spend more time outdoors, with nature more on their minds after the experience, and in their increased attentiveness to the environment, as well as their enjoyment of being in nature. These types of experiences were already present in the students' perspectives before the workshop, but are still relevant in this context, and they became more solid after the workshop. Different degrees of emotional connection were reported by every participant. Some of them only talked about a greater intention in spending more time in nature, and also being reminded, thanks to the workshop, of how much they enjoy it. Others reported a deeper bond and the ability to identify and understand the perspective of the plants. One participant was

also able to express empathy towards the trees or feelings represented by the life form embodied, as well as learning something new from it. Others also related the workshop to their childhood and past experiences, underlining that the workshop brought back to the surface familiar feelings that the participant forgot.

These findings are in line with the research of Jones & Schoonen (2024), which suggests that imagination and sensory engagement exercises work best when grounded in past experiences. The connection with childhood memories can help in future research for strengthening ecological awareness, especially if the participant already has a connection with nature. Future research can use this type of workshop as a reminder and a strengthening of already existing ecological views to trigger effects on the participants. The nuances reported on the emotional connection also raise a question on how individual differences, such as personality traits, culture towards nature or familiarity with the sensations-based approaches, link to different degrees of effectiveness of the workshop. This study didn't focus on this aspect, but future research could explore how these variables impact the workshop. Lastly, future research should also include follow-up activities, like writing letters to trees to focus on the relationship or guided journaling to give participants tools that can make them maintain this bond even when they are not in nature. Something that was not necessary for Joanna Macy and Molly, since the participants were pro-environmental activists.

Secondly, the research questions focus on the responsibility theme; here results were less positive but still very relevant for the scope of the study. A clear example of this concept is two participants explaining that the complexity of the problem was not due to their own behaviour, and they felt powerless to resolve it. They reported this as not feeling responsible or that any changes had happened in that regard. This claim could be interpreted as a great perception of the problem and a lack of resources to solve it. People who have this type of perception tend to say that their impact compared to the real size of a problem doesn't count much, and that they cannot make a difference. But the workshop gave them a space to reflect on this aspect, and the fact that they expressed no changes in that regard may have been caused by the formulation of the questionnaire.

Their perception of the problem and the fact that they talked about it is in line with what the workshop was trying to achieve: helping individuals reflect on their relationship with the environment and its problems. Another participant couldn't report any significant changes since they were already feeling responsible, and a two-hour workshop couldn't change a perspective they had developed after years of experience. Lastly, some participants also expressed discomfort thinking about the environmental situation. They expressed feelings of anxiety and guilt, triggered by environmental awareness. This is an indication that the workshop caused reflection and reminded an issue that students were trying to avoid. Future research should focus on reframing the expectation that the participants have of the experience, re-dimensioning its effect and purpose and educating them on strategies that empower participants, making them feel less powerless. Thanks to this, participants can be more aware of how to use the experience for personal growth.

The third and last part targeted a small but meaningful behavioural change. The main example coded from the diary study covered a wide range of behaviours such as spending more time in nature, increased awareness of the surroundings and reported actions like waste separation, less food waste and biking more frequently. For every participant, the thought of "Going more into nature" and the "Awareness of the surroundings" they were mainly reported by all the participants as something that increased.

This theme was the largest and most diversified, with the largest number of codes constituting this theme. It is important to say that all the participants underlined that the behaviours reported were already present before the workshop. In some cases, to provide an easy answer to the daily questionnaire, the participants also reported behaviours, but simply for the fact that they didn't know what to say on that specific day or for that question. That is why there is a great amount of code related to behaviours. New behaviours weren't triggered by the workshop but there was an increase in thoughts related to pro-environmental behaviour, which can still be categorised as a small behavioural change. This thought change is the first step in the continuum process of behavioural change as well as a reflection of attention and attitude change (Ajzen, 1991). To explain

why behavioural change was not possible, we can consider the other two variables studied in this paper: Emotional connection and responsibility. For example, the relationship between these variables can be linear, where emotional connection and responsibility, when present, can trigger behavioural change. This is a good explanation, but it is not the only one, because their relationship can be more dynamic and less mechanical. For example, when a participant decides to spend more time outdoors, they will notice more of their surroundings and create a deeper emotional connection with nature. This complexity would be in line with the idea that the relationship between behaviours, emotions, and cognitions might be circular and mutually reinforcing with time (Vernon et al., 2015). Moreover, participants who reported no behavioural change still showed reflection on the topic, and this might be an important starting point for change in the future. An important theory that can sustain this point is the Transformative learning theory, which explains that discomfort and critical reflection are actually the start of a process of behavioural change (Mezirow, 2000).

Based on these insights, future research should focus more on the dynamic relationship between emotional connection, responsibility and behavioural change. The use of longitudinal studies, like follow-up interviews, can further cover this dynamic in a fluid and less mechanical way. Also, journaling can help explore micro-changes in a larger period without making the participant answer the same questions, but create a personal moment for reflection (Tröger et al., 2021). Lastly, to tackle how comfortable the participants feel with the experience, future researchers can also schedule interviews before the diary study where they assess the view and attitude of the participants.

Overall, three groups/profiles of participants could be discerned, which seemed to affect the way they evaluated their experience. These groups are: The “Open approach”, where participants reported a higher degree of emotional connection and responsibility, as well as motivation and interest in the method. The “Closed approach” was perceived as less effective, and the expectations on the workshop were too high to let them perceive small but relevant results, making them more

sceptical. Lastly, the “Decrease with time” whom started with stimulating answers and lost interest in the study after some time.

Even though only the “Open approach” group reported feeling empathic towards nature. This also seemed to be triggered thanks to the experience, but especially thanks to the participants' predispositions, since not everyone managed to get these results. This aligns with Rufo (2024), who states that somatic-art-based interventions are effective in promoting ecological awareness only if participants are engaged emotionally and they feel comfortable. They also reported behaviours that were still present, but the difference was the connection and responsibility. Since in this group these two factors were present, reinforcement of behaviours and thought change was also effective. For the “Closed approach” group, they reported not feeling any particular changes, since they didn't report any type of new connection with nature or sense of responsibility. However, they still showed the ability to reason and reflect on their relationship with nature. Changes were present but not fully perceived by the participants, but as mentioned earlier, a critical approach is the first step to generate a new pattern of thinking. In this group seems to have been a disjuncture between participants' expectations of the workshop (to effect major changes) and its more moderate purpose, as evident in an overall evaluation that they thought the workshop was not impactful enough. It is important to note that this was not the case for everyone, since two out of six participants felt impacted by the experience. To connect with the participants' mismatched expectations on the workshop, Barr (2006) describes this as the value-action gap, which consists of a disconnection between environmental concern and pro-environmental behaviours. This phenomenon is caused by internal or external barriers that prevent the person from changing their awareness in the sense of personal responsibility (Barr, 2006).

For the “Decrease with time”, the behaviours were used to answer the question, but they constantly specify that the workshop didn't cause that, but reinforced already existent thoughts and behaviours, which is a relevant small step for the workshop.

Limitations

This study had several limitations that are important to consider when evaluating the results. Firstly, since the participants were mostly female and students, caution is warranted regarding the transferability to other groups. Groups where transferability is easier to achieve are the ones already having a strong connection with nature, like environmentally engaged individuals or volunteers. Another good fit are individuals who are interested in mindfulness yoga or creative arts, who might already be familiar with alternative learning methods. This workshop may not have the same effects for individuals who do not value exposure to or connection with nature. Another group that can have difficulties are highly rational and technical professionals, who might prefer data-driven and practical learning. Contexts where these workshops are more likely to succeed are educational settings like universities, ecological education programs and youth-oriented non-governmental organisations. Contexts where it is less likely are, for example, corporate or business settings where participants might not understand the value of these imaginative approaches (Dunne, 2018).

A second limitation is the diary study method, which seemed to be too repetitive for the majority of the participants, as observed by Milligan et al. (2005). Since this method was perceived as repetitive, it can cause less engagement and less reflection over time. Recall problems inherent in a diary study may have affected the limited reported changes due to the workshop experience, as they reported little to reflect on in the questionnaires. For this reason, around day 3 or 4, most participants felt forced to find new things to write in the diary study, which also caused a drop in engagement over time. The use of Qualtrics is great for open-ended questions, but the website is not designed for long-form, reflective journaling, hence the problem of repetitiveness. To address the recall problems, methods such as including a space in the questionnaire where participants can refresh their knowledge on the experience can be helpful. At the start of the week, they can write a short text about their personal experience and what they felt, and every day during the diary study, they have the possibility to re-read it and refresh their memories.

Lastly, it is important to maintain the personal mindset of the participants and the method of the workshop. While one participant in the “closed approach” group described some activities as “too spiritual” or “forced,” leading to discomfort and resistance, others experienced the very same methods as deeply meaningful and emotionally engaging. Some expressed discomfort and resistance towards some exercises, which might also indicate a mismatch between the participants' values and the workshop setting. To connect on this last point, the workshop objective was also perceived as unclear by some of the participants, who understood that the ultimate aim was to connect with the life they embodied and complied without really believing in this approach. This underlines the need for clearer instructions to better guide the participants. On the other hand, the “Open Group” reported positive responses, showing that they were comfortable and ready to experience the method. Because of this, every individual has a different perception of something, which can be a sign that the workshop needs to be flexible and inclusive, with a structure that enables different forms of engagement. Pearce (2024) also found that embodiment-based exercises can generate resistance or discomfort in participants who are not familiar with the methods. That is why Pearce (2024) suggests adjusting these practices to the participants' culture or personal views.

Conclusion

This study provides further knowledge on the embodiment methods to differentiate from the cognitively based knowledge transfer model of education. Firstly, the link between past experiences and the workshop is in line with the already mentioned work of Jones & Schoonen (2024), which confirms its effectiveness when linked to memories and childhood. Moreover, the fact that participants expressed empathy and resonated with trees is in line with Pearce's (2024), who claims that somatic embodied practices can encourage ecological awareness when they are perceived as comfortable for the participants. On the other hand, the “Closed group” resistance also aligns with Pearce's (2024), which states that these methods might trigger discomfort when personal alignment with the methods is missing.

Also, the mixed views of the participants suggest the possibility of adapting and tailoring these workshops to different beliefs and values, for example, more scientific in providing knowledge or pragmatic with a focus on the relationship with nature. Lastly, such methods could be used in environmental behaviour change initiatives to investigate long-term effects.

This research provided insights into the embodiment of non-human perspectives to foster ecological awareness. Even if some limitations remain, in times of environmental crisis, such creative methods might help in getting a deeper and lasting connection with nature. There is still a lot of room for exploration and research on this imaginative and embodiment method, which shows promise for future discoveries.

Reference List

- Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, 50(2), 179–211. [https://doi.org/10.1016/0749-5978\(91\)90020-t](https://doi.org/10.1016/0749-5978(91)90020-t)
- Barr, S. (2006). Environmental action in the home: Investigating the ‘Value-Action’ gap. *Geography*, 91(1), 43–54. <https://doi.org/10.1080/00167487.2006.12094149>
- Bingham, A. J. (2023). From Data Management to Actionable Findings: a Five-Phase process of qualitative data analysis. *International Journal of Qualitative Methods*, 22. <https://doi.org/10.1177/16094069231183620>
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77–101. <https://doi.org/10.1191/1478088706qp063oa>
- Bolger, N., Davis, A., & Rafaeli, E. (2002). Diary Methods: Capturing Life as it is Lived. *Annual Review of Psychology*, 54(1), 579–616. <https://doi.org/10.1146/annurev.psych.54.101601.145030>
- Dunne, D. (2018). Implementing design thinking in organizations: an exploratory study. *Journal of Organization Design*, 7(1). <https://doi.org/10.1186/s41469-018-0040-7>
- Erick Burgsuggueño Salas. (2024, June 2). *Global forest size 1990-2021*. Statista. <https://www.statista.com/statistics/1292175/global-forest-area/>
- Fife, S. T., & Gossner, J. D. (2024). Deductive Qualitative analysis: evaluating, expanding, and refining theory. *International Journal of Qualitative Methods*, 23. <https://doi.org/10.1177/16094069241244856>
- Gibson, J. (2019). Mindfulness, Interoception, and the Body: a Contemporary perspective. *Frontiers in Psychology*, 10. <https://doi.org/10.3389/fpsyg.2019.02012>
- Jones, M., & Schoonen, T. (2024). Embodied simulation and knowledge of possibilities. *Philosophical Psychology*, 1–25. <https://doi.org/10.1080/09515089.2024.2417990>
- Maloney, M. P., Ward, M. P., & Braucht, G. N. (1975b). A revised scale for the measurement of ecological

- attitudes and knowledge. *American Psychologist*, 30(7), 787–790. <https://doi.org/10.1037/h0084394>
- Mayer, F., & Frantz, C. M. (2004). The connectedness to nature scale: A measure of individuals' feeling in community with nature. *Journal of Environmental Psychology*, 24(4), 503–515. <https://doi.org/10.1016/j.jenvp.2004.10.001>
- Mezirow, J. (2000). *Learning as transformation: Critical Perspectives on a Theory in Progress*. Jossey-Bass.
- Milligan, C., Bingley, A., & Gatrell, A. (2005). Digging deep: Using diary techniques to explore the place of health and well-being amongst older people. *Social Science & Medicine*, 61(9), 1882–1892. <https://doi.org/10.1016/j.socscimed.2005.04.002>
- Munday, G., Jones, C. D., Steinert, N. J., Mathison, C., Burke, E. J., Smith, C., Huntingford, C., Varney, R. M., & Wiltshire, A. J. (2025). Risks of unavoidable impacts on forests at 1.5 °C with and without overshoot. *Nature Climate Change*. <https://doi.org/10.1038/s41558-025-02327-9>
- Ohly, H., White, M. P., Wheeler, B. W., Bethel, A., Ukoumunne, O. C., Nikolaou, V., & Garside, R. (2016). Attention Restoration Theory: A systematic review of the attention restoration potential of exposure to natural environments. *Journal of Toxicology and Environmental Health Part B*, 19(7), 305–343. <https://doi.org/10.1080/10937404.2016.1196155>
- Pearce, M. (2024). Embodied ecological awareness and the pedagogy of Jacques Lecoq. *Journal of Theatre Dance and Performance Training*, 15(3), 375–394. <https://doi.org/10.1080/19443927.2024.2376601>
- Peeters, W., Diependaele, L., & Sterckx, S. (2019). Moral disengagement and the motivational gap in climate change. *Ethical Theory and Moral Practice*, 22(2), 425–447. <https://doi.org/10.1007/s10677-019-09995-5>
- Reed, J., Van Vianen, J., Foli, S., Clendenning, J., Yang, K., MacDonald, M., Petrokofsky, G., Padoch, C., & Sunderland, T. (2017). Trees for life: The ecosystem service contribution of trees to food production and livelihoods in the tropics. *Forest Policy and Economics*, 84, 62–71. <https://doi.org/10.1016/j.forpol.2017.01.012>
- Robbins, Z. J., Xu, C., Aukema, B. H., Buotte, P. C., Chitra-Tarak, R., Fettig, C. J., Goulden, M. L., Goodsman, D. W., Hall, A. D., Koven, C. D., Kueppers, L. M., Madakumbura, G. D., Mortenson, L. A., Powell, J. A., & Scheller, R. M. (2021). Warming increased bark beetle-induced tree mortality by

30% during an extreme drought in California. *Global Change Biology*, 28(2), 509–523. <https://doi.org/10.1111/gcb.15927>

Ruckstuhl, K., Johnson, E., & Miyanishi, K. (2007). Introduction. The boreal forest and global change. *Philosophical Transactions of the Royal Society B Biological Sciences*, 363(1501), 2243–2247. <https://doi.org/10.1098/rstb.2007.2196>

Rufo, R. (2024). Somatic arts and liveable futures embodying ecological connections. *Lagoonscapes*, 1. <https://doi.org/10.30687/lasp/2785-2709/2024/01/010>

Tröger, J., Wullenkord, M. C., Barthels, C., & Steller, R. (2021). Can Reflective Diary-Writing Increase Sufficiency-Oriented consumption? A longitudinal intervention addressing the role of basic Psychological Needs, Subjective Well-Being, and time Affluence. *Sustainability*, 13(9), 4885. <https://doi.org/10.3390/su13094885>

Turner-Skoff, J. B., & Cavender, N. (2019). The benefits of trees for livable and sustainable communities. *Plants People Planet*, 1(4), 323–335. <https://doi.org/10.1002/ppp3.39>

Wasserman, T. N., & Mueller, S. E. (2023). Climate influences on future fire severity: a synthesis of climate-fire interactions and impacts on fire regimes, high-severity fire, and forests in the western United States. *Fire Ecology*, 19(1). <https://doi.org/10.1186/s42408-023-00200-8>

Watfern, C., Watson, M., Doran, B., & Vaughan, P. (2024). A sad tree: visualising ecological emotions through bodies in place. *Visual Studies*, 1–10. <https://doi.org/10.1080/1472586x.2024.2328603>

Weiskopf, S. R., Rubenstein, M. A., Crozier, L. G., Gaichas, S., Griffis, R., Halofsky, J. E., Hyde, K. J., Morelli, T. L., Morissette, J. T., Muñoz, R. C., Pershing, A. J., Peterson, D. L., Poudel, R., Staudinger, M. D., Sutton-Grier, A. E., Thompson, L., Vose, J., Weltzin, J. F., & Whyte, K. P. (2020). Climate change effects on biodiversity, ecosystems, ecosystem services, and natural resource management in the United States. *The Science of the Total Environment*, 733, 137782. <https://doi.org/10.1016/j.scitotenv.2020.137782>

Whipple, A. V., Cobb, N. S., Gehring, C. A., Mopper, S., Flores-Rentería, L., & Whitham, T. G. (2019). Long-term studies reveal differential responses to climate change for trees under soil- or Herbivore-Related stress. *Frontiers in Plant Science*, 10. <https://doi.org/10.3389/fpls.2019.00132>

Work That Reconnects Network. (2023, September 29). *Open source attribution - work that reconnects*

- network*. Work That Reconnects Network -. <https://workthatreconnects.org/open-source-attribution/>
- Yamauchi, T., Colmer, T. D., Pedersen, O., & Nakazono, M. (2017). Regulation of root traits for internal aeration and tolerance to soil Waterlogging-Flooding stress. *PLANT PHYSIOLOGY*, *176*(2), 1118–1130. <https://doi.org/10.1104/pp.17.01157>
- Vernon, D., Lowe, R., Thill, S., & Ziemke, T. (2015). Embodied cognition and circular causality: on the role of constitutive autonomy in the reciprocal coupling of perception and action. *Frontiers in Psychology*, *6*. <https://doi.org/10.3389/fpsyg.2015.01660>
- Zittoun, T., & Gillespie, A. (2015). *Imagination in human and cultural development*. <https://doi.org/10.4324/9780203073360>
- Zittoun, T., & Gillespie, A. (2018). Imagining the collective Future: a sociocultural perspective. In *Springer eBooks* (pp. 15–37). https://doi.org/10.1007/978-3-319-76051-3_2

Appendix

Appendix A

Information Sheet & Informed Consent Form: Embodying More-Than-Human Perspectives

Purpose of Research

Climate change is an ever-present issue facing our societies, coming with a wide range of adverse effects on our ecosystems. As this threat develops, much emphasis is being placed on potential methods to encourage proactive environmental behaviour within our communities. In particular this research focuses on the use of embodiment to enhance participants understanding of the many human and non-human perspectives residing in our ecosystems. Specifically, this study attempts to use an embodiment based workshop, centred around the topic of deforestation to encourage a more inclusive view of our ecosystems whilst promoting pro-environmental behaviour in the future. This study includes a group workshop within the forest near the University of Twente where the concept of embodiment will be utilised to help participants take the perspective of life-forms as though they were part of the reference ecosystem. The workshop itself will include moments of meditation, alongside exercises useful for engaging the senses and embodying these more-than-human perspectives (trees, birds, soil, insects etc) as well as asking and answering questions with others participating in different roles.

After the group workshop has been completed participants will participate in a week-long diary study, where each day the participant will be tasked with answering five questions relating to their experience of the workshop. The group workshop itself will take two hours plus 30 minutes for an evaluation afterwards and for time to fill out the consent form.

The Sit-Spot Practice

Before attending the workshop, we invite you to spend about 5–10 minutes in a day in a quiet, natural spot—this could be a corner of your garden, a bench in the park, or any outdoor space where you can comfortably sit and observe. During this time, allow yourself to become still and simply notice what is happening around you. Pay attention to the sights, sounds, and scents in the environment, as well as any sensations in your body. There is no specific goal other than being present and open to the natural world. If possible, visit the same spot each day to notice subtle changes in the environment. This sit-spot practice can help you develop a deeper connection with nature and prepare you for the perspective-taking activities in the workshop.

Alongside this we encourage you to engage with your surroundings whilst we meet originally at the bus stop at the University, we will be journeying to the location together and it is recommended to use this moment to prepare yourself for the upcoming exercises.

What To Expect From The Workshop

Location:

The forest near University of Twente, specifically 52°15'09.4"N 6°51'25.9"E in a part of the woods closest to Lonneker, which is accessible via the paths through the university grounds.

First Contact & Time:

We will meet at Langenakker where the number 1 bus stops, at 09:45 on Monday the 7th of April and we will walk together towards the location, ideally in silence so we can each soak up the atmosphere around us and also this time is advantageous to get in the right head space to facilitate meditation and imagination.

Beginning the workshop:

Discussion will take place where we lay out the various exercises that will be used in order to enable you to step out of your own frame of mind, out of your body and envision the world around you according to the lens of a particular perspective relative to the forest. These exercises themselves will come with alternative choices, as to allow people a sense of comfort, and choice of exercises can facilitate this. These exercises can range from, enacting what it would be like to be a fox or plant within the forest, or being blindfolded and having a partner from the group lead you to explore and experience the forest as though you had one less sense available to you, which can potentially assist you in familiarizing yourself with the forest.

Sage will be burned, which has been extracted from local sources and they will be burned in order to create a holistic and vibrant atmosphere, conducive to being in a meditative state. If this is an issue with you, then please voice this to the facilitators or supervisors.

After the exercises are completed then, there will be a reflection period where all of the participants involved gather and we have a discussion based on how the experience was for each of those involved. This reflection period will be guided by some open questions, and it is entirely up to you if you wish to voice how you felt during the experience. This audio is recorded, to be used in our research as another source of information.

P.S. The workshop will take a decent amount of time, so we encourage you to bring a small lunch if you believe you may be hungry, we must only ensure that we clean up after ourselves!

After the workshop has elapsed:

We have created a short diary study, where we use five open questions to investigate your attitude and experiences regarding pro-environmentalism for one week after the workshop has ended. This will be used alongside the reflection to assess the viability of a workshop similar to this in potentially promoting pro-active behaviours towards the environment and our various ecosystems.

Benefits and Risks of Participation

The research project has been approved by the BMS Ethics Committee. The workshop itself and act of embodying these perspectives can potentially lead to some distress, due to the impact of climate change, and a possible feeling of dread for the perspectives taken could be felt. The discussion of these climate issues can be distressing for everyone in their own individual way, however the holistic approach to embodying these perspectives and potential discussions for action possibilities may lead to a higher sense of agency and hope going forward. The workshop is also facilitated by an experienced facilitator, who will take care to set up a safe space for participants.

Procedures For Withdrawal From The Study

The participation in this study is entirely voluntary. The participant can decline to participate and withdraw from the study at any time, without any negative consequences and without providing any reasons.

Handling of Personal Data

Personal data is collected in the form of demographic information. The demographic information and all the data will be collected solely with a participant number. All data will be anonymised, so that participants cannot be identified by their participant number after data collection.

Use of Data During Research

The written answers in the diary study will be collected. These data will be fully anonymised and all the data will be referred to with pseudonyms throughout the analysis and in the report.

Individual participants cannot be identified.

Retention Period for Research Data

The data collected during the study will be retained according to the data policy by the University of Twente.

Contact details researchers + supervisor

In case of any questions concerning the research or any of the researchers, participants can contact Daniel Scanlon (d.m.scanlon@student.utwente.nl) or Elisa Quattrini (e.quattrini@student.utwente.nl), supervisor for this project is Anneke Sools (a.m.sools@utwente.nl), who can be contacted for any additional questions.

If participants wish to file a complaint, they can contact the BMS ethics committee (ethicscommittee-bms@utwente.nl). The application number of this research is 250371.

How will it work?

You will take part in a study in which we will gather information by:

- Written text from diary study
- A recording of the focused discussion/reflection after the workshop

This information will only be used by the University of Twente, the Netherlands.

<i>Please tick the appropriate boxes</i>	Yes	No
I have read and understood the study information dated [07/04/2025], or it has been read to me. I have been able to ask questions about the study and my questions have been answered to my satisfaction.	<input type="checkbox"/>	<input type="checkbox"/>
I consent voluntarily to be a participant in this study and understand that I can refuse to answer questions and I can withdraw from the study at any time, without having to give a reason.	<input type="checkbox"/>	<input type="checkbox"/>

I understand that taking part in the study involves risks of experience psychological distress, due to the discussion of climate change issues.	<input type="checkbox"/>	<input type="checkbox"/>
I understand and agree that taking part in the study involves a written text from diary study. After the research report is completed, the original written text will be destroyed.	<input type="checkbox"/>	<input type="checkbox"/>
I understand that information I provide will be used for our research in organization in academic performances.	<input type="checkbox"/>	<input type="checkbox"/>
I understand that personal information collected about me that can identify me, such as [e.g. my name or where I live], will not be shared beyond the study team.	<input type="checkbox"/>	<input type="checkbox"/>
I agree that my information can be quoted in research outputs.	<input type="checkbox"/>	<input type="checkbox"/>
I give permission for the [<i>Written text from diary study</i>] that I provide to be archived in anonymised form so it can be used for future research and learning.	<input type="checkbox"/>	<input type="checkbox"/>
I understand that the duration of the storage of the data of the diary study will be 10 years, safely stored on the computer of the supervisor, and only in anonymised and pseudonymized form, after which the data will be destroyed.	<input type="checkbox"/>	<input type="checkbox"/>
I understand that consent applies for a full calendar year.	<input type="checkbox"/>	<input type="checkbox"/>
I have accurately read out the information sheet to the potential participant and, to the best of my ability, ensured that the participant understands what they are freely consenting.	<input type="checkbox"/>	<input type="checkbox"/>

Name participant:

Signature participant:

Date:

I have accurately read out the information sheet to the potential participant and, to the best of my ability, ensured that the participant understands to what they are freely consenting.

Name of researchers: Daniel Scanlon, Elisa Quattrini, Anneke Sools, Corelia Baibarac-Duignan, Julia Hermann,

Signature researcher:

Date:

Appendix B

Workshop embodying more-than-human actors related to deforestation in Twente (an adaptation from the Council of Beings)

- | | |
|------------|---|
| 9.30-9.45 | Welcome and brief introduction round
Explanation of the topic of deforestation in Twente (Yvonne)
Explanation of the workshop set-up |
| 9.45-9.50 | Opening meditation to ground, arrive in the present moment, open the senses |
| 9.50-10.20 | Sensory exploration in pairs (5 to 7 minutes per person, with blindfolds) followed by brief sharing of experiences in the plenary group (5-10 minutes) |

10.20-10.40 **Being Chosen.** Allow yourself to be chosen. Who (which life-form) is calling to you? Encourage people to stay with the first impulse that arises. It is not a question of choosing a species one knows a lot about, but rather allowing oneself to be surprised by the life-form that comes, be it plant, animal, or ecological feature, such as swamp or mountain – any nonhuman being.

- Visualize / **observe this being fully** and from every angle, its size and shape and ways of moving. Optionally: you can make a drawing or some observation notes
- Kindly **request this being's permission to enter it**, become it, so they can imaginatively sense its body from within.
- Ask the being **how it wishes to be represented**, and if it has a **message** to be shared.
- Practice moving and speaking as the life-form. If time allows, this practice session helps people identify more fully with their life-form.
- Write the name of your life-form on a **stick-on label** (e.g in form of a figure, symbol or word) and if you received a message, you can write it down too on a piece of paper.

10.40-10.50 **Gathering in Council.** The beings move to the Council ground “in character” when summoned by drum beat. When they are all in the circle, the guide, as their own adopted life form, welcomes them to this council, inviting each being to identify themselves. One by one around the circle, they introduce themselves in a ceremonial fashion: “I am Wolf and I speak for the wolf people.” “I am wild goose and I speak for the migratory birds.” “I am the Amazon River and I speak for the rivers of the world.” It is important that this initial roll call precede any lengthier statements.

10.50-11.30 **Council of Beings**

In groups of 3 to 4, the beings make smaller groups. Then one by one, in their small group, they begin to speak as that being. Each person's turn takes about ten minutes and covers three parts, which the guide delineates beforehand, perhaps noting them on a sheet of newsprint:

1. Describe **what it's like to be this life-form**, the powers and perspectives you enjoy, the relationships that nourish you and that you nourish in turn.
2. Describe the **disruptions and difficulties** you may be experiencing now, due to loss of habitat, pollution, toxic dumping, drift nets, clearcutting, factory farming, etc.
3. Since humans are causing these difficulties and abuses, and only they can correct them, consider **what strengths you can offer to the humans to help them make the changes necessary to your survival** – and the survival of life on Earth.

The guide, who has given a time signal for each ten-minute turn, may conclude the exercise by reflecting that the gifts each life-form has given are already present within us by virtue of the web of life. Otherwise, they would not have occurred to us.

11.30-11.50 **Focus group reflection with the whole group.**

- Each small group briefly shares what the messages of the life-forms were, what gifts they offered, and what they discovered in the process.
- Individuals share their experiences of the workshop parts: the guided meditation, the blindfold exercise in pairs, the being chosen, the council of Beings
- Everyone is invited to share their take away message

11.50-12.00 **Signing Informed consent forms and filling out demographic information**

Appendix. Description of the full Council of All Beings

Council of All Beings

from chapter 8 of [Coming Back to Life](#) by [Joanna Macy](#) and [Molly Brown](#); second edition, published 2014. Joanna Macy and [John Seed](#) developed the Council of All Beings ritual for rainforest activists. It is a powerful embodiment of the principles of [Deep Ecology](#). Please [acknowledge the source](#) when you use any of these practices.

Time: 1 hour to an entire weekend

This colorful, sometimes solemn, and often lusty communal ritual allows us to step aside from our human identity and speak on behalf of other life-forms. It is excellent for growing the ecological self, for it brings a sense of our solidarity with all life, and fresh awareness of the damage wrought by one upstart species.

Following a ritual opening, participants allow themselves to be chosen by another life-form, for whom they will speak in Council. They prepare themselves to do this by reflecting on their life-form, often by making a mask to represent it, sometimes practicing moving and speaking as that life-form, and finally gathering in a formal, structured Council to speak of the grave threats faced by nearly all life-forms today.

Each Council, being the extemporaneous expression of those present, is different from all others. Each has its own character and flow. Some release torrents of intense feelings; others appear lighthearted or relatively staid. Remember that appearances can be misleading: participants who seem awkward in their roles, or relatively silent and uninvolved, can be deeply affected by the Council.

Method

Invocation. To begin the process, the guide can call upon the [Beings of Three Times](#) and perhaps the Four Directions. The blessing of the Four Directions is found in many indigenous traditions. Other ritual openings used in various traditions include smudging everyone, perhaps with cedar, sage or sweet grass smoke, and chanting. If you wish to use a ritual from a tradition that is not your own, we recommend that you seek guidance from practitioners within that tradition.

Being chosen. In this process, we imagine that other beings, other life-forms apart from humans, seek to be heard at our Council. The participants take time alone to let themselves be chosen. If time and setting permit, they walk outside for fifteen or twenty minutes. Indoors, allow three to five minutes. Ask people to relax deeply, opening their mind wide like a radar dish.

Encourage people to stay with the first impulse that arises. It is not a question of choosing a species one knows a lot about, but rather allowing oneself to be surprised by the life-form that comes, be it plant, animal, or ecological feature, such as swamp or mountain – any nonhuman being. Suggest that they visualize this being fully and from every angle, its size and shape and ways of moving. Then they request this being's permission to enter it, so they can imaginatively sense its body from within. Finally, they ask the being how it wishes to be represented and, if masks are to be used in the Council, what symbolic form the mask can take.

Mask-making. Lay out materials (cardboard, color markers, paste, tape, scissors, string, fabric scraps, etc.) on tables or ground cloths. People may also gather their own materials from nature. A half hour should suffice; give a five-minute warning before the end of the allotted time. Everyone works without speaking. People can attach their masks with string, elastic, or by taping the mask to a stick to be held in front of the face. Be sure everyone cuts holes to see and speak through; a mask which blocks the mouth makes it hard to be heard.

Practice moving and speaking as the life-form. If time allows, this practice session helps people identify more fully with their life-form. Either or both of the following activities can help alleviate self-consciousness.

- The guide invites participants to start moving as their life-form, beginning with eyes closed.

Breathing easily, begin to let yourself feel how it is to take body in this new life form.... What shape are you? ... How much space do you take up? ... What is your skin or outer surface like? ... How do you take notice of what is around you? ... How do you move, or how are you moved by other forces? ... Do you make any sounds? Play with those sounds....

- In groups of three or four, participants don their masks and practice using their human voice to speak for their adopted life-form. Each being speaks in turn for three to five minutes to their small group, introducing themselves, describing how it feels to be who they are, and naming their special strengths and qualities. Here they stay focused on their physical nature and way of life as it has been from the beginning of time (saving comments about present conditions for the Council itself).

Gathering in Council. The masked beings move to the Council ground “in character” when summoned by drum beat or animal call. When they are all in the circle, the guide, as their own adopted life form, welcomes them to this council, asking, What is Befalling our Earth and our Lives?

The guide invites each being to identify themselves. One by one around the circle, they introduce themselves in a ceremonial fashion: “I am Wolf and I speak for the wolf people.” “I am wild goose and I speak for the migratory birds.” “I am the Amazon River and I speak for the rivers of the world.” It is important that this initial roll call precede any lengthier statements.

Three stages of the Council.

- Speaking at random, the beings express the particular concerns they bring to the council.

For example: “As wild goose, I want to tell the Council that my long migrations are hard now because the wetlands are disappearing. And the shells of my eggs are so thin and brittle now, they break before my young are ready to hatch. I fear there is poison in my bones.” The Beings in the Council respond, “We hear you, wild goose.”

“As Mountain I am ancient, strong, solid, enduring. But now my forest skin is being torn off me, and my top soil washes away, my streams and rivers choke. Blasts of dynamite shatter me. I cannot care for the beings to whom I have always given refuge.” “We hear you, Mountain.” One by one they speak, and are heard. Rainforest, river, soil, wheat, badger, mouse.

- After a while, perhaps a dozen testimonies, the guide reflects that all the suffering that the beings describe seem to derive from the activities of one adolescent species.

“It would be good for humans to hear what we have to say. Let us summon them to our Council, to listen only. Would five or six of you put down your masks and move to the center to be humans?” The guide beats the drum and humans come to sit back to back in the middle, facing outwards. From now on, they are addressed directly: “Hear us, humans. This is our world, too. And we’ve been here a lot longer than you. Yet now our days are numbered because of what you are doing. Be still for once, and listen.”

The humans silently listen as the Council continues. “Oh, humans, as the Danube, I was a bearer of life. Look at what I bear now that you’ve poured your wastes and poisons into me. I am ashamed and want to stop flowing because I have become a carrier of sickness and death.” “We hear you, Danube,” say the other beings.

After a time, when more beings have spoken, the drum beats again and other humans replace the ones in the center, who return to the periphery and pick up their masks. In this fashion, everyone takes a turn to listen as a human.

- When all the beings have had a chance to address the humans and call them to account, a major shift occurs.

The guide may reflect, “For all their machines and apparent power, the humans now are frightened. They feel overwhelmed by the momentum of the forces they have unleashed. It does not serve our survival for them to panic or give up, for truly our life is in their hands. If they can awaken to their place in the web of life, they will change their ways. What strengths and gifts can each of us give them to help them now?”

Now each being has the chance to offer to the humans, and receive as a human when they come to the center, the powers that are needed to stop the destruction of the world, the strengths and gifts inherent in each life-form. Sometimes the humans break their silent listening to say simply, “Thank you.”

“As Mountain, I offer you my deep peace. Come to me at any time to rest, to dream. Without dreams, you may lose your vision and your hope. Come, too, for my strength and steadfastness whenever you need.”

“I, Condor, give you my keen far-seeing eye. Use that power to look ahead, beyond your day’s busyness, your short-term concerns.”

“I, Wild Flower, offer my fragrance and sweet face, to call you back to beauty. Take time to notice me, and I’ll let you fall in love again with life. This is my gift.”

Ending. Each Council ends a little differently, given its dynamics. Some wind up reflectively in silence. Some end intimately when everyone has joined the humans in the center to receive the gifts, and find themselves embracing and sounding together. Other Councils burst into vigorous drumming and dancing, with hoots and howls and other wild calls.

In whatever way the Council ends, a formal releasing and thanksgiving should take place. People are asked to speak to the life-forms they adopted, thanking them for the privilege of speaking for them, and then letting that identity go. Then, placing their hands and foreheads on the ground, they return the energy that has moved through them to the earth, for the healing of all beings.

Now what to do with the masks? The group may burn them in a reverent way, or compost them, or take them home to keep for a while

John Seed and Joanna Macy sometimes end with another suggestion. Participants can retain as their true identity the life-form for whom they have spoken – and put on a human “mask” (their own face) to re-enter the world.

Variations:

When time is short, or the materials are not at hand, drop the mask-making. If desired, use stick-on labels instead, on which people can draw a figure or symbol. Drop the practice sessions of movement and/or speaking in small groups.

One hour version: When time is very short, say you have just an hour, you can still offer a key feature of the Council: the chance to step aside from one’s human identity and speak on behalf of another species.

In this abbreviated form, people cluster in foursomes. Closing their eyes, they follow the guide’s suggestions on how to let themselves be chosen by another life-form. Then one by one, in their small group, they begin to speak as that being. It helps to lean forward, heads together, eyes half-closed.

Each person’s turn takes about ten minutes and covers three parts, which the guide delineates beforehand, perhaps noting them on a sheet of newsprint:

4. Describe what it’s like to be this life-form, the powers and perspectives you enjoy, the relationships that nourish you and that you nourish in turn.
5. Describe the disruptions and difficulties you may be experiencing now, due to loss of habitat, pollution, toxic dumping, drift nets, clearcutting, factory farming, etc.
6. Since humans are causing these difficulties and abuses, and only they can correct them, consider what strengths you can offer to the humans to help them make the changes necessary to your survival – and the survival of life on Earth.

The guide, who has given a time signal for each ten-minute turn, may conclude the exercise by reflecting that the gifts each life-form has given are already present within us by virtue of the web of life. Otherwise they would not have occurred to us. When the whole group has drawn together, people may share what life-forms spoke through them, what gifts they offered, and what they discovered in the process.

[Kathleen Rude](#) led a Council with a group of 40 people. She divided the group into three “delegations.” Each delegation spoke to one of the parts described above, with each member of the delegation walking around the circle while speaking, so that everyone could see and hear clearly.

[Alan Steinberg](#) included a very brief but effective version of a Council in a conference workshop using clay. After a number of clay-working activities, he used a guided meditation to help each group member encounter another life form. Participants then had five minutes to make a clay figure representing it. Then going around the circle, each person spoke as their being, addressing the three topics listed above. Although brief, the process was moving and memorable.

[Frieda Nixdorf](#) leads Councils in an online setting. She opens the ritual before the workshop begins, inviting participants to take time in advance to be “called” by a being and arrive at the workshop as the being. Participants arrive with their cameras off and remain muted for an initial invocation and embodiment experience. Participants are then invited to rename themselves as the being and turn their cameras on. At the closing of Council participants are then invited to return to human form by honoring and expressing gratitude to the being.

Contributor/Author: Joanna Macy & John Seed

Appendix C

Post workshop questionnaire

In the following questionnaire, you will be asked to reflect on your overall experience of the workshop and its various activities. We encourage you to provide detailed responses, sharing your thoughts, feelings, and impressions about each exercise. You will have the opportunity to evaluate how engaging, meaningful, or challenging each activity was for you. Please answer as honestly as possible—there are no right or wrong answers. Your feedback is valuable in understanding how these activities influenced your experience and perception. Feel free to elaborate on what aspects you found most impactful, what you struggled with, and any insights you gained throughout the workshop.

To maintain anonymity while ensuring consistency, please create a unique code using your initials (first and last name) followed by the last three digits of your phone number. You will be asked to enter this same code for every questionnaire you complete over the next week.

- 1) Can you describe your experience in the workshop? What were the most meaningful moments for you, and why?
- 2) Were there any moments in the workshop that felt less meaningful or impactful to you? If so, why?
- 3) Reflecting on the workshop, what did you take away from the experience? Do you feel the workshop has had any lasting impact on how you relate to nature and the environment? How, if at all, has your perception of trees or the natural world been influenced by the experience?

You are now invited to rate each activity you participated in during the workshop. Please use a scale from 1 to 10, where 1 means 'Not at all' and 10 means 'Very much.' Choose the number that best reflects your experience with each activity.

The following questions are now referring to the Sit-Spot Exercise (Spending time alone in the forest before the workshop)

- 1) How easy was it for you to engage in the sit-spot exercise?
- 2) To what extent did you feel connected to the environment during this exercise?
- 3) How helpful was this exercise in preparing you for the workshop's goal of taking the perspective of another life-form?

The following questions are now referring to "Meditation in the Forest"

- 1) How easy was it for you to focus and engage in the meditation?
- 2) To what extent did the meditation help you feel connected to the environment?
- 3) How helpful was this meditation in shifting your perspective toward nature?

The following questions are now referring to blindfolded Exercise (Guiding and being guided through the forest)

- 1) How comfortable did you feel during the blindfolded exercise?
- 2) To what extent did you engage with the sensory experience of sounds, textures, and movement?
- 3) How helpful was this exercise in allowing you to connect with the environment in a non-visual way?

The following questions are now referring to the 'being chosen' exercise (sense into, observe and temporarily become the life-form that has chosen them)

- 1) How easy was it for you to embody your chosen entity?
- 2) To what extent did you feel immersed in your role as a non-human entity?
- 3) How engaging was this exercise in helping you explore a different perspective?

The following questions are now refer to the "Council of Beings" exercise (create a clay statue of the embodied being and dialogue within the group)

- 1) How comfortable did you feel during the council of beings?
- 2) To what extent did you feel immersed in your role as a non-human entity?
- 3) How engaging was this exercise in helping you explore a different perspective?

This section is now about your personal information and demographics.

- 1) What is your gender?
- 2) What is your nationality?
- 3) How old are you?
- 4) What is your education level? Please specify your year of study and the subject.
- 5) How often do you spend time in nature?
- 6) Would you describe yourself as someone who feels connected to nature? Why or why not?
- 7) Have you ever practiced meditation, mindfulness, or other sensory exercises? If yes, what types of practices have you engaged in? (e.g., breathing exercises, body scans, guided meditation, nature-based mindfulness, etc.)
- 8) Were there parts of the workshop that felt unfamiliar or outside your comfort zone? How did you deal with them?
- 9) Did any prior experiences (e.g., hobbies, cultural background, studies, or personal interests) help you engage with the workshop? If so, how?
- 10) Do you have any suggestions for improving the workshop experience?

Follow-up daily diary questionnaire

Thank you for taking part in the workshop. Over the next few days, you'll be invited to complete a short reflection once a day. These open-ended questions are designed to help us explore how the experience may be resonating in your everyday life. Please take a few moments each day to answer as honestly and thoroughly as you can. There are no right or wrong answers — we're interested in your personal reflections, thoughts, and observations, no matter how big or small they may seem.

Your responses will help us better understand how embodied and imaginative experiences may influence our relationship with nature.

please enter your code:

Create a unique code using your initials (first and last name) followed by the last three digits of your phone number. You will be asked to enter this same code for every questionnaire you complete over the next week.

- 1) Since the workshop, have you found yourself thinking about nature differently in your day-to-day life? For example, do you approach outdoor spaces, environmental issues, or your own actions towards nature with a new perspective? If so, please give an explanation.
- 2) Thinking back to the life-form you embodied during the workshop, have you noticed any ways in which its lessons or messages influence your thoughts or actions in daily life? Can you describe a specific situation where this insight shaped your perspective or behavior today?
- 3) A. Thinking about your day, can you recall a specific moment where you interacted with nature or thought about your responsibility toward the environment? How did you respond in that situation, and do you think the workshop influenced your thoughts or actions in any way?

B. If was difficult for you to answer the previous question, take a moment to reflect—was there a reason the workshop lessons didn't feel relevant today? Were there missed opportunities where you could have applied something you learned? Looking back, how might you have approached a situation differently?
- 4) Have you felt any shifts in your sense of responsibility toward nature since the workshop? In what ways, if any, do you find yourself more aware or engaged in environmental actions (such as reducing waste, speaking about nature with others, or making different daily choices)?

Appendix D

AI use

Open AI was used to assist the student in brainstorming or clarification of complex concepts, as well as ideas for suggestions for paraphrasing.