Post-humanising creativity approach in eco-art projects to foster greater empathy with nature

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Abstract

In this article, the author delved into the potential of post-humanising creativity in eco-art experiences to enhance empathy with nature. By reviewing the literature on post-humanising creativity and related theories, the author challenged, shifted, and expanded the current concept of empathy with nature dominated by psychology and neurology. Additionally, the author used the autoethnography method, focusing on her personal experience as a participant in an open eco-art workshop, to explore the practical application of PHC that could foster empathy. By immersing and intra-acting herself with co-actants during the creative process, the author discovered the in-depth process of empathy with nature, the possibilities of using post-humanising creativity to foster it and offered new ideas for future pedagogy.

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Chapter 1- Introduction

The increasing global ecological crisis urges the need to promote actions to tackle environmental issues. Among factors that impact pro-environmental behaviours and attitudes toward sustainable development, many researchers emphasize the crucial role of empathy, which is seen as an internal motivator (Young et al., 2018), engaging humans and nature bonding, further fostering pro-environmental actions (Tam, 2013; Wang et al., 2022). Brown et al. (2019) claimed that although empathy may not always lead to actions, empathy with nature makes a foundation for overcoming the typical dualist perspective and distance between humans and nature, potentially enhancing a more pro-environmental tendency. Empirical research from Berenguer (2007) reveals that people with higher empathy with nature show a stronger attitude toward protecting natural objects and a willingness to conserve the environment, such as donating to protect wildlife, consuming more responsibly, etc. Moreover, it advances the feeling of care (Berenguer, 2007; Tam, 2013; Wang et al., 2022), elicits moral judgment and actions to protect the environment, and induces more responsible ecological attitudes (Pfattheicher et al., 2015).

Post-humanising creativity (PHC), a theory that focuses on the creative process, was developed by Chappell (2018) from the ideas of Wise Humanising creativity, posthumanism, and new materialism. I find this approach, which sees humans and other-than-humans in the creative process as co-actants in *embodied dialogues* and *co-creation* in the *journey of becoming* (Chappell, 2018; 2022), is relevant and prospective to help people easily take perspective and feel other beings' situations (aspects of empathy). Moreover, by decentering human position in the flattened hierarchy with other than humans in the creative process, I believe that the PHC approach can help individuals strengthen empathy with nature and expand it to be more inclusive. The individuals will not just empathize with objects (birds, flowers, plants, etc.) that they are interacting with, but the larger eco-system that both individuals and

objects are living in; further, it forms a stronger commitment to pro-environmental actions. Because of these two key reasons, I would like to take my dissertation to explore the possibilities that PHC can shift empathy with nature.

Moreover, eco-art is an interdisciplinary activity of creation. This approach to engaging empathy with nature is also considered to be a solution to engage empathy with nature. Sunassee et al. (2021) discuss using eco-art in place-based education to encourage students to act as protectors of the environment and to engage in critical thinking about environmental issues. Meanwhile, Curtis (2009) emphasises the role of the arts in forming emotional affinity or empathy for the natural environment through the inspiration of cognitive interests in nature during the interaction and creation process. Together, these papers suggest that eco-art education can be a powerful tool for developing empathy with nature and inspiring pro-environmental attitudes and behaviours. Combining this potential with the potential of the PHC approach for empathy above, I believe that applying PHC in eco-art education promises to develop and expand participants' empathy into an increased consciousness and kinship for all living beings. Therefore, I would like to take this research to explore this potential and also propose how this potential can be applied into practice to truly bring the benefit. In detail, I want to study more about (1) How can PHC's approach to eco-art projects foster greater empathy with nature and (2) How I can bring this theory into practice.

To achieve this, in Chapter 2, I will look at the literature reviews to clarify today's commonly used concepts of empathy with nature, its elements and how it is manifested (Chapter 2.1). Secondly, I will base on the theory of PHC (Chappel et al., 2018), together with "high" theories such as materialism and posthumanism and other related ideas like the intra-active pedagogy of Taguchi (2010), to explain and challenge the concept of empathy with nature we put forward today, also open up the potential that PHC in eco-art context can foster and expand empathy with nature (chapter 2.2). Thirdly, to explore the possibilities that these ideas can be applied into practice, I will illustrate and explain them through my

experience and reflection as a participant in “Making the Mossy Carpet”, an eco-art project run by the Art and Energy organisation- which focuses on using creativity and arts to promote a “brighter and greener future” in chapters 3, 4, and 5. In detail, I will first clarify my research questions specialized for this project, which are aligned with my general research questions mentioned above (Chapter 3.1). Then, I will introduce the auto-ethnology method and explain why I chose this method for finding my research answer (Chapter 3.2). I will also make clear how I collect and interpret data (Chapter 3.3) and draw some ethical considerations in this research (Chapter 3.4). Further, I will share some findings (Chapter 4) on evidence of PHC qualities and related empathic behaviours that appeared and discuss it based on the theory of empathy with nature, and PHC mentioned above (Chapter 5). Alongside with analysing, I will also propose several possible ways that educators can apply ideas of PHC to foster empathy with nature in the future.

Keywords: pro-environmental behaviour, empathy with nature, post-humanising creativity, eco-art project

Chapter 2- Review of Literature

In this chapter, I will define what I mean by empathy with nature. Firstly, I will review the updated and commonly accepted conceptualizations of empathy with nature based on literature reviews from different perspectives, especially the two dominant ones: psychology and neuroscience. Secondly, I will critically discuss, challenge and develop this concept using the PHC approach in an eco-art context, further suggesting the possibility that the PHC approach in an eco-art context can foster greater empathy with nature.

2.1. Conceptualize empathy with nature

Because of similarities, the concept of empathy with nature is possibly developed from the concept of either empathy (in general) or empathy with humans (Tam, 2013; Ruckert, 2016, as cited in Ernst & Budnik, 2022). However, despite thousands of studies over centuries, the concept of

empathy, empathy with humans and empathy with nature has not reached a consensus (Cuff et al., 2016; Eklund & Meranius, 2020). In the scope of this research, I will not attempt to clarify a "correct" concept or concretely follow one specific author's conceptualisation of empathy. Instead, I will critically select and emerge the updated and commonly accepted concepts from different perspectives to form the concept of empathy with nature for the usage in this research. In detail, I will first critically refer to literature reviews on empathy in general, empathy with humans and nature to conceptualize the most common concept of empathy. Then, I will put these views in an environmental context to further develop concepts of empathy with nature I am using for this research. Besides commonly used articles from psychological and neurological perspectives, the updated literature reviews about empathy such as Benjamin M.P Cuff et al. (2016), Eklund JH and Meranius MS (2020) and my educational viewpoints are carefully considered during this review process.

2.1.1. Common conceptualisation of empathy: current understandings

From a psychological perspective, empathy widely refers to two components: cognitive empathy and affective (or emotional) empathy (Tam, 2013; Brown et al., 2019). In detail, *affective empathy*- an emotional aspect of empathy, is the ability to feel and share another individual's emotions (Brown et al., 2019). Accordingly, empathy can involve feeling either positive or negative emotions from others. For example, one may feel distressed for others' suffering or pain and joy for others' happiness. However, psychological research has commonly focused on empathetic reactions to negative rather than positive events (Brown et al., 2019). According to Tam's reviews (2013), the reasons can be explained as follows:

(1) scholarly curiosity about empathy arises from investigations into acts of altruism, and (2) the natural tendency of the human lineage typically is to be more emotionally stirred by negative emotions in others than by their positive counterparts. The neural examination using functional

magnetic resonance imaging from Perry et al. (2012) shows the same results, explaining further details that an individual tends to share the distress of others but react less to the joy of others.

Another dimension of empathy is *cognitive empathy*- a cognitive aspect of empathy that is mainly related to the theory of mind, which is known as the capacity to consciously understand another's feelings or thinking (Brown et al., 2019) but not necessarily have the same feeling of others (Spreng et al., 2009, as cited in Ernst & Budnik, 2022). This distinction is necessary to avoid projecting narcissistic tendencies and missing out on what holds importance and value for others from their distinct perspective. When someone has cognitive empathy, they can mentally put themselves in others' position, imagine how others might feel, and comprehend the reasons behind these emotions, but does not necessarily require an emotional connection. Through a literature review of 43 definitions of empathy since 1975, Cuff et al. (2016) provided more ways than perspective-taking to understand another's feelings, such as reading other's facial expressions, retrieving relevant emotional experiences in the past, imagining events in another place or time frames, projection, etc. Based on the above examination, the elements of cognitive empathy can be summarized as (1) feeling identification- the capacity to accurately recognize one's emotional or mental cues, and (2) perspective-taking, the capacity to put oneself in the position of another and imagine their thoughts or feelings (Dewar, 2020; Ernst & Budnik, 2022).

While affective and cognitive empathy reflect two different constructs, cognition and emotion, and numerous neurological studies have demonstrated distinct brain regions associated with each construct, many other researchers support the idea that these two dimensions are unseparated and enhance each other to create a more comprehensive empathic response. Cuff et al. (2016, p.147) review some claims that "affective and cognitive components interact with each other". While affective response is the beginning of the empathy process (Gruen, 2009), which is automatically sparked by an emotional stimulus, cognitive elements can adjust this affective element (Cuff et al.,

2016) by such as cognitive state of perspective-taking (Pittinsky et al., 2016). Moreover, the most recent literature review by Eklund and Meranius (2020, p.10) also argues how emotion is interrelated to cognition to construct a whole meaning of empathy that "the feeling is one of understanding and that this is not a cold but a sentient understanding". By putting feeling for (cognitive empathy) and feeling with (affective empathy) others in concert, an individual sense and understand the feeling of others more deeply and also forms the desire to relieve their suffering or protect them. Social theorist Rifkin (2009, as cited in Brown et al., 2019) has a similar argument that empathy should be understood to be beyond understanding or feeling to action in support of others. Ernst and Budnik (2022) refer to the result of emotion and cognition combination as *empathic concern* or *motivational empathy* (Figure 1)

Figure 1: Mapping empathy dimension

2.1.2. Conceptualisation of empathy with nature and several considerations

Based on several literature reviews of empathy with nature, the conceptualisation of empathy and consideration above, in the environmental context, this study defines *empathy with nature* as an ability to *understand*, *feel and share* positive or negative states of the natural world (known as living and non-living beings existing independently with human involvement), with *self-other differentiation* (cognitive and affective empathy*)*. This *motivates* them to engage in pro-environmental action to mitigate the suffering of particular natural components or enhance their positive emotional encounters or situations (motivational empathy). For instance, when seeing an animal or a plant dying, an empathetic person perceives the situation, feels and shares this suffering experience, and tries to help animals/plants overcome it in the awareness that the source of the

emotion is not their own. Similarly, when seeing a group of fish swimming freely under the water, an empathetic person shares the joy and nurtures the wish to maintain and develop the fish's favourable circumstances.

The four themes (understanding, sharing, feeling and other-self differentials) included in the concepts of empathy with nature above align well with the most updated literature reviews about empathy by Eklund & Meranius (2020). They argue that the combination of these four themes reflects insights into empathy's dual but concurrent existence and makes a whole meaning of empathy. The first insight is the simultaneous presence of the self-other distinction and merging, which was also mentioned by Cuff et al. (2016). For example, an animal empathiser who witnesses a wounded bird in their garden might feel a strong emotional response to the bird's suffering, experiencing a deep sense of empathy as they imagine the pain and fear the bird might have. However, despite this emotional connection, they are also aware of the fundamental differences between themselves and the bird. Noticeably, distinguishing between oneself and the bird does not necessarily diminish the value or stop one from feeling the bird's situation but instead makes vivid both the resilience and vulnerability of the self in relation to others (Gruen, 2019). Another dual insight of empathy with nature is integrating both body and mind in the empathetic process. This means that empathy, in general, and empathy with nature, in particular, is not just controlled by the "top-down"- intellectual process of the mind but also by the "bottom-up"- automatic engagement of emotion which is elicited by the involvement of different parts of the body (Cutff et al., 2016). Eklund & Meranius (2020, p.9) highlights these two insights above that make a comprehensive empathy concept: "empathy is both closeness and distance" and "empathy is both body and mind".

Several views about empathy in general and empathy with nature should be considered in this research. Firstly, there are opposite arguments about whether (motivational) empathy includes behavioural action, such as helping one to alleviate suffering (Plattheicher et al., 2015; Young et al.,

2018). From the reviews of Wang et al. (2022), although individuals with empathy are more likely to take action, many researchers also show various factors that hinder empathizers from turning their motivation into actual actions, such as the possible ability to help, potential risk or danger to oneself and others, etc. Therefore, in this research, I will consider (motivational) empathy with nature for behavioural motivation rather than action (Cuff et al., 2016; Bloom, 2017). From this standpoint, empathy with nature is a valuable tool to potentially stimulate people to do good deeds for the environment. Further consideration about the choices of actions or ethical elements of empathic actions is beyond the scope of this research.

Secondly, despite these positive possibilities, it is essential to consider the potential drawbacks of empathy with nature. Although an empathic person, through the cognitive process, can distance themselves from others' distress, there are instances where an excessive focus on affective empathy over cognition, without establishing appropriate emotional boundaries, can result in negative states such as exhaustion, cruelty, aggression, and shame (Bloom, 2017). Moreover, sometimes empathy becomes meaningless or suffering when not coupled with agency or any corresponding action (Singer & Klimecki, 2014).

Lastly, empathy is not limited to perceiving only those who are physically present. Gruen (2009) exemplifies this point through the early-age children emerging their feelings of suffering, scarring or happiness according to characters in the stories they are listening to. The empathy with fictional beings indicates that we, as humans, possess an inherent ability to connect with diverse entities through narratives, literature, and art. If cultivated, this capability potentially enables us to empathise with the broader world beyond humans.

From the literature reviews about concepts of empathy with nature and its drawbacks above, from an educator's point of view, I believe that it is essential to accept both positive and negative emotions from the empathetic process as a two-sided aspect of the human being's instinct.

Therefore, fostering empathy with nature is not just about helping one feel, share and understand positive or negative *current* states of the natural world with self-other differentiation (affective and cognitive empathy aspects) but also about awareness of, preventing, mitigating or converting the detrimental impacts of overwhelming emotions to better outcomes.

Above, I explored the concept of empathy with nature, considering my educational viewpoints and updated literature from psychological and neurological perspectives, which are currently the two most common disciplines that approach empathy. However, upon further examination of this concept through the PHC lens and in the eco-art context, I argue that the concepts of empathy with nature we put forward today can only partially address the way we see empathy with nature and, consequently, may not be the most effective means of fostering empathy. In the following session, I will elaborate on this argument, especially showing how applying PHC in an eco-art context can enrich, expand and shift our understanding of empathy with nature we concept today, further fostering it in a more comprehensive and inclusive manner.

2.2. Post-humanising creativity approach to empathy with nature in the eco-art context

2.2.1. Post-humanising creativity approach

PHC was first developed by Chappell (2018), which goes beyond Wise Humanising creativity theory to see creativity through posthumanism and new materialism lens. In contradiction with the anthropocentric perspective, which places humans as ones who dominate or take control and other-than-humans as the resource to serve humans, PHC positions humans and other-than-humans in the flattened hierarchy to co-create and co-grow in the creative process (Chappell, 2018). She explained that we (humans) are not "fully acknowledging the partiality of human perspective or that other-than-humans have strong influences beyond our control" (Chappell, 2018, p. 10), so it is necessary to concern the agencies of other-than-humans and see it more if not equal as just a mediating provocation (Barad, 2003). Another scholar, Haraway (2003), even emphasizes the connection

between humans and other- than-humans as a form of kinship that is always perpetual coexistence. Braidotti (2019) shared the same idea that humans cannot be divorced from other living things and of the physical Earth. By decentering humans and re-valuing the relationship and role of other-than-humans in the creative process, this approach offers countless possible outcomes of creation and especially challenges other notions, such as ethics and empathy, in the period of increasing marketisation and neoliberalism (Chappell, 2018). Building on these ideas, in the following part, I will explain more about how ideas of PHC relate to, sharpen, shift and expand the current concept of empathy with nature, further broadening the potential to foster greater empathy that motivates pro-environmental actions.

2.2.2. PHC in eco-art context potentially fosters empathy with nature

To explain the potential that PHC induces empathy with nature in an eco-art context, the viewpoint of Chappell (2018) that *embodied dialogues* between an individual and other(s) as the core drive of the creative process is helpful here. In detail, an individual makes dialogue with other(s) not only verbally or non-verbally but by embodiment through the conversation between the inside and the outside (inside-out and outside-in), which Merleau Ponty (1964, as cited in Chappell, 2018) called "space in between". Noticeably, Chappell sees this *dialogue* as an ongoing and endless process of questioning and answering to generate unlimited new possibilities, and *other(s)* in this dialogue as not just humans but other-than-humans, such as a tool, living beings, text, environments, movements, etc. (Chappell, 2022). Putting this idea into an eco-art context where individuals are immersed in varied eco-art elements such as plants, flowers, space, ideas or concepts of nature, etc., I find ample opportunities for interaction and dialogues between individuals and eco-art actants to create endless possibilities: a bonding or new understanding of living beings that individuals are interacting with, a new recognition/ideas of environmental issues, easily take perspective and feel other living beings' situations, to name but a few; Therefore, it would be no doubt that one potential result of this creative

process could be an evoke in empathy with nature. In addition, since embodied dialogue is an ongoing process with numerous potential consequences, there might not be a single outcome for empathy but rather endless possibilities for improvement.

2.2.3. PHC fosters empathy with nature beyond the individual's mind and body

Furthermore, the ideas of immersion and embodiment between one and other(s) when dialoguing also mean that not only humans but also other-than-human are embodied and enmeshed within the creative process (Chappell, 2022). This approach expands the understanding that the empathy process (that happens alongside the creative process) does not just occur inside the mind or body individually or in separation from the materiality, space, and environment that individuals are in. Instead, it collaboratively and communally occurs between an individual and everything around for relational becoming during the intra-action. Claxton et al. (2008, as cited in Chappell, 2018) also emphasised that in the mega system, humans do not create independently but always have other-than-humans as co-actants to intra-act, make and be made together. This idea challenges the prevailing viewpoints reflected in the updated review about the nature of empathy by Eklund and Meranius (2020). For example, neuroscience that sees empathy is limited to one person, and perspectives of psychotherapy and philosophy that see empathy occur only among individuals who work together, communicate, and create a shared reality.

2.2.4. PHC in eco-art context fosters empathy with nature by promote the sense of kinship

As can be seen above, applying the concept of PHC in an eco-art context can advocate for a deeper, more dynamic and inclusive approach to empathy. Spending time to interact and immerse with eco-art actants (not only physical objects but environments, ideas and space) offers opportunities to promote a sense of kinship and interconnectedness with nature, which is commonly known as a way to foster empathy (Schultz, 2002). Haraway (2003), a posthuman scholar, also explores the complexities of human-nonhuman animal relationships and advocates for

reconceptualising empathy that includes non-human beings and their experiences. However, I argue that this bonding is even profound as it is not solely driven by emotional reactions that automatically arise upon encountering another's emotions (Singer et al., 2004). Rather, it is also influenced by cognitive understanding since one is conscious of the multiple entanglements and interdependencies with nature and other living beings, as well as their agency and vital roles in lives.

2.2.5. PHC broadens empathy with nature by shifting the focus from sameness to otherness and oneness

People are more easily empathic with the ones whom they have closer relationships and share more commonalities with (Gable & Reis, 2010, as cited in Ernst & Budnik, 2022). This finding makes me wonder about the exclusion and limitation of individuals' empathy with a vast part of natural objects or elements, such as rocks, ecosystems, rivers, etc., that do not have many similarities with them. Gruen (2009, p.31) raised the same concern and explained that "because empathy generally involves affective connection to the object of empathy and because it seems odd to think of mountains and rivers as having feelings in anything other than a metaphorical sense, empathetic engagement will not happen with these natural entities. Empathy does not appear to be the appropriate ethical response to environmental destruction".

In this case, PHC in an eco-art context broadens empathy with nature by shifting the focus from sameness to otherness and oneness. As discussed above, PHC fosters empathy beyond an individual's mind and body, to collaboratively and communally with co-actants in embodied dialogues. This also means the ability of PHC to provide a more comprehensive view of empathy with nature by expanding the boundaries of empathy to include non-living beings, the space in between, the environment, ecosystems, rivers, the land, etc., that may not possess the same characteristics as humans. From this approach, individuals not only zoom in to empathise with natural living beings such as animals, plants, and insects that they are interacting with and can be tangibly seen in the

creative process, but also zoom out to empathise with related non-living beings such as air and rocks.

Furthermore, it expands to acknowledge kindship and empathise with a larger ecosystem where all beings live interconnectedly and interdependently. Consequently, empathy with nature is not just evoked from affective factors to feel and share feelings with others but also from understanding the entanglement and interdependence among all beings (Vagg, 2022) (cognitive empathy). From this point, Gruen (2009) states that fostering empathy does not merely require enhancing affective but wisdom.

2.2.6. PHC fosters motivational empathy with nature

Understanding equal positions and multiple interdependences between humans and other-than-humans is necessary to sharpen the empathic approach to nature. PHC fosters empathy with nature by shifting the focus from the human-centred perspective to a more inclusive and interconnected approach that emphasises the kinship between humans and the natural world. By recognising this multiple entanglements between oneself and other(s), one expands their attention beyond their own needs to include the needs of subjects they are directly engaged with, as well as the space in which they and others reside, even if those spaces may not be similar to their own. This might also involve recognising that humans, like other species, are fully part of the environment and possess unique capacities that are necessary to tackle the issues (Fox & Alldred, 2020). Braidotti (2008, as cited in Fox & Alldred, 2019) further developed a perspective of ethics based on recognising the interconnectedness between posthuman bodies and non-human matter. Consequently, this engages the desire for help (motivational empathy) rather than just standing at feeling the suffering or joy of the object. In other words, empathy with PHC engagement is evoked through both relationships and responsibilities- including relationships with the global ecosystem, resulting in motivational empathy, which pushes the empathiser to take action

2.2.7. Empathy for nature and empathy with nature

Lastly, there is a highlight for my intentional choice of the term “empathy with nature”, which reflects my research approach through the PHC lens. From literature reviews, I found that scholars have been using empathy *for* (Young et al., 2018; Sunassee et al., 2021); and empathy *with* (Tam, 2013; Wang et al., 2022) interchangeably and with equivalent concepts. For me, the term *for* is more direction, bringing the feeling of separation between humans and nature. From the posthumanism viewpoint, I consider that the term empathy with nature is not just about the *outcome* of the creative process but the *process* of achieving this outcome when humans and other-than-humans are in intra-action. I prefer to use *with* to imply this co-existence, co-contribution, and co-creation between humans and non-humans in the *journey of becoming more empathetic* with ecological issues. It is also inspired by the book “staying with trouble”, where Donna Haraway states, “nothing makes itself; nothing is really autopoietic or self- organising”. During this growth, humans and non-humans (materials, space, etc.) are learning, strengthening kinship, making and being made together.

Above, I already built my viewpoint about empathy with nature through the PHC perspective. In which, I argued for the potential that approaching empathy through PHC and in the eco-art context invites us to develop a more inclusive and expansive understanding of empathy. This understanding was formed by embodied dialogues, immersive experiences and by acknowledging the agency of entities involved, the complex web of relationships among them and us (humans), which in turn lead individuals to a kinship with nature, respon-ability and greater commitment to environmental actions. In the following part, I will exemplify how PHC approaches to eco-art context can foster greater empathy through an eco-art project of Art and Energy organisation.

Chapter 3- Methodology

In this chapter, I will present the research questions that are based on the general goal mentioned earlier. I will then introduce autoethnography and explain why I chose it as the method to answer my research questions. Next, I will explain in more detail how I collected and interpreted

data using the autoethnography method and with the lens of PHC. Finally, I will clarify various ethical points related to the project.

3.1. Research questions

The literature review presented above explores a theoretical foundation for the idea that PHC potentially fosters greater empathy with nature in the context of eco-art. To see how this theory manifests in the reality, I conducted further research through my participation in an offline eco-art workshop named The Mossy Carpet, run by the Art and Energy organisation. My study will focus primarily on the below questions:

- How is PHC applied and manifested in this eco-art project to foster my empathy with the moss and/or ecological issues?
- How did my empathy with the moss and/or nature change during the eco-art activities with PHC application?

3.2. Methods

Autoethnography, a qualitative research method, is increasingly being used and developing in maturity within the humanities and social sciences, especially in education to explore in-depth how people learn and develop (Nicol, 2012). Belbase et al. (2008) refer to autoethnography as “a method of research and teaching for transformative education” (p. 86) by emphasizing its significance of utilizing personal life experiences as a means of inquiry to deeply explore hidden or complex concepts, further bringing about positive change in education. Numerous scholars employed autoethnography as their method for these purposes. For example, Dickson (2008) utilized this approach to gain insight into her own learning preferences while Fox (2008) employed it to re-evaluate and question the notion of "experience" in experiential education. Above are some examples and theories I hope to accomplish to achieve the backup why I first thought of finding my research answers through autoethnography. Below, I will provide further details about why I chose

this method in my research context.

From the psychological and neurological perspective mentioned above, empathy with nature involves both cognitive and emotional aspects, which are very subjective (Cuff et al. 2019), complex, changeable and affected by different factors (Schultz, 2002). Also, from the PHC lens and literature review earlier, I referred empathy beyond the mind and body of individuals, which involves collaborational, communal embodied interaction and outside-in and inside-out dialogues during the creation. In addition, I also mentioned above the wide range of players (humans and other-than-humans actants) in the creative process, inducing endless possibilities of empathy. To sum up, for me, empathy with nature through PHC viewpoint is more complex to be tested or measured. Furthermore, upon a closer examination of my research questions, I aim to investigate the transformation of empathy, which encompasses consideration of both the process and the events of change. Thus, it is essential to adopt a research approach that is interactive, flexible and in an in-depth manner, which can reveal not only what changes but also the insight of the entire process of how it changes.

In this case, autoethnology is potentially a suitable method as it allows the researcher to be "deeply immersed in self-experience while observing, writing, journalling and reflecting" (Edward, 2021, p. 1). Followingly, I can immerse myself in the process of empathy, in space-in-between, to make embodied dialogue with co-actants. Consequently, as was written by Briginshaw (2001, as cited in Chappell, 2018) about potency for new possibilities from the ambiguous space of interaction, this intra- action allows me to obtain more insight information of changes and spontaneously experience the dynamics and complexity of how the change happens that might be hardly apparent through questioning others or other empirical methods (Alotabi, 2018). This matches the idea of embodied dialogues, as mentioned in the PHC section above. Also, this idea aligns with Vagg's idea (2022) about the value of embodied or hands-on experience with materials to collaboratively

generate new insights for understanding, questions and ideas, as she argues that passive observation and analysis from a distance can create a divide and hierarchy.

Moreover, although both autoethnography and ethnography are useful methods for studying internal experiences with space and community involvement (Alotabi, 2018; Sparkes, 2000), in the limited scope of this dissertation, auto-ethnography that focuses on self-experience to explore and critically examine this subjective issue (empathy with nature) is much more suitable to me. As I am new in the field of educational research, I aware that it would be challenging for me to capture and understand exactly the thoughts and emotions of others. Especially, it will be much more difficult and complex since my research concerns on the process of how empathy grows within a person and in a situation involving broad embodied interactions and numerous possibilities, as is the case with the PHC view.

In addition, even though I can collect data suggesting that people are becoming more empathetic through interviews or observation, it is only external perspectives or "second-hand observation" (Buckley, 2015) and cannot cover all possible outcomes from this opened creative process as well as might not fully comprehend these internal emotions of others. Buckley (2015, p. 1) states that some feelings (affective empathy aspects) are only "comprehensible to individuals who have experienced them in person, … so if a research subject cannot communicate their emotional experience to a researcher, there is no opportunity to analyze unless the researcher can directly experience the same emotion themselves". Thus, I choose to validate the research answers through my own perspective experience first to really gain insight into the process of empathy with nature so that I can frame and have a better orientation for my future research.

Furthermore, autoethnography is known as an ethnographic inquiry that utilizes the researcher's autobiographic materials as the primary data (Chang, 2016). It helps me gain the entire insight process of empathy as I got the information directly from my experience. Since placing myself

as a participant, I use myself as a research subject and do not only *stand in the middle* to see and explore *with* others (human) (Deleuze and Guattari, 1987, as cited in Vagg, 2022) and gain an understanding of the empathy process from external perspectives. Instead, I can explore it *within* me (my body and mind, experience, empathic emotion and cognition change, etc.), at the same time immerse *with other(s)* for embodied dialogues, intra-actions, making and being made in the journey of becoming more empathetic and understanding my research questions. As the PHC lens that I mentioned above, the term "others" here includes both humans (my peers, facilitators, etc.) and other than humans (space, living or non-living objects, environments, etc.). Consequently, autoethnology potentially taps me into much more enriching, in-depth and holistic data for collection and interpretation. Chang (2016, p. 9) also sees this method to be "researcher-friendly" as it "allows the researcher to easily access the primary data source from the beginning because the source is themselves" and "autoethnography are privileged with a holistic and intimate perspective on their familiar data".

Lastly, and only for personal interest, I am not originally from the UK and am not entirely familiar with or know much about mosses. Although I understand that every creature has its own value, mosses are so popular and different that I sometimes ignore their existence and have less interest in them. Due to this, I guess it might be harder for me to connect emotionally and empathise with this creature. However, as a creative educator who is keen on and follows posthumanism, I am intrigued to see how the perspective of PHC that was built on posthumanism theory can engage my empathy with an object which I don't think is easy to have a connection like mosses. Therefore, choosing autoethnography and focusing on self-observation as my research method suits not only my current limited ability as a new educational researcher in the field but also my personal interest.

3.3. Research process of data collection and interpretation

In this process, I (a researcher) will take the role of a participant, engaging and immersing in

eco- art activities of The Mossy Carpet workshop to reflect related evocative personal and interpersonal narratives, particularly about how PHC was applied in an eco-art project that fosters empathy with mosses and/or ecological issues.

The Mossy Carpet is an eco-art initiative run by the Art and Energy organisation that inspires participants to connect with nature, take action and provide hope for a brighter, greener future. The initiative is funded by various partners, including Arts Council English (*How to Bury the Giant — the Art and Energy Collective*, 2023). There have been different Mossy Carpet workshops across Devon and the UK through the year 2023, inviting people to join in making a massive collective mossy carpet. I participated in a Mossy Carpet workshop for the first time, on 08th July 2023 in Plymouth. Although after that, I also joined them again in other locations, I decided to choose this first workshop to introduce in this research as it left the strongest impression on me and brought about significant changes in my empathy with mosses.

The workshop I joined was outdoor and open to all participants interested or curious about mosses, nature and making textile pieces. It was operated in a non-hierarchical environment, where all participants were welcome to freely share their ideas, contribute to post questions, learn and grow together. In this project, participants are invited to (1) sense the mosses to feel them and get inspiration from their appearance, stories and contribution to the eco-system, then (2) creatively make textile pieces (make pompoms, knit crochet, embroider, etc.) that are similar to mosses by recycled materials and (3) joint these works together for a massive mossy carpet.

Any of my experiences, thoughts, feelings or happenings, and dialogues with participants in the projects related to research questions will be collected and documented to recall and evidence. The form of data collection was reflected through visual tools (drawings, photos), my field notes and artefacts (Jorgenson, 2002 as cited in Carolyn et al., 2011). All the data is attentively collected, seen and interpreted through the PHC lens as it is the base I foster empathy in this article. For example, I

will explore empathy with nature and make meaning with what I experienced not by solely concerning myself (body and mind) but in relation to other related co-actants such as other participants, environments and other-than-humans. Also, I will see the environment or other-than-humans as co-actants to actively make meaning rather than being controlled by humans as an anthropocentric perspective. In other words, the environment and human is co-learning, constructing and growing together rather than I in particular and humans in general trying to control or put meaning on the environment.

3.4. Research quality and ethical concerns

While autoethnography has been valued for its ability to provide rich and nuanced understandings of social phenomena, it has also faced criticism and controversy. As this method relies mostly on autobiographic materials, it is often evaluated based on the authenticity and reflexivity of the researcher's self-narrative, as well as the insights gained from personal experiences (Sparkes, 2000). Because of this, some scholars argue that autoethnography lacks objectivity and rigour, and that blurs the boundaries between personal storytelling and academic research (Sergi & Hallin, 2011; Chang, 2008). Others raise concerns about the potential for self-indulgence and narcissism in autoethnographic writing (Sergi & Hallin, 2011). To avoid this case, I continually examine my own biases, perspectives, and motivations throughout my research and follow a systematic and rigorous methodology. This includes clearly defining research questions and carefully gathering data from different sources to support each other (Chang, 2016).

Generally, researchers always directly or indirectly relate, implicate and further affect either positively or negatively to others in/by their work (Carolyn et al., 2011). Particularly, autoethnography involves sharing personal experiences, which can be sensitive and potentially impact the well-being of the researcher and other related participants. Thus, “relational concerns” should be prioritized throughout the research and the writing process (Chang, 2008; Carolyn et al., 2011). Edwards (2021)

also places autobiographers in the centre of writing the research so that “rather than representing experiences of others, we write about ourselves, and our experiences in interaction with those who were present when the experiences occurred” (p.5). Applying this idea in my research, I keep aware that my primary focus is to investigate my research questions, especially how the projects cultivate greater empathy with nature through my personal experience. Therefore, I will not focus on specific individual participants’ traits such as race, gender, name, and appearance but on how intra-action or embodied dialogues with/among them and their works during the eco-art creation process impact my empathy with the mosses and/or ecological issues. Moreover, for the privacy and safety of others’ purposes, I will alter or refrain from mentioning any participant’s name or characteristics (Carolyn et al., 2011).

Moreover, from the perspective of the PHC approach, I see both humans and other-than-humans in a flattened hierarchy, so the ethical consideration in this research will include whether both human and non-humans can speak their voices in the creative process. However, during the data collection and interpretation, I might have sometimes generated ideas by putting meaning on the objects or environment rather than letting objects or environment speak their voice, and I learned from it. To avoid it, I will keep engaging in reflexivity throughout my research process to not control the objects or environment but learn and respect the intra-action and dialogue with them.

Lastly, as mentioned above, this is an open workshop for everyone and during the workshop, I overheard different conversations from different people. Also, as a participant, I put myself in the interaction with others but do not treat them as an interview but follow the flow of conversation. Bochener, (2017, as cited in Edwards, 2021) states that “human beings are relational beings, and thus every story of the self is a story of relations with others” (p. 1). To avoid losing certain ideas during the conversation, I will take note of the keywords to ensure I can capture as many ideas as possible and then rewrite them in full sentences later. There might be an ethical consideration here when I

am paraphrasing the conversation of somebody; it might not be exactly their quote. So, it is more about the trust of the reader that I treat it fairly.

Overall, as autoethnography relies on and values autobiography and personal experience that might be hard to verify the truth, when seeing autoethnography as a method, it is essential for the autoethnographers to continue reflecting on both their "process and products" (2011, as cited in Edwards, 2021, p. 1). This reflection is necessary to ensure that ethical considerations, accountability, and care are at the forefront of responsible research practices.

Chapter 4- Findings with and through Making Mossy Carpet

In this chapter, I will reflect on my experience in the Making Mossy Carpet workshop. This includes describing activities that I participated in, the intra-action and the conversation among me, other humans and other than human actants during the workshop that foster the change in my empathy with mosses and, ultimately with nature. To make it easier to follow, I will break the entire workshop down into smaller vignettes.

4.1. Research vignette 1- Sensing the mosses

To be able to make the mossy carpet, I was first suggested to observe the actual mosses. The facilitator introduced me to a "seeing-the-mosses" corner and encouraged me to *spend time "seeing"* the mosses through different lenses and different senses. The set-up was open and inviting for me to freely and creatively observe and sense the mosses in my own ways. It included 2 types of mosses that are popular in this local area, a paper document of mosses and liverworts information, and some types of equipment (a magnifying glass and a microscope) (see Figure 2). At first, seeing the mosses by eyes did not attract me as I saw them as just ordinary ones that could be found on the ground everyday. However, this perception changed when I was invited by the facilitator to physically interact with the textiles and feel their movement against my figure skin. One type of moss was very soft and supple, while the other one (sphagnum moss) was very squishy. I started to feel the mosses interesting and

curious about them. Then, I attempted to examine the mosses with a microscope and magnifying glass. Due to my eye problems, I did not feel comfortable with the magnifying glass, but a little child nearby me spent more than 5 minutes joyfully using this, repeatedly and attentively, to observe while curiously touching and exploring these little mosses. Meanwhile, I found myself more engaged in using a microscope as it changed my ordinary view of mosses to a much larger size. I even saw the very little water droplets still presenting on their leaves.

Figure 2: Seeing-the-mosses corner

"Wow… How beautiful!" I whispered.

The mosses, in their larger size seeing through the microscope, impressed me with their perfect beauty and fascinating textiles. They looked lively, green, and strong, with patterns emerging and expanding from the tangled tapestry threads. I suddenly associated them with a fresh, attractive, mysterious mini "forest". The facilitator shared the same association with me and calmly encouraged me to *take my time*. I spent more time than I thought to *be in present* with this mini forest and microscope. Interestingly and gradually, I saw many surprising things appear: a little ant, a tiny creature (I do not know its name) moving, the texture of the soils in their big size, etc. Through different creative ways of intra-action with the microscope, such as zooming in and out on the mosses, touching, smelling, and seeing them from different angles, I started to know them more. In

particular, I not only knew more deeply their appearances, such as the shapes, texture, structure of stems and leaves and how each moss grows interwinedly together but also recognised their function as a home for tiny inhabitants. Patch of mosses, with me now, was no more a mysterious forest but a fantasy tiny world with its own life and also covers different lives of other beings living in it. This newness fascinated me, and I felt joy with mosses's freshness, greenness and vitality. However, I also felt my heart beating faster and harder when I suddenly recognised that the other patch of mosses nearby had dried because they had been removed for too long time from the soil for our observation. I wonder if I re-plant them, it could arise again?

4.2. Research vignette 2- Making the mossy tuffs

After interacting with the real mosses, participants and I were invited to make mossy textile tuffs that reflected the appearance or qualities of the mosses we had just observed, felt or those we already knew. The mossy tuffs also represent me and any actions that I have taken or will take to help the environment. We (the facilitator, other participants and me) sat together on the grasses in front of different inviting equipment, wools and textiles for making mossy textile tuffs. This creating time was relaxing and open, where we could freely choose any colours, materials and shapes to make mossy tuff. I chose the moss-green colour for a pompom, which resembled the appearance of moss I had observed. For another mossy tuff, I combined other colours to make more colourful mossy pompoms (Figure 3) representing the diversity and harmony of different types of mosses existing on the earth, which I just read through the paper documentation at the "seeing-the-mosses" corner.

While seeing the mosses, in reality, brought me excitement from knowing new things, spending time making mossy tuffs calmed me down to re-think and further imagine what I observed and experienced, as well as to open conversations. I saw myself being *in present* again, intra-acting with wool, people, fresh air, shapes of the moss and images of the fantasy tiny world repeatedly appearing in my head. Crafting intricate features that resemble mosses once again awoke me to

mosses' natural beauty and uniqueness. I feel the similarity between the interweave and flexibilities of woof yarn in the mossy tuffs I created with the way the mosses blend with each other. This attention to detail fosters my sense of wonder and admiration for mosses and the natural world.

Figure 3: making mossy pompom

The relaxing and open space during the art-making process also unfolded not only art techniques but also the facilitator's and participants' stories about mosses and their actions. During this process, I overhear a conversation between a man (after seeing his daughter's mossy pompoms) and a facilitator, which I reflect here as a dialogue.

A man: Oh, these pom poms really looked like mosses in my garden. I often saw mosses everywhere and tried to kill them. I didn't see any of their value at all!

The facilitator: Well, they are helping us a lot. They do not just provide oxygen but also be a home for many little living beings.

A man: Interesting!

The facilitator: Yeap, …(she started to share more about the moss's functions)... *Mosses, despite*

their small size, are a part of nature, and so we are. All have their own values, and that is why we should collaborate to grow together

This short conversation brought the mosses even closer to me. By understanding their contribution to me and to other creatures and the eco-system, I was really surprised and grateful to have them surrounding with me/us now.

4.3. Research vignette 3- Making the mossy carpet

Finally, we were invited to joint our mossy works to a massive mossy carpet, as a symbol of a future growing healthy mosses and also human collaboration for a brighter and greener future. Some people, after needling their mosses on the carpet, started to run their fingers across the surface and recommended that it brought them a very comfortable feeling. I followed and truly felt fascinated by this experience. The sensation was calming, soothing and unique, inviting me to run my fingers back and forth, feeling like they were sinking into a cosy colourful cloud. The mossy wool tuffs with a soft, luxurious texture from a natural variation in its fibres also brought me a certain warmth and resilience. Meanwhile, some textile tuffs made of cloth offered me a plush tactile experience. It reminds me of the fascinating experience when touching the real mosses at the “seeing-the-mosses” corner. Combining these varied and unique tactile experiences, together with seeing the carpet fully covered by varied and colourful mossy tuffs, I imagined a scene of the thriving and diverse growth of the mosses, and especially of the tiny creatures that were living in and calling them home. This association of joyful flourishment filled me with a sense of happiness as I, too, were a part of it all. It suddenly brought me an inspiration to do something to protect and cultivate mosses, not just for their benefit to me in particular and humans in general, but because just by existing themselves have been bringing certain inherent beauty, agency, and value for entire ecosystems.

Figure 4: Mossy carpet

4.4. Research vignette 4- After the making

On my way back home after the session, I started to looking around, attentively search for mosses. I was fascinated to discover that these little organisms exist not only on the ground but on the house roof, bus stops, walls, and almost everywhere (Figure 5). Unlike my previous ordinary look, I feel joy when seeing them around, growing strongly, flourishing and appearing fresh. Interestingly, I also saw several little birds playfully frolicking amidst the moss on a roof along the walk. The moss, with its velvety texture and vibrant hues, provided both a stage and a playground for these winged performers, creating a scene of pure, natural wonder. I stood for a while, enjoying their joys with the birds and moss being together. Along the rest path to walk home, I found myself more intentional with my walk to avoid stepping on and hurting the moss and little creatures on the ground.

Figure 5: Mosses along my walk to home

Chapter 5. Discussion

This chapter assembles the above literature review about empathy with nature through the lens of PHC, with some contrast and comparison with psychologic and neurologic perspectives (Chapter 2) and findings in and through making the mossy carpet (Chapter 4) to answer the research questions raised in Chapter 3: how PHC is applied, manifested and how my empathy with mosses and nature change with this eco-art experience. Moreover, co-actants, their agency and how they got involved in this transformation of empathy will also be discussed. Alongside this, I will introduce some PHC ideas that can be applied to foster empathy with nature.

5.1. Turning points

Through the project, my empathy with mosses and nature grows with time, which is reflected in what Taguchi (2010) refers to as *turning points*. My first turning point was when I touched the mosses, feeling their lives under my figures. This experience shifted my state from ignoring the moss's existence to being more interested and curious about it. The second turning point emerged in an event when I used the microscope to explore the mosses, recognising their beauty and texture. This point elicited my very first affective empathy with mosses: a feeling of joy upon witnessing their fresh growth and distress when seeing some mosses dying. The third turning point occurred during the making pompom process, I heard the open conversation between the facilitator and a male participant. This conversation deepened my understanding of the essential values of mosses to us and the ecosystem as a whole. My concern for mosses went beyond personal interest to an appreciation. All these experiences were the foundation for the last turning point when I sewed my mossy pompoms to the carpet and imagined the mosses' bright future where I was a part of it. I felt joy and empathised with their flourishing growth in the imaginative scene, which in turn motivated me to protect the mosses, the beings that are living with them and nature as a whole.

5.2. Co-actants' intra-action and agency

In the detailed look at this creative process, I made embodied dialogues and immersed myself with many co-actants, which are human and non-human, tangible objects such as the microscope, the mosses, or the woof etc., and intangible elements such as the space and stories, etc.. Together, they contributed to creating turning points that continuously helped me shift and build empathy with mosses and nature. For instance, intra-acting with the microscope engaged my first affective empathy or the conversation between the facilitator and the participants, and the mossy pompoms joining with the mossy carpet engaged my motivational empathy.

Interestingly, it should be noticed that the empathy outcomes were not induced by the sole embodiment between one actant and me, but by the collaborative and communal relation among different actants with me. For example, it was true that the microscope affected me the most, but it was not just the microscope that brought me interest to explore but other actants such as the mosses themselves, the open space, and the encouragement from the facilitator that I should "take my time" etc., provided me a safe and comfortable state to explore the mosses. These complex, intertwined relations, objects, and spaces formed what Haraway (2016) calls "thick present", which engages me to be more attentive to creatively and joyfully explore and build up empathy with mosses. If the facilitator pushed me, the space was uncomfortable, or I was in a rush condition, the outcome might be different. This phenomenon aligns with Cuff et al.'s (2016) literature review that empathetic response is not only subject to trait but influenced by situation or context, which I reviewed from the PHC perspective above, is affected by the presence of co-actants and how we intra-act and make embodied dialogue together.

There is also a notice when more detail looks at co-actants's agency through the PHC lens that I want to emphasise here. Take, the case of the microscope as a demonstration. It might be common to see a microscope as just a means that I used to larger the mosses' size, which in turn evokes my excitement, connection and empathy with mosses. However, by viewing the microscope in this way, we

still put the agency in us- humans in control of the process by using passive materials. Instead, if we shift our perspective to the microscope, I argue that we can realise that the microscope itself also has agency in bringing to life the difference in appearance and characteristics of mosses. The new perspective of the mosses, provided by the microscope, turned my view from ignoring the mosses's existence to caring for their well-being, further deepening my sense of empathy with them. Similarly, in the case of making mossy pompoms by using the woof, if we consider the agency of the woof, we will see that it was not any other humans (the facilitator, any participants or me), but the woof itself after transforming into the shape of mosses, reminded the man of the mosses in his living space, which initially opened the conversation between the man and the facilitator. As the conversation progressed, I obtained a deeper understanding of the value of mosses, resulting in a more meaningful connection and empathy with them. As Taguchi (2010) states, all materials (actants) have their own agentic force, intensity, and value in the process of creation.

Moreover, it is important to acknowledge that each actant possesses unique potentialities, resulting in varying levels of agency that do not impact equally when intra-acting with each other (Taguchi, 2010). For instance, between the two tools set up at the seeing-the-mosses corner, the microscope could stimulate my empathy, while the magnifying glass did not, as it made me uncomfortable. Meanwhile, the magnifying glass intra-acted with the boy longer and more joyful than with me. Assembling the analysed ideas above, I would suggest embracing both human and non-human actants in the creative process as they both have their own agency. At the same time, it is essential to also consider their various impacts when intra-acting with one another so that educators could offer more comprehensively effective space, time, types of materials, etc., that better suit participant needs for empathy engagement or their other educational purposes.

5.3. Facilitator as a co-actant

Furthermore, to continue going beyond the theory for applying the above explanation into practice, it is essential to also mention the role of the facilitator as a co-actant in co-creating opportunity and space for empathy growth in this creative process. Although the facilitator did not label her practice as a posthuman perspective, what she performed and said reflects the posthuman approach that helped engage my empathy with mosses and nature. For example, during the eco-art process, she was not completely "passive" by just following every person or did not "actively lead" the activity or let me, other participants (human actants), lead it. Instead, she fixedly and fluidly stepped in and out into the process to intra-act with me and other co-actants (participants, mosses, participant's ideas, conversation, etc.,) and engage us to make dialogue and perform our agency together during the project. As can be seen, she opened a non-hierarchical environment where she could interact with materials and other participants; participants could freely interact with other participants, with her, with different materials; and all could freely share ideas, contribute to post questions, learn from and grow together. For me, she worked well in the concern of other actants and in what Beghetto & Kaufmann (2011) introduced as *disciplined improvisation*. In other words, she was effective in the *"in-between" space* of being fixed on her goals (encouraging people to explore, connect and be inspired by the mosses) and being fluid in the intra-action and dialogues that was tailored for other co-actants and me. This space is "a site wherein the interplay is the creative production of newness, where newness can come into being. It is an inspired site of being and becoming" (Aoki, 2004, as cited in Beghetto & Kaufmann, 2011, p. 95) more creative and empathetic for me.

Another case is in the conversation with the man, she said: *Mosses are a part of nature, and so we are. All have their own values, and that is why we should collaborate to grow together.* For me, this approach showed the decenter human in a natural context, in which all are co-actants to intra-act and immerse for together grow. Along this journey, it is acknowledged the differences, such as our traits, in what/how we (humans and the mosses) contribute, but at the same time, the *oneness* as we are all a

part of nature. This perception, as opposed to the anthropocentric approach and more similar to the eco-centric view, recognises intrinsic values of beings (plants, animals and non-biotic elements such as mountains and rivers) in the natural world, which further helps overcome the conventional dualism and shortens the distance with nature (Brown et al, 2019). This approach then, combined with other sharings about mosses' values from the facilitator and the action of joining mossy pompoms into the massive mossy carpet as a symbol for collaboration and consolidation, brought me a feeling of belonging, kinship and gratitude with mosses and nature as a whole. Parallelly, my empathy development moved beyond the scale of only mosses to living beings related to them, which in turn to nature, where all beings (mosses and I included) are living in. In other words, this empathy was the combination of both emotional stimulus and cognitive stimulus, which was evoked by the understanding of my identity in nature, the value of the mosses' efforts and the interconnection between me – mosses and other-than-humans in the natural context. Further, it also motivated me to take action.

Chapter 6: Conclusion

6.1. Achievements of the research

In this paper, I applied PHC (Chappell, 2018) and its underlying theories, posthumanism and materialism, together with related theories such as the intra-active pedagogy of Taguchi (2010) to critically challenge, sharpen and even push further the current viewpoints of empathy with nature which are commonly seen through the psychological and neurological lens. In detail, by decentering humans and acknowledging the agency, kinship and valuable contributions of other-than-humans in an eco-art creative context, I proposed a shift towards a more inclusive and expansive view of empathy with nature in the literature review (Chapter 2). For example, I highlighted the need to move the concern of empathy with nature beyond solely within the mind or body of an individual, to collaboratively and communally in the entanglements and intra-action with other co-actants,

including both other humans and other-than-humans (Chapter 2.2.4). Also, by shifting the focus of empathy from sameness to otherness and oneness, I further broadened the concept of empathy to nature to include natural objects or elements that might not have or have less similarity with an individual (Chapter 2.2.5). Especially, I also argued for the possibility that PHC can engage empathisers to take good action through the understanding of their kinship, multiple interdependences with nature and the agency of other natural elements (Chapter 2.2.6).

To explore the possibilities that PHC can foster greater empathy with nature from theories to reality, I applied the autoethnography method to study an eco-art workshop (Chapters 3 and 4). By assembling theories in the literature review and practical experience, I answered my two research questions: how PHC applied in an eco-art context fosters empathy with nature and how I can apply it to reality. In other words, this research provide insight the forming and changing of empathy with nature through personal experience, reflecting through the discussion about the turning points, the co-actant's intra-action and also the facilitator as a co-actant (Chapter 5).

6.2. A reflection on the strengths and implications

Applying autoethnography allowed me to directly immerse myself in the creation process to interact and reflect deeply on my personal experience. This brought the strength of my research since the outcomes reveal not just the insight process of how empathy changed but what made empathy change in an individual when applying PHC to the eco-art context.

Following that, this research offers many potential ideas for pedagogy in the future. Firstly, it is essential to recognise the diversity of different co-actants and their agency in the creation process, as well as how they affect differently to each other so that educators can make use of them and build up a suitable pedagogy that suits their educational goal (Chapter 5.2). Secondly, through the example of how the facilitator successfully used disciplined improvisation (Chapter 5.3), applying fluid and fixed interaction when working with students is helpful. Thirdly, to bring PHC ideas into practice, it is

necessary that educators understand them so that they can deliver them flexibly and effectively in any situation and to different students (Chapter 5.3). Fourthly, and I think it is the most important, if an educator can help their students recognise their kinship, interdependence and agency with nature, it strengthens the opportunity for them to take responsible action. Finally, during the art-making process, it is beneficial to create opportunities for students to be present, as this brings attention to learning and connecting. The be-present moment can come from a safe and comfortable atmosphere that the educator creates, suitable and attractive provocation set up, etc. Generally, these are several ideas that can help create turning points that are mentioned in Chapter 5.1.

6.3. Limitations and suggestions for future research

Despite the strengths and implications mentioned earlier, the research has some limitations and potential development for future research. The answers to this research's questions are mostly based on my personal experience. Moreover, although it can bring a certain deep level for understanding the process of empathy with nature and open different applicable ideas for educators, I am aware that my response about empathy with nature might differ from others. Therefore, further empirical research for testing and to ensure that it is widely applicable is necessary.

While this study showed that empathy with nature through PHC can help to engage empathy in a way that leads to good action, it does not completely make sure the participants will take actions. This brings forward another possibility for this research in the future to consider how applying PHC in the eco-art context to foster empathy that help individuals to take action.

6.4. A never-ending conclusion

This research showed that the PHC approach in an eco-art context can be a powerful tool for fostering empathy. By participating in this research, I not only made the answers to my research questions but also be made to become a more empathetic educator with nature and everything around. As Chappell (2022) refers to PHC as an imperfect process, I believe that this journey of making

and being made is a never-ending process due to the possible factors and entanglement that come along.

Reference

Alotaibi, N. (2018). Ethnography in qualitative research: a literature review. International Journal of Education, 10(3), 25. https://doi.org/10.5296/ije.v10i3.13209

Barad, K. (2003). Posthumanist performativity: toward an understanding of how matter comes to matter. *Signs*, *28*(3), 801–831. https://doi.org/10.1086/345321

Beghetto, R. A., & Kaufman, J. C. (2011). Teaching for Creativity with Disciplined Improvisation. In *Cambridge University Press eBooks* (pp. 94–110). https://doi.org/10.1017/cbo9780511997105.006

Berenguer, J. (2007). The Effect of Empathy in Proenvironmental Attitudes and Behaviors. Environment and Behavior, 39(2), 269–283. https://doi.org/10.1177/0013916506292937

Bloom, P. (2017). Empathy and Its Discontents. Trends in Cognitive Sciences, 21(1), 24–31. https://doi.org/10.1016/j.tics.2016.11.004

Braidotti, R., & Bignall, S. (2019). Posthuman Ecologies: Complexity and Process after Deleuze. *ResearchGate*. https://www.researchgate.net/publication/334032117_Posthuman_Ecologies_Complexity_and_Process_after_Deleuze

Brown, K., Adger, W. N., Devine-Wright, P., Anderies, J. M., Barr, S., Bousquet, F., Butler, C., Evans, L., Marshall, N., & Quinn, T. (2019). Empathy, place and identity interactions for sustainability. Global Environmental Change-Human and Policy Dimensions, 56, 11–17. https://doi.org/10.1016/j.gloenvcha.2019.03.003

Buckley, R. (2015). Autoethnography helps analyse emotions. *Frontiers in Psychology*, *6*. https://doi.org/10.3389/fpsyg.2015.00209

Carolyn Ellis, Tony E. Adams and Arthur P. Bochner (2011). *Autoethnography: An Overview on JSTOR*. https://www.jstor.org/stable/23032294

Chang, H. (2016). Autoethnography as method. *ResearchGate*. https://www.researchgate.net/publication/40010651_Autoethnography_as_Method

Chappell, K., Pender, T., Swinford, E., & Ford, K. M. (2016). Making and being made: wise humanising creativity in interdisciplinary early years arts education. International Journal of Early Years Education, 24(3), 254–278. https://doi.org/10.1080/09669760.2016.1162704

Chappell, K. (2018). From wise humanising creativity to (Posthumanising) creativity. In *Springer eBooks* (pp. 279–306). https://doi.org/10.1007/978-3-319-96725-7_13

Chappell, K. (2022). Researching Posthumanizing creativity: expanding, shifting, and disrupting. *Qualitative Inquiry*, *28*(5), 496–506. https://doi.org/10.1177/10778004211065802

Cuff, B. M. P., Brown, S. J., Taylor, L., & Howat, D. J. (2016). Empathy: A review of the concept. Emotion Review, 8(2), 144–153. https://doi.org/10.1177/1754073914558466

Curtis, D. (2009). Creating inspiration: The role of the arts in creating empathy for ecological restoration. *Ecological Management and Restoration*, *10*(3), 174–184. https://doi.org/10.1111/j.1442-8903.2009.00487.x

Dewar, G. (2022). Teaching empathy: Evidence-based tips for fostering empathic awareness in children. *PARENTING SCIENCE*. https://parentingscience.com/teaching-empathy-tips/

Edwards, J. (2021). Ethical Autoethnography: Is it Possible? International Journal of Qualitative Methods, 20. https://doi.org/10.1177/1609406921995306

Eklund, J. H., & Meranius, M. S. (2020). Toward a consensus on the nature of empathy: A review of reviews. *Patient Education and Counseling*, *104*(2), 300–307. https://doi.org/10.1016/j.pec.2020.08.022

Ernst, J, & Budnik, L (2022). *Fostering Empathy for people and animals: An evaluation of Lake Superior Zoo's Nature Preschool.* https://eric.ed.gov/?id=EJ1350506

Fox, N. C. and Alldred, P. (2020). Re-assembling climate change policy: materialism, posthumanism, and the policy assemblage. The British Journal of Sociology, 71(2), 269-283.

https://doi.org/10.1111/1468-4446.12734

Fox, N. C. and Alldred, P. (2019). Sustainability, feminist posthumanism and the unusual capacities of (post)humans. Environmental Sociology, 6(2), 121-131. https://doi.org/10.1080/23251042.2019.1704480

Field-Springer, K., & Striley, K. M. (2017). Managing Meanings of Embodied Experiences Theory: Toward a discursive understanding of becoming healthier. *Health Communication*, *33*(6), 700–709. https://doi.org/10.1080/10410236.2017.1306413

Gruen, L. (2009). Attending to Nature: Empathetic Engagement with the More than Human World. *Ethics and the Environment*, *14*(2), 23. https://doi.org/10.2979/ete.2009.14.2.23

Hanley, N. (2021) 'The contribution of empathy-based pedagogy in global citizenship education: Kazakhstani context'. International Journal of Development Education and Global Learning, 13 (2), 79–93. DOI: https://doi.org/10.14324/IJDEGL.13.2.02.

Haraway, D. (2003). *The Companion Species Manifesto : Dogs, People, and Significant Otherness*. http://ci.nii.ac.jp/ncid/BA65788953

Horowitz, L. S. (2013). Toward Empathic Agonism: Conflicting Vulnerabilities in Urban Wetland Governance. Environment and Planning A, 45(10), 2344–2361. https://doi.org/10.1068/a45591

Lorimer, J. and Davies, G. (2010). When species meet. Environment and Planning D: Society and Space, 28(1), 32-33. https://doi.org/10.1068/d2706wsa

Mar, R. A. (2011). Deconstructing empathy. Emotion Review, 3(1), 113-114. https://doi.org/10.1177/1754073910384158

Nicol, R. (2013). Returning to the richness of experience: is autoethnography a useful approach for outdoor educators in promoting pro-environmental behaviour? *Journal of Adventure Education & Outdoor Learning*, *13*(1), 3–17. https://doi.org/10.1080/14729679.2012.679798

Perry, D., Hendler, T., & Shamay-Tsoory, S. G. (2012). Can we share the joy of others? Empathic neural

responses to distress vs joy. *Social cognitive and affective neuroscience*, *7*(8), 909–916. https://doi.org/10.1093/scan/nsr073.

Pittinsky, T. L., & Montoya, R. M. (2016). Empathic joy in positive intergroup relations. *Journal of Social Issues*, *72*(3), 511–523. https://doi.org/10.1111/josi.12179

Pfattheicher, S., Sassenrath, C., & Schindler, S. (2016). Feelings for the Suffering of Others and the Environment. Environment and Behavior, 48(7), 929–945. https://doi.org/10.1177/0013916515574549

Preston, S. D. and Waal, F. B. M. d. (2002). Empathy: its ultimate and proximate bases. Behavioral and Brain Sciences, 25(1), 1-20. https://doi.org/10.1017/s0140525x02000018

Schultz, P. W. (2000). Empathizing with nature: The effects of perspective taking on concern for environmental issues. *Journal of Social Issues, 56*(3), 391–406. https://doi.org/10.1111/0022-4537.00174

Shultz, P. W. (2002). Inclusion with nature: The psychology of human-nature relations. In P. Schmuck & W. P. Schultz (Eds.), *Psychology of sustainable development* (pp. 61–78). Kluwer Academic Publishers. https://doi.org/10.1007/978-1-4615-0995-0_4

Sergi, V. and Hallin, A. (2011), "Thick performances, not just thick descriptions: the processual nature of doing qualitative research", *Qualitative Research in Organizations and Management*, Vol. 6 No. 2, pp. 191-208. https://doi.org/10.1108/17465641111159152

Sevillano, V., Aragonés, J. I., & Schultz, P. W. (2007). Perspective Taking, Environmental Concern, and the Moderating Role of Dispositional Empathy. *Environment and Behavior*, *39*(5), 685–705. https://doi.org/10.1177/0013916506292334

Singer, T., & Klimecki, O. (2014). Empathy and compassion. Current Biology, 24(18), R875–R878. https://doi.org/10.1016/j.cub.2014.06.054

Sparkes, A. C. (2000). Autoethnography and Narratives of Self: Reflections on criteria in action.

Sociology of Sport Journal, *17*(1), 21–43. https://doi.org/10.1123/ssj.17.1.21

St Levan Park Summer Fun Day — The Art and Energy Collective. (2023, July 8). The Art and Energy Collective. https://www.artandenergy.org/events/st-levans-gate

Sunassee, A., Bokhoree, C., & Patrizio, A. (2021). Students' Empathy for the Environment through Eco- Art Place-Based Education: A Review. *Ecologies*, *2*(2), 214–247. https://doi.org/10.3390/ecologies2020013

Tam, K. (2013). Dispositional empathy with nature. Journal of Environmental Psychology, 35, 92–104. https://doi.org/10.1016/j.jenvp.2013.05.004

Taguchi, H. L. (2010). *Going Beyond the Theory/Practice divide in Early Childhood Education: Introducing an Intra-Active Pedagogy*. Routledge Taylor & Francis Group

The Art and Energy Collective. (n.d.). The Art and Energy Collective. https://www.artandenergy.org/

Vagg, J. (2022). Experiencing-With Data: Exploring Posthuman Creativity Through Rhizomatic Empathy. Qualitative Inquiry, 28(5), 541–551. https://doi.org/10.1177/10778004211069696

Wang, L., Sheng, G., She, S., & Xu, J. (2022). Impact of empathy with nature on pro-environmental behaviour. International Journal of Consumer Studies, 47(2), 652– 668. https://doi.org/10.1111/ijcs.12856

Young, A., Khalil, K., & Wharton, J. (2018). Empathy for Animals: A review of the existing literature. *Curator: The Museum Journal*, *61*(2), 327–343. https://doi.org/10.1111/cura.12257