

# How Does it Feel to be Connected with Nature?

*A Qualitative Study of Meditation Practitioners in Sweden.*

*Romane Louise Aurélie Yang*

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International Master's Programme in Environmental Studies and Sustainability Science  
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Supervisor: Sara Gabrielsson, LUCSUS, Lund University

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## **Abstract**

For the past centuries, human-nature relationships have deteriorated into a drastic disconnection, characterized by a lack of compassion for nature and insufficient action for mitigating environmental degradation. This study investigates connectedness with nature (CWN) among regular meditation practitioners. Nine in-depth interviews were conducted with meditation practitioners active in Sweden. The results suggest an expressed link between meditation and a state of CWN, during which participants practice being in the present moment and experience a sense of oneness, strong feelings and emotions and lastly, increased well-being. These experiences seem to be stronger for experienced practitioners. Implications for sustainability science are discussed as well as limitations of the study.

**Keywords: meditation, connectedness with nature, mindfulness, human-nature relationship, Buddhism, Sweden**

**Word count: 12,087**

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## **List of abbreviations**

**Research Questions – RQ**

**Connectedness With Nature – CWN**

**Connectedness To Nature Scale – CNS**

**Thích Nhất Hạnh – TNH**

## 1 Introduction and problem statement

*“We cannot win this battle to save species and environments without forging an emotional bond between ourselves and nature as well—for we will not fight to save what we do not love” – Stephen Jay Gould (as cited in Orr, 2004, p.43)*

The quote above highlights the separation and loss of empathy between humans and the natural world, as well as the crucial importance of fostering compassion for a sustainable future. In “The Psychopathology of Human-Nature Relationships”, Metzner (1995) explains how dysfunctional this separation is, especially when it is further exacerbated by narratives of separation in science and religion, whereby *“we are suffering from an epidemic of the psychopathic mutilation of ontogeny”* (Shepard, as cited in Metzner, p.58). He refers to several metaphors to illustrate this disconnect, such as the “dissociationist metaphor” based on the idea of an inner separation in consciousness. Metzner (1995, p.64) suggests that the political, economic and educational institutions have this dissociation built into them, making it difficult for such connection and adequate behavioral change to occur.

The human mind shapes and is shaped by the collective narratives that dictate societal paradigms (Wamsler, 2022). A narrative that places humans as separate and superior to nature entails an exploitation of natural resources and degradation of ecosystems (Wamsler, 2022). This dominant narrative is the *story of separation* (Wamsler, 2022) which can be linked to the “extinction of experience” referring to the decline in everyday nature experiences as a result of industrialization (Ives et al., 2018, p.1390). The resulting environmental and social consequences reveal the intersection between the state of the human mind and climate change (Ives et al., 2018, Wamsler, 2022). Our inability to understand ourselves, relate to others and to connect with nature leads to feelings of isolation, self-centeredness, and fading compassion, which are significant barriers for addressing environmental problems (Wamsler & Brink, 2018; Wamsler, 2022). As a result, we are currently experiencing a vicious cycle of deteriorating individual, collective, and planetary well-being (Wamsler, 2022).

Current climate mitigation and adaptation strategies are dominated by techno-scientific solutions, which are revealed to be insufficient due to the actual gravity of the climate crisis (Woiwode et al., 2021). Researchers have identified that the inner dimensions of humans have been neglected, which “refer to subjective domains within the individual” and include emotions, qualities, values, beliefs and worldviews (Wamsler & Brink, 2018, p.55; Ives et al., 2020). One way of addressing these inner dimensions is mindfulness, which refers to “a natural capacity that enables people to pay attention intentionally to present-moment experience, inside themselves and in their environment, with an attitude of openness, allowing, curiosity and care” (Bristow & Wamsler, 2022, p.10). Emerging research investigates mindfulness practices such as meditation as a reconnection strategy and its potential for fostering transformative changes (Howell et al. 2011, Ives et al., 2018; Wong & Faikhamta, 2021).

## 1.1 Research questions (RQs)

This study explores human-nature connectedness and mindfulness practices as a potential way to reconnect with nature, specifically focusing on meditation. Thus, the aim of this study is to explore the phenomenon of *connectedness with nature* among regular meditation practitioners. Three RQs are guiding my research:

1. What meaning do meditation practitioners give the phenomenon of connectedness with nature?
2. How do practitioners describe and interpret their experience of connectedness with nature from doing continuous meditation?
3. What meditation outcomes do practitioners identify as enabling or hindering towards feeling connectedness with nature?

## 1.2 Relevance for sustainability science

Nature connectedness is deeply rooted in biology, according to the *biophilia hypothesis* (Wilson, 1984; Kellert, 1997). This suggests that there is a natural inclination for humans to seek out a connection with nature. Further, being close to nature is important for the emotional and psychological development of humans (Kellert, 1997). As such, recognizing the need for nature connectedness and nurturing it can enhance human flourishing (Nisbet et al., 2011; Gullone, 2000).

The human-nature disconnection is embedded in the story of separation and shapes the personal and collective story, both of which are at the root of the climate crisis (Barragan-Jason et al., 2022; Wamsler, 2020). Thus, it resembles a key leverage point for systemic change (Woiwode et al., 2021). There needs to be a shift in the dominant narrative that governs human behavior through reconnection strategies and transformational changes in human values, mindsets, consciousness and worldviews (Ives et al., 2018). This thesis investigates change from the *inside-out* (Ives et al., 2018) through inner dimensions and contemplative practices for transformation at the individual level and how enhanced human-nature connectedness can pave a path towards sustainability (Barragan-Jason et al., 2022).

## 1.3 Terminology

### 1.3.1 Connectedness With Nature (CWN)

There are many different terms for explaining this phenomenon, such as “connectivity with nature” (Dutcher et al., 2007), “connectedness to nature” (Mayer et al., 2004), “nature relatedness” (Nisbet et al., 2011), “human-nature connectedness” (Ives et al., 2017). I decided to base my thesis on Zylstra et al.’s research (2014), as their conceptualization of CWN is based on a synthesis of interdisciplinary literature covering definition, measures, and implications of CWN. Zylstra et al.’s CWN seems to be the most comprehensive and interdisciplinary framework and definition to use for my thesis (2014). CWN is described as a “stable state of consciousness comprising symbiotic cognitive, affective, and experiential traits that reflect, through consistent attitudes and behaviors, a sustained awareness of

the interrelatedness between one's self and the rest of nature." (Zylstra et al., 2014, p.126). Further, multiple scholars define connectedness as the extent to which people include nature within their sense of self (Schultz, 2002; Mayer & Frantz, 2004) which relates to the 'ecological self' (Drengson, 2005). This entails an overlap between the self, all living beings and ecosystems, in a way that harm to the environment is seen as harm to the self (Nisbet, 2011). Overall, CWN seems to be based on an "enduring appreciation, empathy, and mindfulness of the intrinsic value and shared essence of all life" which can help deconstruct dominant unsustainable paradigms and enhance pro-environmental behavior (Zylstra et al., 2014, p.126).

### **1.3.2 Meditation**

This study focuses on practitioners of meditation, as a mindfulness practice. Although the definitions of meditation are many, it can broadly refer to a mind-body practice involving giving one's full attention to something (e.g., breathing, phrase, object etc.) (Deshmukh, 2006). It is the practice of being attentive to the present moment (Deshmukh, 2006). However, such simplification of the definition of meditation can be seen as limited as the concept is taken away from its cultural and religious roots to adapt to a secular western audience (Newcombe & O'Brien-Kop, 2021). Defining meditation is very challenging as it encompasses many different translations based on the country of origin, but in simple terms it can be described as either traditional or secular.

#### ***Traditional meditation***

Traditional meditation finds its roots in religious context and has been found in many religions such as Hinduism, Judaism, Christianity and Buddhism (Newcombe & O'Brien-Kop, 2021). Although there is uncertainty as to when and where meditation officially started, it finds strong roots in India, where it was referred to as 'Dhyāna' or 'Jhāna' which translates to the training of the mind (Newcombe & O'Brien-Kop, 2021). Meditation was thus practiced for religious and spiritual reasons, as a way to expand human consciousness (Newcombe & O'Brien-Kop, 2021). In fact, Buddhist meditation seeks to broaden one's understanding of the world, which is often linked with developing a holistic worldview and the pursuit of a bigger purpose (Newcombe & O'Brien-Kop, 2021).

#### ***Secular meditation***

Secular meditation in contemporary contexts is considered individualistic as it aims to induce a relaxed and/or focused state, allowing for more clarity and emotional regulation within an individual (Newcombe & O'Brien-Kop, 2021). In a society where we are overloaded with stimuli and where attention is habitually scattered, meditation and other secular mindfulness practices regroup self-regulation practices that focus on training the mind, which can bring about higher well-being and emotional balance (Newcombe & O'Brien-Kop, 2021).

In this thesis and given that the study is conducted in a secular cultural context (Sweden), meditation is seen as a secular practice adapted to a western audience. Meditation is mostly promoted and practiced for its therapeutic benefits and potential for coping with difficulties in life (Lam, 2020).

## 2 Conceptual frameworks

The conceptual frameworks help me frame and make sense of my empirical data. As I am exploring CWN and meditation, matching the data with the following frameworks can allow me to combine them into a comprehensive conceptual framework showing the potential connections between CWN and meditation.

### 2.1 CWN framework

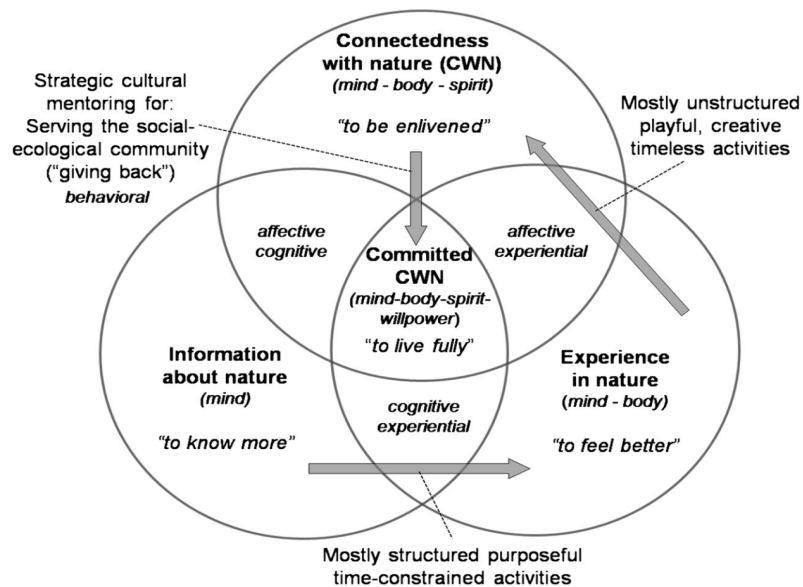


Figure 1. Conceptual framework of key components comprising CWN  
Source: Zylstra et al. (2014)

This CWN framework has three dimensions: *information about nature*, *experiences in nature*, and *experiencing CWN and committed CWN* (Zylstra et al., 2014).

#### 2.1.1 Information about nature (bottom left circle)

Knowledge about nature and awareness of socio-ecological interactions allow for a deeper understanding of natural processes (Zylstra et al., 2014; Nisbet et al., 2009). Similarly, spiritual knowledge can shape the way people relate to and conceptualize nature, leading to an expansion of one's sense of self, such as including nature as part of their identity or self-construct (Schultz, 2000). This resonates with the concepts of 'environmental identity' and 'ecological self' (Clayton, 2003; Bragg, 1996).

#### 2.1.2 Experience in nature (bottom right circle)

Interacting with the natural environment allows for a connection between the mind and the body, through embodied experiences (Zylstra et al., 2014). Being in contact with nature can reinforce this *cognitive*

*experiential* connection, by facilitating knowledge and cognitive understanding about the natural world (Zylstra et al., 2014). Experience in nature also entails an affective dimension, leading to an *affective experiential* connection (Zylstra et al., 2014; Kals et al., 1999). According to different scholars, these include feelings of love, empathy, respect and oneness with nature (Zylstra et al., 2014). Overall, Zylstra et al. differentiate cognitive and affective experiential dimensions of CWN, as they can emerge from either “structured purposeful time-constrained activities” (*cognitive experiential*) or “unstructured playful, creative, timeless activities” in nature (*affective experiential*) (2014, p.125).

### **2.1.3 Connectedness With Nature (top circle)**

As such, CWN is a result of having knowledge about nature (sustaining the mind) and immersive experiences in nature (sustaining the mind and body) (Zylstra et al., 2014). In turn, the affective and cognitive experiences can nurture one’s mind, body, but also *spirit*, reinforcing CWN (Zylstra et al., 2014). The framework differentiates between CWN and committed CWN, the latter of which balances the mind-body-spirit to generate *willpower*—the determination to create positive changes in the self and the world (Figure 2) (Zylstra et al., 2014). Here, spirit refers to “that which serves as an individual’s source of inspiration” (p.126). The focus on spirit made the framework suitable for my study as it relates to spirituality, which is a central aspect of my research as meditation is traditionally a spiritual practice (Newcombe & O’Brien-Kop, 2021).

The distinction between CWN and *committed* CWN is also helpful for my research as it provides a richer and deeper framework to describe the complexity of the phenomenon and how it can relate to meditation practice. The framework is used in conjunction with the “selected competences and practices for cultivating CWN at the individual level” (Zylstra et al., 2014, p.128), discussed further in section 3.4.1.

## **2.2 Internal–external transformation model**

The model shows the interactions between the external and internal dimensions of systemic change, along with the pre-conditions for, and outcomes of such change (Figure 2) (Wamsler et al., 2021). I use this in my thesis as an analytical framework to contextualize CWN and describe its relevance for sustainability science.

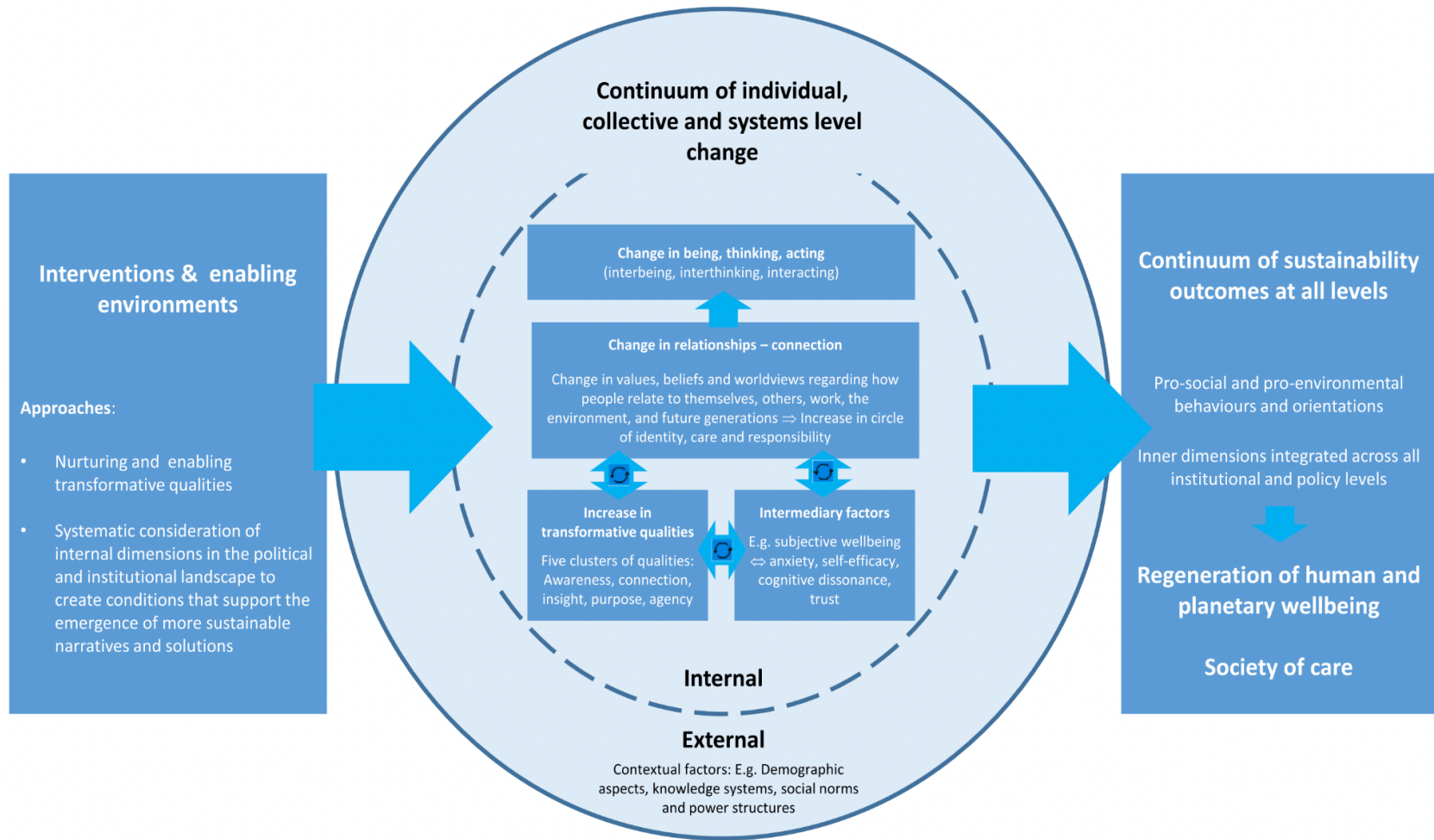


Figure 2. Model of change for internal–external transformation towards sustainability.

Source: Wamsler et al. (2021)

### **2.2.1 Continuum of individual, collective and systems level change (middle circle)**

#### ***Transformative skills and well-being***

Contextual factors (outer circle, “external”) such as social norms and power structures shape and influence people on both the individual and collective level (Wamsler et al., 2021). The inner circle shows the internal dimensions. At the bottom of the circle, we see that increasing a person's transformative qualities has a direct impact on the way one connects and builds relationships with others (Wamsler et al., 2021). This is also influenced by and influences intermediary factors such as well-being (Wamsler et al., 2021). Mindfulness is argued to enable transformative qualities and enhance well-being through all five clusters of qualities (Wamsler et al., 2021). It has been associated with increased awareness, prosocial behavior, compassion, behavioral and emotional regulation etc. (Wamsler et al., 2021; Miller & Verhaeghen, 2022; Adair et al., 2018). This is because they allow one to shift their attention inwards and to pay attention to the inner processes which govern behavior and can broaden one’s consciousness (Bristow & Wamsler, 2022).

#### ***Change in relationships***

A change in individual well-being and personal qualities can change the way people relate to themselves and their external world through a shift in values and beliefs. For instance, someone may start to care more about environmental issues due to a deeper connection with nature. Thus, they would include nature in their circle of identity, care and responsibility (Wamsler et al., 2021).

#### ***Change in being, thinking and acting***

Having a deeper connection with the self and the external environment can allow for changes in “being, thinking and acting”, which relies on an awareness of patterns of dependency, such as the interconnectedness of everything around us (Wamsler et al., 2021, p.6). This includes the notion of *interbeing*, which is based on the idea that we do not exist independently (Hạnh, 1997). Interbeing is at the core of Buddhist meditative practices and an important aspect of inner transformation (Hạnh, 1997, 2017; Wamsler et al., 2021). It facilitates the expansion of the self, through practices of mindfulness and compassion to nurture “an understanding of the world as inherently connected” (Bristow & Wamsler, 2022, p.45). This can lead to *interthinking* and *interacting*, meaning that every action and thought is done collectively and non-separate (Wamsler et al., 2021).

### **2.2.2 Continuum of sustainability outcomes at all levels (right quadrant)**

Transformations in the way people are and relate to others can allow for a transformation of society as a whole through a shift in human behavior, by letting go of unsustainable patterns of thinking and behaving resulting from narratives of separation (Wamsler et al., 2021; Wamsler 2022). In turn, moving towards an enhanced pro-social and pro-environmental behavior can be facilitated through a deeper sense of interconnection (Wamsler et al., 2021; Bristow & Wamsler, 2022).



### 2.2.3 Interventions and enabling environments (left quadrant)

For such change to happen, there needs to be “conditions that support the emergence of more sustainable narratives and solutions” (Wamsler et al., 2021, p.6). For instance, in the context of education, being in a school that incorporates mindfulness practices and exposure to nature may provide a safe environment for children to develop transformative qualities and grow up with sustainable narratives (Wamsler, 2021; Wong & Faikhamta, 2021; Frank et al., 2019)

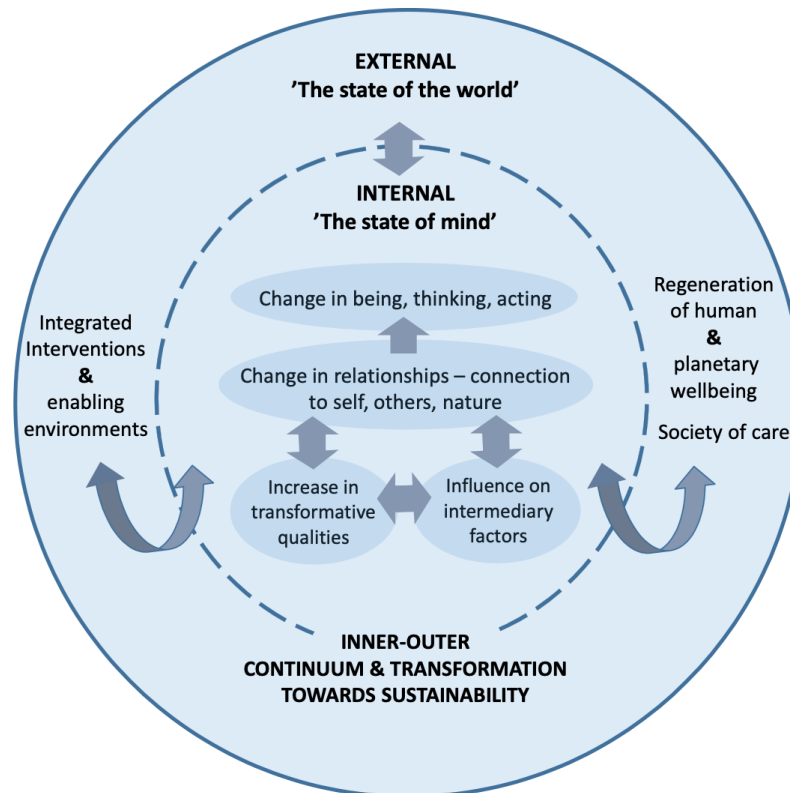


Figure 3. Simplified version of the model of change for internal–external transformation.  
Source: Wamsler et al. (2021)

As such, this framework gives a comprehensive view of my research as it shows not only the importance of inner dimensions as a leverage point, but also the path towards achieving long-term human and planetary sustainability (Wamsler et al., 2021; Woiwode et al., 2021). It also helps me interpret and contextualize my empirical data into the bigger picture and investigate how it connects with the CWN framework and meditation outcomes. For my results section, I included a simplified version of the framework (Figure 3).

### 3 Methodology

#### 3.1 Research epistemology

In my research, I adopt the lens of critical realism, which is a suitable framework for the integration of transdisciplinary knowledge in sustainability science as it seeks to *understand* a reality (e.g., the causal mechanisms, structure, relations etc.) rather than simply describing it (Cockburn, 2022; Stutchbury, 2021). It allows researchers to go beyond the limits imposed by empirical and constructivist approaches, as it encompasses the *real*, the *actual* and the *empirical* (Cockburn, 2022). The framework below (Figure 4) shows three overlapping circles to illustrate these layers, with my personal examples related to the human-nature disconnection.

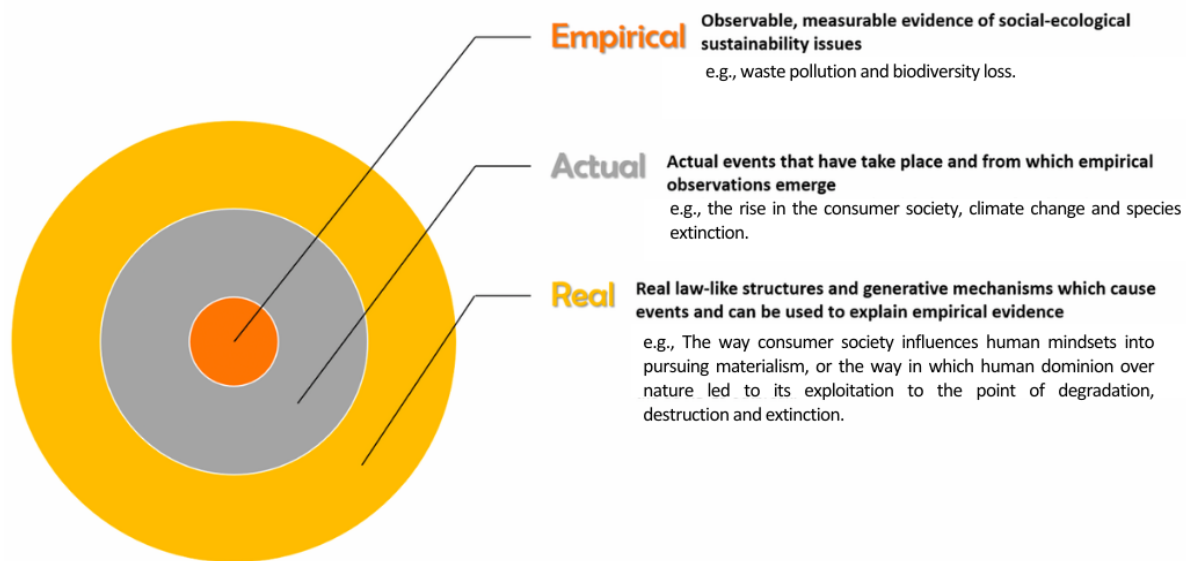


Figure 4. The critical realism depth ontology.  
Source: Cockburn (2022), modified by the author

This frame is suitable for systems thinking and dealing with the complexity of sustainability issues (Cockburn, 2022). It is in line with my research as it explores the worldviews of a group of individuals within their socio-ecological context, which is nested in all three domains of the critical realist ontology (Cockburn, 2022). Critical realism allows me to explore the leverage point of inner transformation through empirical evidence from a population experiencing CWN and practicing meditation, indicating a potential change in real life structures and societal paradigms (Woiwode et al., 2021).

#### 3.2 Research design

For my research strategy, an exploratory case study was chosen, as my RQs both include *what* and *how* questions (Yin, 2003). My RQs are about the personal meaning that a group of people give to a certain phenomenon they experience, for which case studies are preferred. The strength of this strategy is that I

could collect a variety of evidence allowing me to explore the phenomenon in depth (Yin, 2003). A holistic single case design was chosen as it represents a typical case; my goal was to capture information about an “everyday situation” (p.43) (i.e., CWN). Therefore, one single case of daily or weekly meditation practitioners in Skåne, Sweden, was selected.

### 3.3 Methods

This section relates to the data collection process. To answer my RQs, I collected qualitative data from one-on-one interviews, allowing me to listen fully to the participants’ personal journey and get a deeper understanding of their experiences and thought process.

#### 3.3.1 Interview sampling

Nine meditation practitioners living in Skåne were interviewed (Table 1). I conducted a generic purposive sampling as it has a direct reference to my RQs (Bryman, 2016; Flick, 2007). Contrary to probability sampling, my choice of participants was not random as they were targeted specifically for answering my RQs. This type of purposive sampling is based on criteria as I am sampling daily and weekly meditators in Skåne (Bryman, 2016; Flick, 2007). The technique and duration of meditation did not matter to me as I was also interested in having participants with a diverse set of meditation techniques.

Table 1. List of participants and their type of meditation.  
*The types of meditation are discussed further in 4.1.1*

Participant	Interview Date	Location	Type of meditation
P.1	Feb 9th	Participant’s home	Thích Nhất Hạnh Mindfulness Meditation
P.2	Feb 20th	Love Coffee	Thích Nhất Hạnh Mindfulness Meditation
P.3	Feb 21st	Stadsbibliotek	Thích Nhất Hạnh Mindfulness Meditation
P.4	Feb 22nd	Botanical Garden	Zazen
P.5	Feb 24th	Zoom	Zazen
P.6	Feb 25th	My home	Meditation with Dr. Joe Dispenza
P.7	Feb 27th	Chan Temple Malmö	Zazen & Thích Nhất Hạnh Mindfulness Meditation
P.8	Feb 28th	Participant’s home	Zazen & Thích Nhất Hạnh Mindfulness Meditation
P.9	March 6th	Lilla Kafferosteriet	Vipassana

I selected three meditation-related Facebook groups based in Skåne (Wake Up Lund/Malmö and Soul Tribe Community), amongst which two groups are based on Buddhist meditation, specifically from the tradition of Thích Nhất Hạnh. Offline outreach was limited to Buddhist temples (The Lund Zen Center and Chan Temple in Malmö), both practicing Zen meditation, as well as my personal network; I reached out to two yoga teachers that I know personally, who forwarded my study to their students. I also attended a

group meditation and shared information about my study for those who wish to participate. Ultimately, most participants who contacted me practice a form of Buddhist meditation (Table 1).

### **3.3.2 Scope and limitations**

The scope of the study includes people in the geographical area of Skåne in Sweden who share a common behavior, i.e., people with a weekly or daily meditation practice. A limitation of the study is that the online outreach for study participants was limited to Facebook and no other social media platforms, and offline outreach was limited to two meditation centers which practice Zazen. These decisions were made based on convenience and proximity, to ensure the amenability of my data collection process with the time constraints of this thesis project.

### **3.3.3 Interview Guide**

After initial email exchanges to explore unanswered questions, research ethics and to sign the consent forms, an interview was scheduled with all participants. I asked participants their preferred location for the interview so they would feel more comfortable (Table 1). Some participants scheduled the interview right after a meditation session, others chose to meet after their work. I left the decision to the participants. The interviews were set to be 60 minutes but some of them went overtime, with the longest being around 100 minutes. They were recorded with an app on my phone. The interview questions were mostly open-ended to allow them to describe their experience in their own words, without my personal input (Kvale & Brinkmann, 1996) (Appendix B). The questions were divided into three main sets of questions:

#### ***The current meditation practice and meditation journey of the participant***

This set of questions aims to understand the variety in meditation techniques used and to analyze potential links between their practice and their experience of CWN. This is most relevant to answer my third RQ, relating to the meditation outcomes that can enable or hinder a practitioner's feeling of CWN.

#### ***The participants' upbringing***

This helps me identify the context of upbringing, i.e., whether they grew up being exposed to nature, and/or whether they learned about nature from people in their surroundings (e.g., family, schoolteachers).

#### ***The meaning participants give to CWN***

This set of questions include inquiries about terminology and the participant's interpretation of their experience (e.g., "what does *nature* mean to you?"). This is relevant to answer my first and second RQ, as they directly prompt the participant to describe how they *view* and *feel* about nature. The interview questions were supported by the Connectedness to Nature Scale (CSN) (Mayer & Frantz, 2004) (see 2.2 and Appendix A). This is a 13-item scale that is meant to tap into an "individual's affective, experiential connection to nature" (Mayer & Frantz, 2004, p.504). It includes the concepts of oneness, egalitarianism, embeddedness, belonging, and kinship, which are different dimensions of feelings of connectedness

(Mayer & Frantz, 2004). This was helpful to formulate interview questions and sub-themes for the data analysis. The scale uses the verbs to *feel*, *think* and *recognize* as well as specific terminology linked with connectedness and non-duality, such as the concepts of “*oneness*”, “*life force*”, and “*cyclical process of living*” (Mayer & Frantz, 2004, p.513). These concepts may also be used when talking about the meditative experiences of practitioners, which would be relevant for my third RQ. It can also serve as an aid for my participants to put words on their experiences. Further, I asked them to elaborate on their ratings to the statements and inquired about specific terminology as every person has a different interpretation of the concepts (e.g., “how would you describe the concept of *oneness*?”).

### **3.4 Data Analysis**

I resorted to a thematic analysis with an inductive approach (Nowell et al., 2017). The interviews were coded with the Computer Assisted Qualitative Data Analysis Software, NVivo, to assign each statement into codes, which later could be translated into relevant themes linked with the conceptual frameworks for CWN (Zylstra et al., 2014).

#### **3.4.1 Sub-themes**

As mentioned in the conceptual framework section (2.1.), the themes were based on Zylstra et al.’s framework and the “selected competences and practices for cultivating CWN at the individual and collective level” (Zylstra et al., 2014, p.128) (Appendix D). The “collective level” was out of my scope as I was interested in the individual experiences of participants and their strategies for reinforcing CWN. In addition, some competences were excluded (e.g., *green care*, *creativity*, and *problem solving*) as I did not consider that they would contribute to the RQs. I also selected sub-themes from the CNS as they seemed relevant for my RQs, such as *appreciation* and *kinship* (Mayer & Frantz, 2004). The last important sub-theme I identified was *interbeing* as it is mentioned in the internal-external transformation model (Wamsler et al., 2021) and is central to Thích Nhất Hạnh’s teachings (which five participants follow) (Hạnh, 1997).

#### **3.4.2 Overarching themes**

I grouped the sub-themes into four main overarching themes: *presence*, *holistic perspective*, *exposure*, and *knowledge* (Table 2). While *holistic perspective*, *exposure* and *knowledge* are all used in Zylstra et al.’s CWN framework (2014), *presence* was added as it is central to mindfulness and “may facilitate the development of a sense of connectedness to nature” (Schutte & Malouff, 2018, p.10).

Table 2. Themes and sub-themes of the empirical data.

PRESENCE	HOLISTIC PERSPECTIVE	EXPOSURE	KNOWLEDGE
quiet mind awareness attentiveness attunement appreciation	oneness interbeing kinship	interaction	curiosity

### 3.5 Data limitations

My research design and choice of sampling method is limited as this is a very specific case study, taking place within a certain population in a specific context. Participants were also chosen based on their interest in the topic, as they contacted me directly upon seeing my study information sheet. My study results are likely biased towards people who likely have higher levels of CWN and this influences the interpretations that can be made about the role of meditation techniques in this process. The participants may have a positive bias towards the study due to their interest in nature and meditation and therefore pose a bias in the study results. Moreover, my results cannot be generalized to a larger population of meditation practitioners, of individuals with high CWN or the Swedish population. This makes the external validity of my study rather low (Yin, 2003; Cuncic, 2022).

The data collected is also limited as some of my questions and statements may have prompted the participants to reply in a certain way. Despite most of my questions being open-ended, some of them were not. Sometimes I would restate what a participant has said but I may have interpreted their responses in a biased way, prompting them to, for instance, state that they “feel a sense of community with the natural world” (statement from the CNS (Mayer & Frantz, 2004, p.513)).

### 3.6 Positionality

As a meditation practitioner myself and believing that connectedness to nature has relevance for sustainability research, I am aware that I have a positive bias to the topic of mindfulness and nature connectedness. My personal interest may have influenced how I conducted the interviews and interpreted the data collected. This also influenced the social media platform I used and groups to which I shared the study. Being aware of my positionality however, I have made a concerted effort to not let my positive bias influence the study and reflect upon instances where this unconscious and conscious bias may have affected the study.

### **3.7 Ethical considerations**

The participants were made aware of the study purpose and its ethical considerations, such as the anonymity and confidentiality of their personal information. They contacted me based on their personal interest; therefore, their participation was fully voluntary. Participants were made aware that they could withdraw at any time from the study and skip certain interview questions if they felt uncomfortable. I made space for asking questions twice before starting the interview (both by email and in person) and after the interviews ended. A consent form was signed to ensure the understanding of the study protocol and the participant's rights (Appendix C). The interview recordings were deleted from my recording device and are stored on my personal computer. They are not stored anywhere online (e.g., Google Drive, iCloud). This computer is only used by me and is protected by a password. The name of the participants was modified wherever mentioned, and the files' name was coded by numbers.

All these measures were to ensure that the participants were not negatively affected in the data collection process and will not be after the end of the research. Despite the risk of positive bias, the interviews seemed to have positive outcomes for the participants rather than potential harm, based on the participants' statements and body language. Most participants expressed their gratitude at the end of the interview, stating that they enjoyed the experience and were happy to contribute to this research as they see value in this.

## **4 Results & Discussion**

### **4.1 Meditation practice**

#### **4.1.1 Type of meditation**

Most of the participants practice a form of Buddhist meditation (see section 3.3.1. Table 1): Vipassana (Hart & Goenka, 1990), Zazen (Ziff, 1965) and Mindfulness Meditation from Thích Nhất Hạnh tradition (referred to as 'TNH' in this thesis) (Hạnh, 2023). Another participant practices a form of secular meditation for healing by Dr. Joe Dispenza (Unlimited with Dr. Joe Dispenza, n.d.). According to the participants' descriptions, all these meditations involve a focus on the breath and bodily sensations and the continuous letting go of thoughts. Specifically, whenever a thought comes, the practitioners try to not engage with the thought and to bring their attention back to the object of focus. TNH and Dr. Dispenza's meditations can be more focused practices, targeted at bringing a certain state of mind through the use of affirmations and/or visualizations (Plum Village, n.d.; Unlimited with Dr. Joe Dispenza, n.d.). For instance, TNH tradition can involve the repetition of 'gathas', which refer to the verses that can be repeated during meditation and throughout the day (as part of daily mindfulness practice) (Murray, 2022). An example is the following gatha: "*Waking up this morning, I smile. Twenty-four brand new hours before me. I vow to live fully each moment and to look at all beings with eyes of compassion.*" (Hạnh, 2006, p.12). For the meditation with Dr. Dispenza, participant 6 described going through visualizations and repetition of mantras to bring about certain states, such as gratitude:

For me, I ask myself what feelings do I want to feel? I want to feel happy, feel bliss, gratitude... So this would be a mantra. Like 'I'm grateful'. But then I ask my brain, how does it feel to be grateful? Then I just let myself feel the feeling of gratitude. So the idea is to practice these emotions that you want to feel. You practice everyday. For me, meditation has become a way to feel what I want.

– Participant 6

#### **4.1.2 Meditation experience**

The participants vary in terms of experience, having either a daily or a weekly practice. For this thesis and simplicity purposes, I assume that experience is based on the duration and frequency of practice. As such, those who do not practice meditation everyday and/or only do short meditations are considered less experienced than those who practice every day and/or do longer meditations. This assumption is based on my interpretation of the participants' experience. The year at which they tried meditation for the first time was asked to provide contextual information. It was also revealed that most participants have had an on-and-off practice since their first time meditating, especially those who started several years ago. In the end, their years of experience with meditation did not seem to have a big impact on the depth of their meditation practice, as opposed to the regularity and duration of the meditation sessions.

#### **4.2 Main Findings**

The following framework (Figure 5) was created to conceptualize CWN in relation to the meditation outcomes described by the participants, along with the selected themes and sub-themes. The bottom quadrants, *knowledge* and *exposure* support the mind-body dimensions of CWN while the top quadrants, *presence* and *holistic perspective* support the mind-body-spirit dimensions. Meditation was added to the very top of the figure as my results suggest that it may provide support for human-nature connectedness.



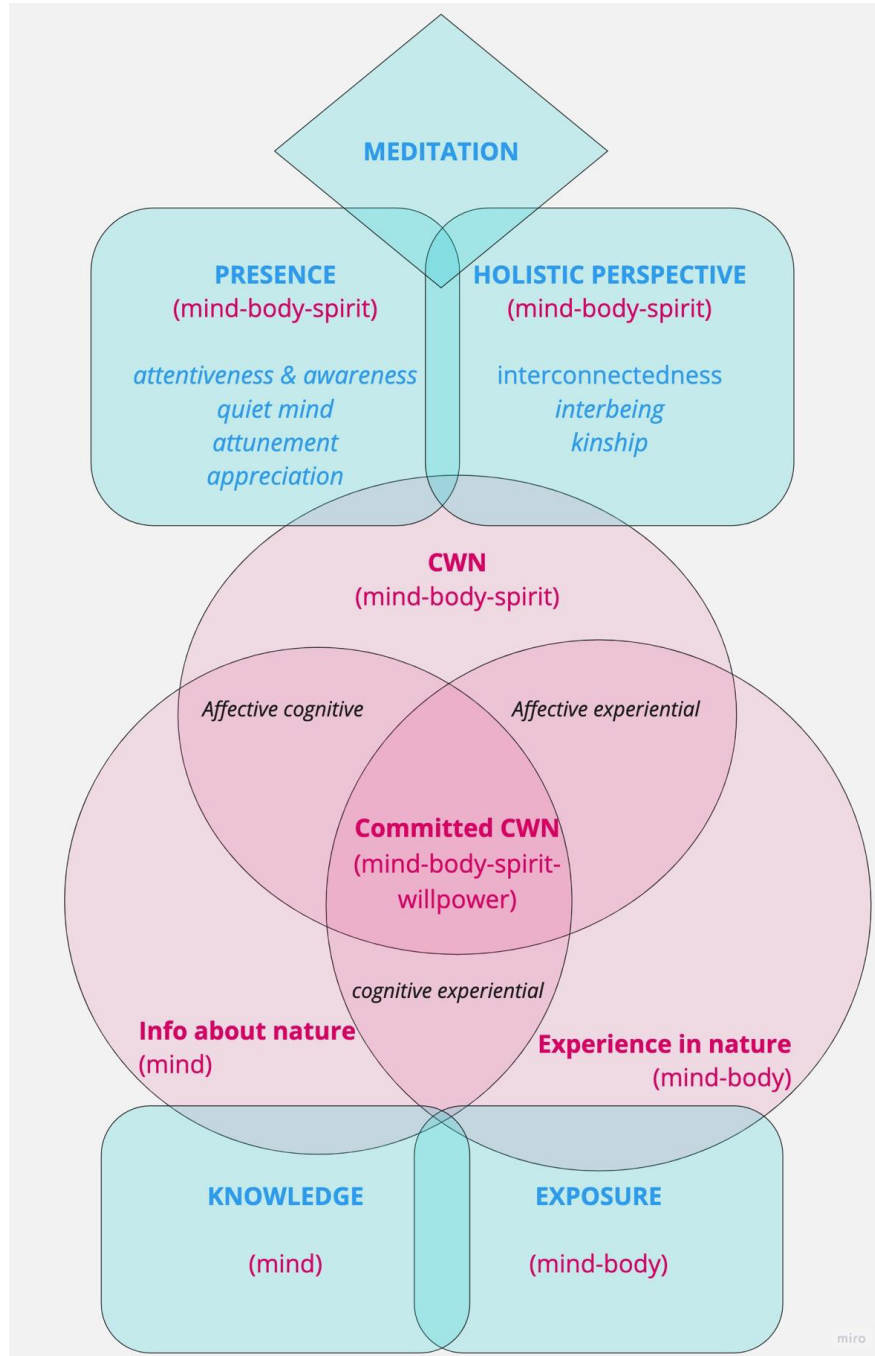


Figure 5. Intersection of CWN and meditation, created by the author. Source: Zylstra et al. (2014)

The themes and sub-themes identified are interlinked and they build upon each other. I will guide through the framework section per section, from top to bottom.

#### **4.2.1 Presence**

Based on the participants' experience of meditation and exposure to nature, connectedness seems to be highly linked to the theme of *presence*, which refers to being in the present moment (Tolle, 1997). The present moment refers to the moment-to-moment experience and entails that one is fully in the 'here and now', not caught up in thinking about the past, future or daily problems that occur outside of the immediate embodied experience of being alive (Tolle, 1997).

I can sense that I feel more connected with nature. When I meditate, it feels like the tree is having the same experience as I am. The tree is just there. Just *present*. It doesn't need a brain, it doesn't need anything. It's just there, just like me. – Participant 5

All participants mentioned being *present* to some extent and their description of this experience was in line with the selected sub-themes: *attentiveness & awareness, quiet mind, attunement & appreciation* (Zylstra et al., 2014; Mayer & Frantz, 2004).

#### **Attentiveness & Awareness**

Attention and awareness seem to be prerequisites and outcomes of being in the present moment. In meditation and mindfulness practices, by shifting the entire attention to the present reality without engaging with thoughts about the past/future and personal beliefs and bias, one can cultivate being aware of themselves and their surroundings (Deshmukh, 2006; Vago & David, 2012). As mindfulness is recognized for its features of non-judgemental awareness, self-reflection and overall *presence* (Brown & Ryan, 2003; Neenan, 2019; Vago & David, 2012), this can enhance nature connectedness through a more engaged interaction between people and their environment (Shutte & Malouffe, 2018). In turn, being in nature can naturally enhance attentiveness and awareness, which can be explained by the Attention Restoration Theory (Kaplan, 1995). This suggests that spending time in nature activates our involuntary attention system, which requires little effort as attention is based on intrinsic interest in the object of focus (Kaplan, 1995). As such, natural landscapes have a restorative effect on people, combating mental fatigue through effortless attention and a soft fascination (Kaplan, 1995; Huynh & Torquati, 2019; Macaulay et al., 2022). For soft fascination to occur, an individual must be receptive enough to their external environment (Kaplan, 2001).

This suggests that nature has restorative capacities that inherently enhance attention and awareness, overall facilitating relaxation and contemplation, depending on an individual's level of engagement (Kaplan, 1995, 2001). Some practitioners mentioned that by cultivating a still mind and actively engaging with their environment, they are able to notice little details, shapes and movement in nature: "*If you just look, you still your mind, then you see it. You see that it's like a little universe. A microcosm.*" (Participant 4)

## **Quiet mind**

Reaching a state of stillness and a quiet mind is a feature of being in the present moment (Tolle, 1997), which may emerge from active exposure to nature and meditation. In addition, as participants all practice seated meditation, the body is very still. Therefore, they practice maintaining a still mind and body– “*in focusing attention, such (in)activities cultivate a degree of stillness in the mind and body*” (Zylstra et al., 2014, p.125). All participants have stated that meditation helps them quiet their inner chatter, by consciously focusing on the breath which serves as an anchor, which is said to be very calming:

I feel like I always need to have nature around me. Similar to meditation, it gives me the same calming effect” – Participant 5

Similarly, Falk (2022) mentioned a “softening of [her] inner critic” when she is present in nature and during meditation (p.186). This resonates with the findings of Aspy & Proeve (2017), which explain that Mindfulness Meditation can enhance connectedness by expanding our awareness of the world and reducing preoccupation with self-centered thoughts, which often isolate us from our environment. However, to cultivate more connectedness, they argue that more focused meditation techniques are needed, such as meditations with visualizations or affirmations on a specific state of mind (Aspy & Proeve, 2017). When it comes to active exposure to natural environments, nature may naturally prompt participants to quiet their mind and be more present with what is around them, as explained in the previous section.

[When going to nature], it would probably take me like 10-20 min to settle and let go of my thinking. Then I start opening up, I see what’s around me. See the tree, the leaves. Feel the wind. And then be like ‘wow, it’s been here all this time’. – Participant 3

## **Attunement & Appreciation**

Attunement is described by the practitioners as a slowing down of one’s energy and physical/mental state, with a sense of relaxation and quietness. For nature to serve as a mirror and to be in harmony with it, it seems like there needs to be an engagement and receptivity to nature to allow it to touch us on a deeper level (Kaplan, 1995, 2001). This seems to resonate with soft fascination, as explained previously.

I would go to nature to meditate and to really take the time to slow down. Then, the way it felt for me, I was trying to adjust myself to the rhythms of life. The rhythm of the city is hectic and fast, whereas nature is very slow. Like flowers they grow slowly, trees also... When I had this rhythm within me, then I could walk slowly [...]. I find that nature allows me to calm down and be in touch with the deeper things in myself, which is nature also. – Participant 7

This phenomenon seems to be more intuitive for experienced practitioners; they seem to reach a state of quietness and awareness more easily as it is something they practice on a daily basis and for a longer duration. Four of the participants meditate between 30 to 60 minutes per day and they were the ones describing the most occurrences of this phenomenon.

The practitioners also described a deep *appreciation*, *wonder*, and recognition of nature's beauty. All nine participants refer to the aesthetic features of nature and its ability to elicit a state of awe.

Just like for instance a sunset. It's so majestic. Or like an old tree that's been here for thousands of years. This tree has outlived us. It's totally awe inspiring. – Participant 9

For some, this appreciation may come from the healing properties of nature, anchoring the individual in the present moment and providing them with a sense of meaning. The beauty of nature can be so captivating that it seems to directly catch one's attention and elicit relaxation, attunement, and appreciation, keeping ruminative and existential thinking at bay (Tolle, 1997; Kaplan, 1995, 2001; Falk, 2022). Similarly, practicing gratitude and perceiving nature as a gift seems to be very healing (Falk, 2022). It may also provide meaning to people's lives as suggested by Buss (2000) in the following quote: "*Appreciating the beauty of a blossom, the loveliness of a lilac, or the grace of a gazelle are all ways in which people can, in some small measure, fill their daily lives with evolutionarily inspired epiphanies of pleasure*" (p. 22). This resonates with a participant's statement when speaking about nature:

Bugs are so beautiful, to be able to see them with eyes of wonder, it's deeply healing in a way. Otherwise I find myself lost in everyday life. – Participant 1.

Attunement and appreciation towards nature seems to elicit many emotions among the participants, which is indicative of a heart connection (Bristow & Wamsler, 2022). The study revealed the importance of feeling emotions in relation to nature. This was mentioned by all the participants and is supported by Zylstra et al. (2014), suggesting that affect is a fundamental experience of CWN. Being able to *feel something* seems to be connectedness in itself, whereas a lack of affect may be a sign of disconnection: "*Before, I would be in nature but not necessarily feel things.*" (Participant 8). Meditation may also support nature connectedness by helping people tap into their heart center. These experiences were more prominent amongst more experienced meditators, who are able to go in deeper meditations.

Going to the forest without connecting with your heart... I don't know if that could even count as connectedness to nature. [...] When you're in your heart, you feel so much love, gratefulness and joy. You can feel that with nature. You feel something from your heart center. I feel like the heart feeling is almost like something that goes inwards, instead of something that goes outwards. [...] Meditation has really helped me understand how to connect with the heart. And then connecting that to the sun, or the air [...]. How connected I am to my own heart, to my inner being, is how I will experience this tree, the sun. – Participant 6

Lastly, a reconnection with the natural world and the experience of awe can take the focus beyond oneself, shifting the attention to something bigger and making the self feel small (Preston et al., 2017). This state of awe is described as a *spiritual* phenomenon by some scholars, as it is a self-transcendent experience (Preston et al., 2017). Thus, practitioners may feel a deep sense of appreciation not only for the beauty of nature, but also the healing and spiritual experience that nature-connectedness can elicit. Coming back to the concept of *biophilia* (see section 1.2), it may explain why many people tend to gravitate towards the natural, and why some may suffer from a disconnection (Wilson, 1984).

Overall, the study found that *presence* was an overarching theme when participants elaborated on their experience of CWN in conjunction with meditation practice. It seems like the states of meditation and

CWN can facilitate an increased awareness of oneself and one's surroundings, to feel in tune with nature and lastly, feel gratefulness. This allows for strong emotions and feelings to emerge, indicative of a deeper heart connection (Bristow & Wamsler, 2022).

#### **4.2.2 Holistic perspective**

The description of a holistic perspective among people who meditate is a key finding. The interview question “*what do you consider nature?*” (see Appendix B for interview guide) explores the personal meaning and definition that people give to nature. This is important for my thesis as it can give clues about the extent to which individuals consider nature as part of their sense of self (and vice versa). With a value system that perceives nature as separate and inferior to humans, there is no sense of moral responsibility (Schultz, 2002). In fact, the human-nature separation narrative entails that “nature is valued only to the extent it benefits humans” (Schultz, 2002, p.65). On the other hand, a strong overlap between humans and nature entails that our center of identity and care expands to include nature (Wamsler et al., 2021). It can also impact human behavior and conservation goals (Schultz, 2002). This theme touches upon the sub-themes of *interdependency & interconnectedness*, *oneness & interbeing* and lastly, *kinship*.

#### ***Interdependency & interconnectedness***

In the study, all participants described the intrinsic value of nature and the mutual dependency that we have with nature, such as the idea that we cannot exist without it: “*If you look at it scientifically, the reason we breathe is the trees. When we think of connection, it could be as simple as that. We don't exist without it.*” (Participant 9).

Despite this sense of interconnectedness, some participants perceived nature as a separate entity that is outside of themselves. For instance, one participant mentioned that nature is raw nature that has not been transformed into a commodity and it refers to a place they go to:

But just for me, when I think that I want to go to nature, I usually mean like going to the forest, touch plants, hear birds... and it's just way much more beautiful than what we produce out of natural resources. – Participant 6

Overall, some of the less experienced practitioners described nature as being equal but still saw themselves as separate from nature. They have a holistic worldview because they recognize and respect the interconnectedness of everything in nature, but do not experience the full extent of the ‘ecological self’ (Bragg, 1996, as cited in Zylstra et al., 2014).

#### ***Oneness & Interbeing***

For more experienced practitioners, nature is “everywhere and all around us” (Participant 4) and is seen as part of the self (and vice versa). To a certain extent, they saw their self as *being* nature, or being strongly entangled with nature. They described a feeling of oneness when exposed to nature or being in a deep

meditative state, which seems to indicate a strong CWN: *“So being connected to nature for me, is about dropping this idea that we’re all separate, getting closer to the idea of being one.”* (Participant 8).

Meditation experience seems to influence the experience of oneness. In fact, the participant who rated the highest on the CNS was the most experienced practitioner (Participants 4). They especially rated high on the statement about oneness, i.e., *“I often feel a sense of oneness with the natural world around me.”* (Mayer & Frantz, 2004, p.513). This can be explained by Deshmukh (2006), stating that meditation can lead a practitioner to a state of *“spontaneous unity with no sense of situational interactive self or personal time”* (p.2239), leading to an experience of non-duality or oneness. However, this state may be more realistic to reach when practicing longer meditations on a regular basis.

What is nature? Most people would think that this place is a garden, not a forest. This is the closest thing to nature in a city. Sitting in front of a pond, watching the ripples on the water, the branches swaying in the wind. The birds singing. Is that nature? I don’t know. I think it only makes sense as an idea if we separate ourselves from it, which I think is a mistake. We move around endlessly in this ecosystem – there’s no separation in that sense. I am nature and nature is me. – Participant 4

The notion of oneness is at the core of *interbeing*, which was mentioned by four TNH meditation practitioners. Other participants did not mention interbeing directly, but described something quite close to that, such as the recognition that *“it is a part of us”* (Participant 9).

There is the idea of interbeing, which we talk about in Plum Village. The existence of this life form is also like... They’re not separate entities. And so we all inter-are together. If I’m the way I am now, it’s because of the way this thing is now. It’s all inter-being in a way. And so there’s no self for me and no self for the life around me. And so this contributes to the feeling of oneness. – Participant 7

Interbeing goes beyond the concepts of interconnectedness and interdependence (Lam, 2020). The latter assumes that the two things that are interconnected are separate entities that have a relationship or some sort (Lam, 2020). Interbeing, on the other hand, indicates that the two ‘inter-are’, meaning that they are not separate, but they are one, and thus cannot exist without the other (Hanh, 2017, 1997). Interbeing is based on the formula *“A is made of non-A elements”* (Lam, 2020). When talking about a sheet of paper, TNH explains: *“Looking even more deeply, we can see we are also in the paper... Because when we look at a sheet of paper, the sheet of paper becomes the object of our perception. [...] Everything – time, space, the earth, the rain, the 64 minerals in the soil, the sunshine, the cloud, the river, the heat, and even consciousness – is in that sheet of paper. Everything coexists with it. To be is to inter-be. You cannot just be by yourself alone; you have to inter-be with every other thing. This sheet of paper is, because everything else is”* (Hanh, 2017, p. 28).

It seems like more experienced meditation practitioners are more likely to experience interbeing, even for a short period of time. As TNH meditation can include the daily repetition of gathas, it helps come back to the present moment and continuously cultivate interbeing (Murray, 2022). The following quote describes the practice of mindful eating in Plum Village in France (a Buddhist monastery established in 1982 by TNH), where a participant previously lived in:

In Plum Village, we do contemplation before eating. We recognize that this food is the gift of the Universe, the Earth, the Sky, the work of numerous living beings. Even the food that I eat is the Earth saying “I am here for you” – Participant 1

This can explain why TNH practitioners, especially the most experienced ones, describe a deep holistic worldview and see their sense of self as highly entangled or merged with nature. However, they rated lower on the statement of oneness at the moment of the interview (3 or 4 out of 5). This indicates that the phenomenon of oneness/interbeing may be fluid, based on the state of mind of the person. It may also be influenced by the depth of the meditation practice and/or whether the participant meditated before the interview. In fact, participant 4 (the most experienced practitioner who practices Zazen) mentioned still being in a meditative state as they were speaking with me, which may explain why their CWN was the highest of all participants in that moment. Their practice does not include gathas (contrary to TNH meditation) but rather focuses on the breath while continuously letting go of thoughts, with the goal of cultivating a still mind.

I meditated for over an hour. It keeps ticking because I don't really stop. 30 min of formal Zazen sitting meditation, then coming here I did 30 minutes of formal dedicated walking meditation. I'm sort of always with my practice, if I lose myself in something, I always come back to it. – Participant 4

It seems like to actively feel oneness/interbeing, one needs to have a dedicated meditation practice, as it can facilitate the internalization of certain beliefs (e.g., the spiritual belief that “we are all one”) (Javanaud 2020). In the case of interbeing, meditation may enhance the melting away of the self, which is an indication of high CWN. For instance, when speaking of meditation, Participant 7 described: “*where the boundaries between myself and the outside world just completely disappear.*” This in turns allows one to develop an egalitarian mind, characterized by non-discrimination and non-hierarchy: “*when the discriminating mind is still, it doesn't distort our experience and ideas*” (Participant 4).

### ***Kinship***

The cultivation of an egalitarian mind may enhance connectedness because nature is no longer seen as a resource to exploit or dominate, but as a living entity with intrinsic value (Bai, 2015; Vilkkka, 2021). All the participants agreed that nature has some kind of “life force” and all rated high on the related statement on the scale (Mayer & Frantz, 2004, p.513). This life force was described by participant 5 as “*a need to live*” and “*a way to exist*”. The terms ‘energy’, ‘essence’, ‘universe’, ‘god’, ‘consciousness’ and ‘soul’ were used by some of the participants:

But those years made me more connected with nature by applying personality to things. Like you feel like the waterfall as a type of *energy* etc. The soil and weather, all these things... When you have this in your focus, this is how you start to read and feel life. – Participant 6

Here, nature is no longer seen as an inanimate object that can be instrumentalized for satisfying human needs (Bai, 2015; Vilkkka, 2021). For five of the participants, nature is also perceived as a community to which they belong, and they feel a *kinship* with other living beings. Some referred to living beings (e.g., animals, plants, trees...) as being a family member or as friends, or nature as a parent: “*Sometimes I think*

*of nature like grandmother willow.”* (Participant 9). The sense of kinship was also strongest for experienced meditators and those who grew up with animals.

The grass, the trees... If it's at home meditating, it's not necessarily that I feel alone, but I feel more included when I do it outside. Almost like a feeling of being amongst friends. – Participant 3

Overall, the extent to which participants see themselves as being 'one' with nature was a key finding. The stronger the sense of oneness is, the stronger the connectedness may be. The participants recognized the interconnectedness between themselves and nature, and how they depend on nature to live. However, the more experienced practitioners who practice TNH and Zazen meditation described a state of oneness and interbeing to some extent, which goes beyond interconnectedness as it involves the 'melting away of the self'.

#### **4.2.3 Knowledge**

Accumulating new knowledge and educating oneself may lead to a difference between what participants know/believe in (i.e., how they *want* to feel), and how they *actually* feel. For instance, a statement from participant 8 highlights the cognitive dimension of practicing interbeing:

Buddhism has this idea that we're interconnected and all one. I'm trying to go into this idea that I am the Earth and the Earth is me. But this is all very theoretical for me. It's a belief that I have. I'm also reading a book which talks about this idea of interbeing. – Participant 8

In fact, Ives et al., (2018) suggests that there is a “philosophical” dimension to CWN which relates to different conceptualizations of human-nature relationships. They explain this dimension as “perspectives or worldviews on what nature is, why it matters, and how humans ought to interact with it” (Ives et al., 2018, p.1391). However, despite knowing about certain concepts and worldviews, people may not fully embody such concepts yet.

In addition, four participants mentioned that learning about nature from teachers/ parents in conjunction with nature interaction during their childhood has helped them cultivate a connection from an early age.

My father was a scout and my mother grew up on a farm. So, I was taught as a child, I learned [about nature]. I can sense and see on the cloud if we'll get rain, if it gets colder etc. – Participant 5

But those who did not have experiential learning explained feeling disconnected in their childhood, which was translated by a lack of awareness and empathy towards nature. However, acquiring a variety of knowledge about nature in adulthood allowed those participants to reconnect to a certain extent. This was accompanied by more frequent exposure to nature.

#### **4.2.4 Exposure**

Results revealed that upbringing in nature did not make a big difference in the participants' current CWN. All participants described a high state of CWN, regardless of whether they grew up close to nature or not. Exposure to nature during adulthood led 'urban' participants to reconnect with nature, which contributed to their high CWN as of today.



In addition, interacting and exploring the natural world may help participants turn their conceptual knowledge about nature into embodied knowledge (Pagis, 2010). For instance, by being present and fully engaged in a forest, an individual can explore this environment and see for themselves how this ecosystem functions. When this practice becomes embodied, “this interaction produces habitual patterns of action that do not require thought” (Pagis, p.471). This process may be able to enhance CWN, through a *mind-body* connection and affective experiences (Zylstra et al., 2014) (Figure 1). Likewise, learning about meditation theory or Buddhist teachings (e.g., on compassion, interbeing) requires embodied practice to deeply *feel* its outcomes (Pagis, 2010). This may explain why CWN requires direct interaction with nature (Zylstra et al., 2014), and why mindfulness needs embodied practice, through meditation (Deshmukh, 2006).

### ***Intersection of nature exposure and meditation***

Most participants mentioned that being in nature is similar to being in a meditative state, which may be due to the process of attunement (Zylstra et al., 2014). This is because it may allow practitioners to tune in with nature and still their mind, as explained in section 4.2.1. Thus, as exposure to nature allows for a *mind-body* connection, my findings reveal that meditation may allow one to tap into their *spirit*, enabling them to experience the *mind-body-spirit* connection that characterizes CWN (Zylstra et al., 2014). As Zylstra defines *spirit* as “that which serves as an individual’s source of inspiration” (Zylstra et al., 2014, p.126), meditation and mindfulness practices in general may serve as a source of inspiration for individuals, as they all seem to practice it to expand their consciousness.

But in some cases, exposure to nature is not sufficient to enhance CWN, which may be due to “cognitive factors such as pessimistic beliefs or attitudes about people and nature” (Aspy & Proeve 2017, p.103). Negative and discriminative narratives can pose a barrier to connectedness (Wamsler, 2022). Meditation may help to tackle such pessimistic attitudes about nature and the self through a continuous practice of letting go and focusing the attention on the breath or affirmations (Aspy & Proeve 2017). This may explain why all meditation practitioners in my study describe deep levels of CWN, in particular the more experienced practitioners. They seem to actively work on letting go of any negative and dualistic narratives they may hold about the world.

### ***Nature-based meditation***

Meditation *in* nature may enhance CWN as well. Indeed, researchers have found a positive correlation between human-nature interconnectedness and mindful meditation (Unsworth et al., 2016; Howell et al., 2011; Ray et al., 2021). Similarly, Ray et al., (2021) provided preliminary evidence for the effectiveness of nature-based meditations in increasing mindfulness, CWN and pro-environmental behavior. This entails that there may be a virtuous circle of mindfulness and connectedness between meditation and nature—i.e., meditating in nature may enhance the depth of the practice and thus enhance connectedness, which in turn reinforces the depth of the meditation itself. Both phenomena can overlap and be reinforced when combined together in nature-based meditations (Unsworth et al., 2016; Ray et al., 2021). Participant 6 explains it by saying:

I feel like that's what you naturally do, when you are being present in nature. Like you go and sit down. It's a very humbling experience to sit more on the ground and come into a relaxing state in nature. That's a place for meditation. I feel like that happens naturally, when you place yourself in these situations. – Participant 6

### ***Negative aspects of meditation***

There was very little mention of the negative aspects of meditation. The participants either replied “no” to the question or mentioned negative outcomes from sitting for too long (e.g., body pain) or not being able to let go of thoughts in the meditation (which may lead to frustration). One participant mentioned that “*the only barrier of meditation is yourself*” (Participant 3). Two other participants mentioned that a barrier is not having the right mindset or intention when meditating; for instance, meditating to follow a trend or for extrinsic reasons, such as improving productivity.

Overall, knowledge about nature and/or spiritual teachings (e.g., interbeing) as well as exposure to natural environments were found to contribute to the participant's experience of CWN and meditation (e.g., stillness, non-duality). Both *knowledge* and *exposure* reinforce each other through a mind-body connection, enhancing CWN (Zylstra et al., 2014).

### **4.3 Implications for sustainability science**

This section explores the implications of nature-connectedness and meditation for inner transformation and sustainability science, as well as the linking factors between the conceptual frameworks (see extended framework in Appendix F). We look at the themes of *well-being* and *commitment to action* and their interlinkages (Figure 6).

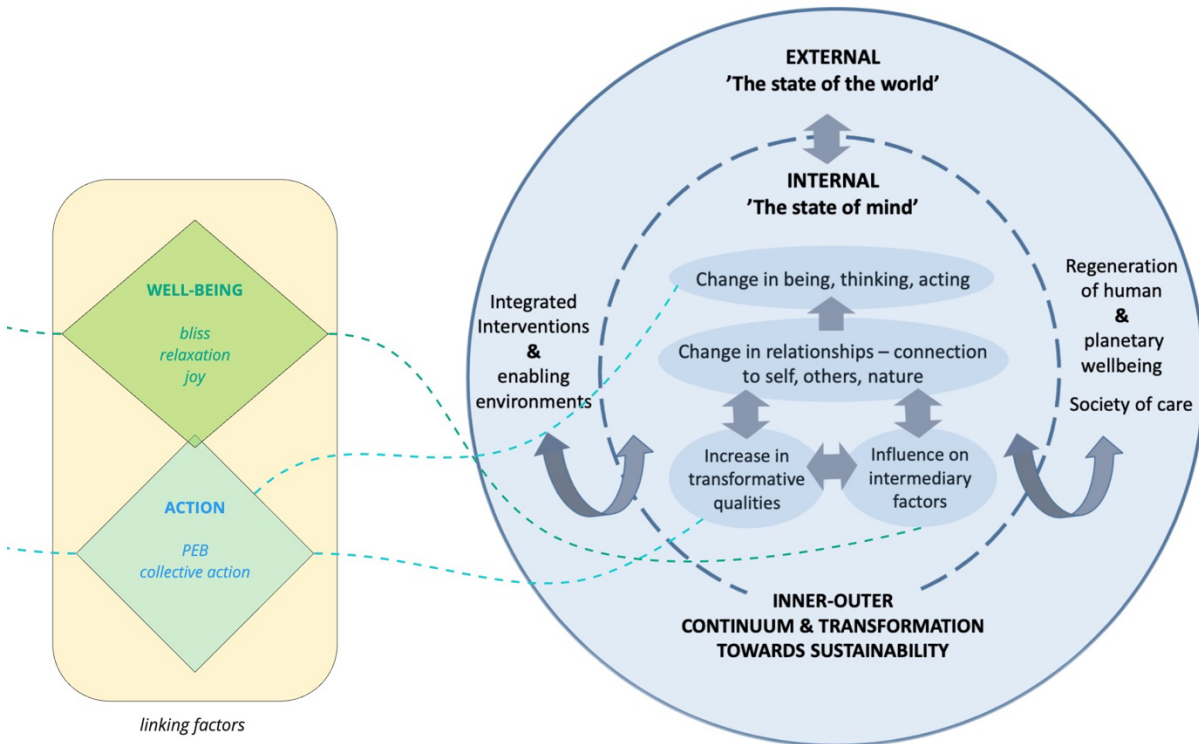


Figure 6. Internal-external transformation model and linking factors.  
Source: Wamsler et al. (2021) modified by the author.

### 4.3.1 Well-being

#### ***Meditation & well-being***

Well-being can emerge on multiple dimensions and is a very personal experience. It could be an outcome of many experiences, such as the restorative effect of nature (Kaplan, 1995), and/or cultivating a state of peace through meditation (Aspy & Proeve, 2017). The following words were used by the interviewees to describe this experience of peace when meditating deeply enough: “presence”, “blissful”, “joy”, “letting go”:

For me, it feels very peaceful. I feel like I can really feel my body at that moment in time. And just be. A very peaceful feeling. [...] [when] you take longer meditations, a lot of it can be a struggle, but every now and then, you will touch this moment of *bliss and presence*. That just feels very peaceful for me  
– Participant 2

Well-being may emerge as an outcome of meditation. For some participants, it helped them overcome their suffering. It seems like their practice allowed them to recognize and transform their own suffering through increased self-awareness: *“I was going through a difficult time personally, and as most people do when they’re going through a difficult time, they seek answers to help themselves.”* (Participant 9). For six of the participants, there is the notion of suffering. They have turned to meditation as a spiritual practice to heal themselves. The state of presence and self-awareness that meditation cultivates may help them

become resilient against difficult emotions, as it involves tending to emotions rather than dismissing them (Bristow & Wamsler, 2022). Half of the practitioners mentioned doing this during seated meditation.

When we're there to feel all [our suffering] and question why we feel like this and accept and understand, then we can transform it into some love and compassion for ourselves and others, and then we rest into this deepest part of ourselves. The part that is very loving and compassionate.

– Participant 1

Further, it seems like meditation helps practitioners feel a state of peace and space, allowing them to connect to their heart and cultivate non-discrimination (Bristow & Wamsler, 2021) and more openly welcome the outside world. As participant 7 puts it:

Meditation uses the heart, not the mind. It helps us to see things as they are, not through our perception of ideas and concepts. [...] Through meditation, I can make space within me and welcome others and the world. – Participant 7.

### ***Nature connectedness & well-being***

Another dimension of well-being is its interlinkage with nature connectedness. Some participants mentioned that nature represents a “refuge” or an “oasis” which they can go to for comfort, relaxation and peace of mind.

[Nature] became more of an oasis or refuge. Somewhere to go. To get away perhaps. Or to come home, in another way. – Participant 4

The experiences of the participants are supported by Howell et al.'s finding that nature connectedness correlates with psychological well-being (2011). More specifically, there seems to be a reciprocal relationship between CWN and well-being whereby the happier and more fulfilled people are in their life, the more connected they may become to nature (Howell et al., 2011). In addition, high connectedness was found to increase perceived well-being through reduction in stress (Yamaguchi et al., 2006), increase in positive affect and reduction in negative affect (Mayer et al., 2009; Berman et al., 2012), endorsement of intrinsic goals (Weinstein et al., 2009) and enhancement in vitality (Ryan et al., 2010). This relationship was also found to be mediated by meaning in life, as connectedness may inherently provide meaning: “*Meaning is found in connecting the self to the external world.*” (Howell et al., 2013, p.1682). This may be due to the self-transcendence ability of nature (Howell et al., 2013). As such, a high state of connectedness with nature may put an end to the human search for meaning and happiness, a search that causes suffering for many. This seems to be linked to Zylstra et al.'s definition of *spirit* (mind-body-spirit dimension of CWN) (2014) and it may provide an explanation as to why connecting with nature can heal people; potentially by providing meaning in life and peace of mind, similarly to mindfulness practices (Howell et al., 2013; Van Gordon, 2018).

Overall, well-being is very important in supporting systemic change for internal–external transformation towards sustainability as it impacts not only people’s transformative skills but also the way they manage relationships (section 2.2. Figure 2) (Wamsler et al., 2021). This study may support the idea that meditation and CWN can enhance well-being and vice-versa through a reduction in negative affect (i.e., coping with suffering) and increase in positive affect (e.g., feelings of peace, joy, self-transcendence) (Van

Gordon, 2018). In fact, mindfulness was found to be a mediator of the relationship between well-being and nature connectedness as it helps to cope with stressful situations through mindful awareness (Huynh & Torquati, 2019), contributing to human and planetary well-being (Wamsler et al., 2021).

#### **4.3.2 Commitment to action**

This section is related to *willpower*, which forms the deepest state of CWN, balancing the faculties of *mind, body, spirit, and willpower* to create a “behavior which aims to “give back”” (Zylstra et al., 2014, p.126). This is also related to cultivating transformative skills (e.g., agency, insight, awareness etc.) for systemic change at the individual/collective/societal level (Wamsler et al., 2021).

In the interviews, some practitioners emphasized the importance of transforming their suffering into skillful actions. This was especially the case for TNH practitioners as TNH teachings follow Engaged Buddhism (Lam, 2020). They expressed wanting to make the world more compassionate and sustainable through their own inner transformation and the continuous practice of mindfulness:

The first thing is to be able to recognize in myself my own suffering and then transform this. I first transform it for myself, then for my friends and family, and then for the whole world. But I agree that if I practice, it’s to be a better person I would say. – Participant 7

Another identified driver of transformation was love. Participant 9 stated that, for them, love can only be real when it is shown through concrete actions. In their experience, expressing love for nature but not doing anything for the environment is not considered as true love.

I think it’s the same thing as when you say you love someone. Like if I love my partner, what is that, really? That’s actually in the action. That love is not me saying I love you. It’s the actions that I take that show I really love them. – Participant 9

This resonates with Kals et al.’s (1999) finding that emotional affinity is a motivational basis to protect nature and that compassion leads to pro-environmental behavior (Pfattheicher et al., 2016). Those who engage in committed CWN seem to protect nature for intrinsic reasons rather than extrinsic. They may do so because protecting nature is no longer seen as a sacrifice or compromise but is an integral part of their personal well-being (Nisbet et al. 2011), especially if they perceive nature as part of their self-construct, i.e., the ‘ecological self’ (Drengson, 2005). As such, emotional affinity seems to be linked to well-being and it may create a reinforcing virtuous loop between CWN, well-being and *willpower*. As Nisbet et al., (2011) puts it: “*happy people may be more likely to act environmentally, but doing so is also likely to result in positive affect, producing a positive feedback loop whereby nature-protective behaviour becomes reinforcing for the good feelings and personal well-being it produces.*” (p.319). This resonates with the statement of one participant in relation to their pro-environmental behavior:

[Through mindfulness] I see now how everything is interconnected. How my well-being is connected to the well-being of the Earth and vice versa. I also need to be happy so I can help the Earth. Like I need to be more calm, grounded and centered. The more I care for the Earth, the happier I am. So everything comes back to me and to the Earth and that’s when i started to really made this connection between me as a person, and the Earth. – Participant 8

Lastly, the following poem written by participant 1 (an experienced TNH practitioner who lived at the Plum Village monastery) expresses the depth of their connectedness and love for nature:

*Dear Body, Earth, Cosmos,  
I love you very much and recognize that you have always been here for me. Unfortunately, I have not always been here for you. Now, looking deeply, I see that there is no edge. Where one of you will end and one of you will begin.  
My Body is the Earth, and the Earth is my Body. The Earth is the Cosmos, and the Cosmos is the Earth. I am the Body, the Earth, the Cosmos, yet I'm really not any of these things. By thinking too much, I have not been in touch with what is real and what is true. The mind hooked my attention and I have been carried far away from home. With each mindful breath, step, bite or sip, I come back to you, dear Body, Earth, Cosmos. When you breathe and walk, oh beloved Body, I vow to breathe and walk with you. When you dance and transform, oh beautiful Earth, I vow to dance and transform with you. When you expand and shine, oh wonderful Cosmos, I vow to expand and shine with you.*

This poem displays the experience of oneness (“*my Body is the Earth, and the Earth is my Body*”) and suggests that nature is a mirror to the self and vice versa: “*When you breathe and walk, oh beloved Body, I vow to breathe and walk with you*”. This seems to express that the human-nature relationship is reciprocal and is an indication of interbeing.

#### **4.4 Limitations & future research**

One of the main limitations of the study is that participants ranged from the ages of 23 and 30 years old and the majority of participants are ethnic Swedes. As such, the study sample may not be representative of Swedish society and findings may not be generalizable. Indeed, studies with older participants revealed a stronger link between mindfulness and connectedness to nature, compared to studies with younger participants (Schutte & Malouffe, 2018). Future research should aim for bigger and more diverse sample to include intersectionality and explore how different cultures and socio-economic backgrounds can influence the results (Theriault & Daniel, 2014). In addition, most participants are experienced practitioners (only two of them are considered less experienced), so it would have been interesting to have additional participants that are less experienced to have a more accurate comparison of meditation experience.

More studies need to explore the link between meditation/mindfulness and human-nature connectedness as well as how to integrate mindfulness and spiritual practices into climate policy (Bellehumeur et al., 2022). Additional research on the inner dimensions of sustainability science is also needed to advance the field of inner transformation and contemplative studies. Lastly, CWN may also be linked to eco-anxiety, which many of the participants in this study mentioned experiencing. Thus, more research on mindfulness as a potential way to build psychological resilience against eco-anxiety and enhance climate action would be relevant to sustainability science.

## 5 Conclusion

Connectedness with nature is a phenomenon that encompasses cognitive, experiential and affective experiences in relation to the natural world, which can be a leverage point for transforming individuals and society as a whole (Zylstra et al., 2014; Wamsler et al., 2021). This study explored the phenomenon of CWN, whereby three RQs guided my research: (1) What meaning do meditation practitioners give to CWN? (2) How do participants interpret and describe their experience of CWN from doing continuous meditation? (3) What meditation outcomes do practitioners identify as enabling or hindering towards feeling CWN?

The interviews revealed that being connected to nature is seen as a way of life (RQ 1). The participants have a deep appreciation and respect for the natural world, leading them to notice and *feel* nature. In addition, there seems to be an expressed link and a reinforcing relationship between meditation and nature connectedness (RQs 2 and 3). Both experiences seem to elicit a state of presence and holistic perspective about the world where the sense of self of the meditator diminishes or dissolves. This was strongest for more experienced meditators and is influenced by the degree of exposure to nature and their level of engagement, as well as the knowledge they hold about the world. CWN seems to be characterized by strong feelings and emotions regarding nature including love and compassion, which is indicative of a heart connection (Bristow & Wamsler, 2022). Meditation may facilitate these states through the cultivation of a quiet mind and mindful awareness, allowing practitioners to feel relaxed and experience non-duality to some extent (RQ 3). Lastly, these experiences were described to enhance the perceived well-being of participants and seem enhance ecological behavior (Aspy & Proeve, 2017; Bristow & Wamsler, 2022; Howell et al., 2011).

The findings of this study may provide preliminary evidence for the relevance of meditation and nature-connectedness for an internal-external transformation for sustainability (Appendix F) (Wamsler et al., 2021). My findings may illustrate the power potential of meditation in allowing for a shift in consciousness and worldview to close the separation between humans and nature and, thus, contribute to a more sustainable future.

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## 7 Appendix

### Appendix A

#### Connectedness To Nature Scale

Source: Mayer & Frantz, 2004

This scale was only used for supporting the interview questions and opening discussion about specific terminology. It was not used for quantitative purposes.

Please answer each of these questions in terms of *the way you generally feel*. There are no right or wrong answers. Using the following scale, in the space provided next to each question simply state as honestly and candidly as you can what you are presently experiencing.

- | 1                 | 2 | 3       | 4 | 5              |
|-------------------|---|---------|---|----------------|
| Strongly disagree |   | Neutral |   | Strongly agree |
| ___ 1.            |   |         |   |                |
| ___ 2.            |   |         |   |                |
| ___ 3.            |   |         |   |                |
| ___ 4.            |   |         |   |                |
| ___ 5.            |   |         |   |                |
| ___ 6.            |   |         |   |                |
| ___ 7.            |   |         |   |                |
| ___ 8.            |   |         |   |                |
| ___ 9.            |   |         |   |                |
| ___ 10.           |   |         |   |                |
| ___ 11.           |   |         |   |                |
| ___ 12.           |   |         |   |                |
| ___ 13.           |   |         |   |                |
| ___ 14.           |   |         |   |                |

## Appendix B

### Interview Guide made by author.

#### *Meditation Practice*

- **How do you feel today? Have you meditated already?**
- **Please tell me about how your interest in meditation first began.**
  - How/when did you discover meditation?
  - What was your motivation for starting?
  - How do you approach meditation?
- **Please describe your current meditation practice**
  - The technique, duration, frequency, experience, place...
- **How do you feel about meditation?**
  - Can you describe how meditation makes you feel (before/during/after)?
  - How has your practice/approach evolved?
  - What aspect(s) of meditation do you enjoy/dislike?

#### *Upbringing/childhood*

- **Please tell me more about your upbringing.**
  - Can you describe the environment in which you grew up?
  - How did you learn about nature as you grew up?
  - What did nature mean to you as you grew up?

#### *CWN*

- CWN. what does this mean to you?
- Can you tell me about when you first noticed a shift in your worldview?
  - Has meditation played a role in this shift? If so, please describe how.
- How do you feel when you're in nature vs. when you haven't been there in a while?
  - What emotions emerge when you're in nature?
  - What do you like/dislike about being in nature?
- What do you do to reinforce your connection with nature?

#### *CNS [discuss answers]*

- How would you say this has evolved for you?
- Where you read this term, what does that mean to you?
- Can you tell me more about the answers to [...]
- Why did you rate [...] on this statement?
- When did that shift for you? Have you always felt this way?
- How has this changed your behavior?
- How does [...] feel like to you?



## Appendix C

### Consent Form made by author.

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#### Study Consent Form

- I, the undersigned, have read and understood the Study Information Sheet provided by Romane Yang.
- I have been given the opportunity to ask questions about the study.
- I understand that taking part in the study will include being interviewed and audio recorded.
- I have been given adequate time to consider my decision and I agree to take part in the study.
- I understand that my personal details will not be revealed to people outside the project.
- I understand that my words may be quoted in publications, reports, web pages and other research outputs but my name will not be used.
- I understand that I can withdraw from the study at any time, and I will not be asked any questions about why I no longer want to take part.
- I understand that I am free to contact any of the people involved in the research to seek further clarification and information.

**Name of Participant:**

**Email:**

**Signature of Participant:**

**Date:**

**Researcher Signature:**

**Date:**

#### Researcher contact information

Romane Yang  
[romane.yang@gmail.com](mailto:romane.yang@gmail.com)  
0769653943

#### Lund University contact information

LUCSUS, Center for Sustainability Studies  
[Website](#)  
Josephson building, Biskopsgatan 5, 223 62 Lund

## Appendix D

### List of selected competencies and practices for cultivating CWN at the individual level.

Source: extracted from Zylstra et al., 2014

Level	Competences	Practices for cultivating competences	Literature
Individual (personal routines)	Quiet mind	Still for extended introspection/sits in nature	[28, 34, 166–168, 170, 171, 268, 293]
	Awareness	Engage and expand natural survival senses	
	Attentiveness	Focus on nature signs: tracks, calls, phenology	
	Interaction	Touch nature to foster subject–subject view	
	Sense of place	Know your area: map, wander, sit, explore	
	Curiosity	Practice inquisitive questioning, reflection	
	Appreciation	Cultivate awe, wonder, gratitude for nature	
	Creativity	Do art, poetry, story, music, imagination, play	
	Problem solving	Experiment and improvise for self sufficiency	
	Green care	Participate in nature-based therapy, farming or exercise	
	Holistic perspective	See reality as interconnected, reciprocated	
Attunement	Awaken to/harmonize with earth’s language and wisdom		

## Appendix E

### List of participants with their meditation experience and interview quotes.

This table shows the type of meditation, the regularity of the practice and some quotes from the interviews. “More experienced” refers to those who meditate everyday and/or do longer meditations. “Less experienced” refers to those who do not meditate everyday and/or do shorter meditation. This categorization is for simplicity in my analysis process and may not accurately reflect the actual experience level of the practitioners.

Participant	Type of meditation	Experience	Quotes
P.1	TNH Mindfulness Meditation	<p>more experienced</p> <p>Daily approx. 30min, for the past year.</p> <p><u>note</u>: lived in the Plum Village monastery (dedicated daily practice)</p> <p>first meditation 1 year ago</p>	<p><b>Holistic worldview</b></p> <p>“In Plum Village, we do contemplation before eating. We recognize that this food is the gift of the universe, the Earth, the sky, the work of numerous living beings. Even the food that I eat is the Earth saying “I am here for you””.</p> <p>“But when I see the clear cut trees lying down, I feel like “oh my friends, i’m sorry for you”. It’s a terrible sight. I feel many emotions. This is the home of many insects and animals. They just want to live. The most precious thing they have is their life and we take it away.”</p> <p><b>Stillness</b></p> <p>“But the circumstances in the monastery are really helpful. Because we need the mind to be so still and quiet. In stimulating environments, the mind can get so tangled. When the water is still, then we can see our reflection. We need to have a quiet life as well.”</p>
P.2	TNH Mindfulness Meditation	<p>less experienced</p> <p>Weekly group meditation: (1-2 x 30min) solo meditation: (10min once in a while)</p> <p>first meditation 10 years ago</p>	<p><b>Holistic worldview and action</b></p> <p>“I think I’m quite good at gatas – like brushing your teeth, you recite this little poem. Like ‘brushing my teeth, I clean my mouth and I vow to speak with mindfulness...’. Saying kind words. Or like looking at your food before you drink it. These are very quick and accessible things for me. So I think it’s also about the ambition that you have. For me it’s kind of to be able to cultivate that peace in myself and in the world and the sangha. To serve the sangha through volunteering.”</p> <p><b>Knowledge</b></p> <p>“Without meditation and awareness, I would probably still be quite ignorant to the life that nature is giving.”</p> <p><b>Appreciation</b></p> <p>“I think [disconnection from nature] is when you don’t have the opportunity to take in its beauty.”</p>
P.3	TNH Mindfulness Meditation	<p>more experienced</p> <p>Daily approx. 30-60min for the past year</p> <p>First practice 9 years ago</p>	<p><b>Holistic perspective</b></p> <p>“Nature for me is more easily defined as walking outside in the hills and stuff. And you can feel like all these things that are alive, and the air, the ground.. Everything together would be nature for me. So part of it, I think, is to feel these things that are outside of me. Like feeling the vibrations in the air, some type of energy. Being able to feel the ground, the grass, the trees, animals... and not really having this border between you and everything else.”</p> <p>“So part of it, I think, is to feel these things that are outside of me. Like feeling the vibrations in the air, some type of energy. Being able to feel the ground, the grass, the trees, animals... and not really having this border between you and everything else.”</p> <p><b>Exposure to nature</b></p> <p>“Some of the symptoms of not being in nature. Forgetting myself. Forgetting being part of life.”</p> <p><b>Affect</b></p>

			<p>“Everyone can see a tree but this feeling or thing that some people can feel or hear... And also part of this feeling like communion and joy, I feel like that’s a spiritual feeling, because you need some sort of different way of viewing the world than just the physical.”</p>
P.4	Zazen	<p>more experienced</p> <p>Daily 30-60min per day with formal zazen at the Zen Center (2-3x per week?)</p> <p>first meditation 9 years ago</p>	<p><b>Stillness</b> “If you just look, you still your mind, then you see it. You see that it’s like a little universe. A microcosm.”</p> <p><b>Exposure to nature</b> “Later on, [nature] became more of an oasis or refuge. Somewhere to go. To get away perhaps.”</p> <p><b>Holistic perspective</b> “What is nature? Most people would think that this place [the botanical garden] is a garden, not a forest. This is the closest thing to nature in a city. Sitting in front of a pond, watching the ripples on the water, the branches swaying in the wind, the birds singing... Is that nature? I don’t know. I think it only makes sense as an idea if we separate ourselves from it, which I think is a mistake. We move around endlessly in this ecosystem, there’s no separation in that sense. I am nature and nature is me. I didn’t think that before so [meditation] definitely changed my perception of nature.”</p> <p>“Every living being holds within them an entirely different world. How am I to say that they are less [than me]. Of course they’re not.”</p> <p>“I can go into [meditation] with any feeling. There’s no feeling that is better. It’s a sort of dualistic point of view, which is a bit paradoxical. To sit to unify the mind beyond this dualistic point of view. I can go into it with any kind of mindset and it will definitely change the experience of meditation by a lot. But given enough time, I always end up at the same place, which is stillness.”</p>
P.5	Zazen	<p>more experienced</p> <p>Weekly 3x90min for several years, on and off practice.</p> <p>first meditation 35 years ago</p>	<p><b>Presence</b> “I can sense that I feel more connected with nature. When I meditate, it feels like the tree is having the same experience as I am. The tree is just there. Just present.”</p> <p>“It’s such a freedom to just go into this kind of state of acceptance. That’s not really how we feel in our daily life. Here you just have to sit, and you don’t have to do anything.”</p> <p><b>Holistic perspective</b> “Nature is the source. It’s where we come from. My body and my cells come from the food we’re eating. We’re completely dependent on nature. I feel like I always need to have nature around me. Similar to meditation, it gives me the same calming effect”</p> <p>“A life force is a need to live. Like a way to exist. – a stone has a way to exist. Everything has kind of a drive to exist.”</p> <p>“In this sense, I am above [nature] because I don’t live completely in an ecological way. I do things that are bad for nature, and it’s not just me. It’s the whole society. Like, my computer has metals that are bad for nature. I have a standard of living that is exploiting nature. But I don’t think it should be this way. So when I say I consider myself superior [to nature], I don’t think that’s what I should do but it’s what I’m doing.”</p>
P.6	Meditation by Joe Dispenza	<p>more experienced</p> <p>Daily 30-60min for the past 5 months</p> <p>first meditation 5 years</p>	<p><b>Heart connection</b> “Meditation has really helped me understand how to connect with the heart. And then connecting that to the sun, or the air [...]. How connected I am to my own heart, to my inner being, is how I will experience this tree, the sun.”</p> <p>“Going to the forest without connecting with your heart... I don’t know it that could even count as connectedness to nature”</p>

		ago	<p>"You're given so much beauty, freedom, sense of purity or something. You're given this for free."</p> <p><b>Kinship</b>          "But those years made me more connect with nature as applying a personality to things. Like you feel like the waterfall as a type of energy... The soil and weather, all these things... When you have this in your focus, this is how you start to read and feel life."</p>
P.7	Zazen & TNH Mindfulness Meditation	<p>more experienced</p> <p>Weekly</p> <p>first meditation 8 years ago</p>	<p><b>Attunement</b>          "The rhythm of the city is hectic and fast, whereas nature is very slow. Like flowers they grow slowly, trees also... I would go to nature to catch up with the rhythm of life, rather than the city. When I had this rhythm within me, then I could walk slowly, arrive home and do things... then the city would catch up with me [...]. I find that nature allows me to calm down and be in touch with the deeper things in myself, which is nature also."</p> <p><b>Appreciation</b>          "Sometimes, I see that [nature] is so beautiful that I want to cry. Sometimes, it's so beautiful and I know that there's so much suffering that I wish people could see it the way I see it. And that's what I do with the meditation because I find that I can touch within myself this dimension of peace. I know this feeling of suffering so well because I've felt it – I want to bring to others what I need, in a way."</p> <p>"Even bugs like... I love bugs, I love all life. Bugs are so beautiful, to be able to see them with eyes of wonder, it's deeply healing in a way. Otherwise, I find myself lost in everyday life."</p> <p><b>Holistic perspective</b>          "And so I find that if I look very deeply within me, I'm not so different from all the other beings [...], I can see that we're all from the same nature. There is this idea of interbeing which we talk about in Plum Village. [...] We all inter-are together. If I'm the way i am now, it's because of the way this thing is now. There's no separate self-entities. [...] And so there's no self for me and no self for the life around me. And so this contributes to the feeling of oneness."</p> <p>"Life is a manifestation of some sort of original love that gives."</p> <p>"...where the boundaries within myself and the outside world just completely disappear."</p>
P.8	Zazen & TNH Mindfulness Meditation	<p>less experienced</p> <p>Daily 10-20min meditation (TNH)</p> <p>Weekly Formal Zazen once a week (3x25min)</p> <p>First meditation 4 years ago</p>	<p><b>Heart connection/affect</b>          "Before, I would be in nature but not necessarily feel things."</p> <p><b>Holistic perspective</b>          "So being connected to nature for me, is about dropping this idea that we're all separate, getting closer to the idea of being one."</p> <p>"Like nature is a living entity – all the living beings are alive and living a life of their own. And we wouldn't exist without them. Nature is constantly calling us back and we ignore it because we never learned to feel connected with it."</p> <p>"[gathas] also allow me to connect with nature when the affirmations are about Mother Earth. I've also tried walking meditation, which made me feel so connected with nature because with each step, I was thanking the Earth for all that it's doing for us."</p> <p>"Yesterday I actually went to the forest to try and feel that connection. Again, it's a practice, but I felt very nurtured by the trees. Trying to set this intention and thanking the trees for what they're doing. Noticing the little details on different trees, questioning their age, what they've seen and been through."</p>

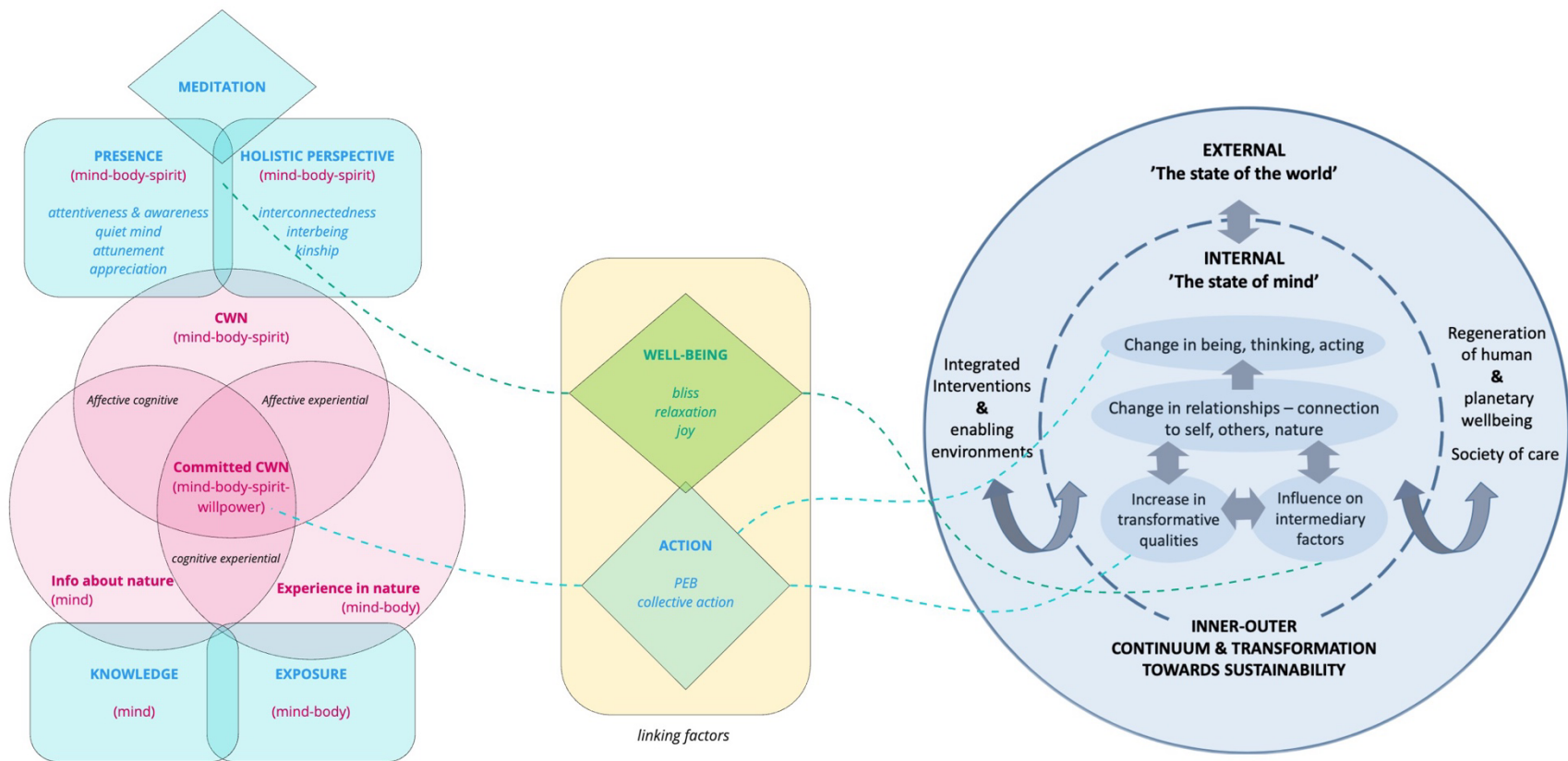
			<p>"I believe in this idea of inter-being. How it's all connected, like I'm in front of a tree and the tree is me. But again, it's hard to conceptualize and feel on a deeper level. And I'm still practicing."</p>
P.9	Vipassana	<p>less experienced</p> <p>Weekly 10-30min practice</p> <p>First meditation 3 years ago</p>	<p><b>Holistic perspective</b></p> <p>"If you look at it scientifically, the reason we breathe is the trees. When we think of connection, it could be as simple as that. We don't exist without it."</p> <p><b>Appreciation</b></p> <p>"Just like for instance a sunset. It's so majestic. Or like an old tree that's been here for thousands of years. This tree has outlived us. It's totally awe inspiring."</p> <p><b>Animism</b></p> <p>"There's something about trees, especially rilly old trees that have seen so much more than we ever have and ever will. And then I feel like... If you could talk to something that has witnessed so much... If they could communicate, what stories would they tell?"</p> <p>"For nature as well, and animals too. Everything is living and breathing. We're all so connected. And I think that becomes... It's easier to realize the more you meditate."</p> <p>"You know when you're meditating. This idea of no self, like just the pure consciousness. When there's no thought. That's sort of what I think this life force is. Like this life force that is untainted, that's in everything. Stones, animals, humans."</p>

## Appendix F

**Combined conceptual framework showing the links between CWN, meditation, and the model of change for internal-external transformation.**

**Source:** Zylstra et al., 2014; Wamsler et al., 2021. Modified by the author.

This final framework is divided into three main sections. It is based on a modified version of Zylstra et al.'s CWN framework showing the intersection with meditation (left-hand side) and Wamsler et al.'s model for internal-external transformation (right-hand side). The middle section shows the linking factors which connect the two frameworks, based on my findings.



*Connectedness With Nature (Zylstra, 2014).*

*Model of change for internal-external transformation (Wamsler et al., 2021)*

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