Metabolising Bigger-than-Self Distress through Nondual Enactive Wisdom Development:

A Layered Autoethnographical Study of Embodied Embedded Psychological Responses to Biospheric and Civilisational Crises

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Nicholas Clyde Laurence

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Abstract

The current thesis explores the question of how psychologists and other mental health professionals might assist clients experiencing bigger-than-self distress. Bigger-than-self distress is defined as psychological distress that relates to what I describe as the biospheric-civilisational meta-crisis, which comprises a compounding and interlinked set of social and environmental issues, some of which pose time-bound existential threats to the stability of our civilisation and the biosphere's capacity to sustain it. The thesis begins with looking at the cognitive behavioural tradition and mindfulness-based interventions (MBIs) and explores what further psychological assistance might be given for those whom these interventions are not enough. The thesis takes an autoethnographic approach, drawing on the author's own experience of responding to bigger-than-self distress, and blends this with an enactivist theoretical account that seeks to link more closely together mindful understandings of experience with cognitive scientific theory and empirical literature. The author's experience of engaging in mindfulness training broadened and deepened his perspective on bigger-than-self distress and the seeming necessity of an expanded container within which to hold and process it. This expanded container is expounded in the form of the Big History, Systems View of Life, and Theory of Knowledge perspectives, which provide an evolutionary, scientific, and cosmological account of history within which to situate the biosphere, humanity, and the civilisational-biospheric meta-crisis that is related to bigger-than-self distress. An updated view of cognition is also provided, which views cognition as self-organising, based on principles of relevance realisation, free energy minimisation, predictive processing, and which is profoundly embodied and embedded within its environment. From this expanded base, wisdom traditions from Western, Eastern, and Indigenous cultures are discussed with a view

to being able to draw from these for novel interventions within the cognitive behavioural tradition that align with this updated version of cognition and context of cosmos, biosphere, humanity, and biospheric-civilisational meta-crisis. From there, interventions within clinical psychology and coaching (IFS and Aletheia Coaching, primarily) are presented as prototypical novel cognitive behavioural interventions that are aligned with this view of cognition. The novel ways of working with psychological content are applied to bigger-than-self distress via a new term that I label metabolisation. This overall way of working can be understood as enactive nondual wisdom development for bigger-than-self distress and helps to provide a cognitive scientific vocabulary for understanding psychological responses to bigger-than-self distress. Importantly, nondual enactive wisdom development is something that can only be enacted in real-world praxis, and so to guide clients through it requires clinicians to go through it experientially ahead of their clients: a philosophy that overall fits well with the reality of bigger-than-self distress and the meta-crisis being something that clinicians and clients alike are subsumed within.

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This project, while thoroughly an individual piece of work, could truly never have gotten to completion without the support, generosity, wisdom, and guidance of many individuals and indeed whole communities of people, and so I'd like to share a sense of what mindfulness teacher Thich Naht Hahn might call the interbeing nature of this project by acknowledging some of the beings without which this project would not exist in the form it is today. This interbeing nature includes the more-than-human life forms and land of Aotearoa New Zealand and the tangata whenua of this land, who are too many iwi to name here but who I am grateful to for their care for live-giving values and maintenance, despite overwhelming challenges and affronts, of a living culture grounded in right relationship with whenua to this day.

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tertiary supervisor Dr Chris Stephens, in contributing to the design of the empirical aspect of the study, and the Human and Disability Research Committee, who approved the MiCBT pilot study (approval number 15/CEN/31).

This project has broken down perceptions in me of my own self-reliance and independence from communities and systems bigger than myself. Doctoral theses are never easy, and this one has coincided with a number of personal and bigger-than-self challenges I've been grappling with in my own life. I've relied on the generosity of friends, family, flatmates, as well as the supportive structures of society's social security nets as I've undergone disruptive (yet ultimately very growth-engendering) personal changes concurrently with this project. Intellectually, several organisations, both within Aotearoa New Zealand and around the world, have given me courage to discuss bigger-than-self issues within clinical psychology by their communication of the existential relevance of climate change to the whole of society. I've personally been inspired by Generation Zero New Zealand for making climate change a legitimate topic of political import in Aotearoa; Extinction Rebellion, Fridays for Future, School Strikes for Climate, and indigenous groups around the world for their work in communicating the existential importance of wise, evidence based political and societal responses to the climate crisis; and Deep Adaptation, for taking seriously the psychological and emotional aspects of climate change and the possibility of catastrophic climate-induced sequelae for society. Each of these organisations, and countless people around the globe who have taken part in climate action, have made the seriousness of the situation clearer than ever and shifted the Overton window to allow projects such as the present thesis to become feasible. Many of these organisations and movements were not in existence at the outset of this project, and it gave me a sense of being deeply not alone in my concern for and prioritisation of such issues. This sense of being

just one part of a wider system and humanity that is facing these realities informed the project in profound ways and influenced the idea of the individual finding their own contribution within their niche(s), rather than the blunt and rather unrealistic idea of saving the world that is often presented within popular media on social and environmental change.

Another trend that has emerged, at least in my own awareness, as this project has been being carried out, is the existence of podcasts and dialogues accessible through popular media that take the idea of wisdom development in the context of bigger-than-self issues seriously. The terminology used here may be different to that found in this thesis at times, but conversations involving people such as Jordan Hall, Bonnitta Roy, Daniel Schmachtenberger, Nora Bateson, Tyson Yunkaporta, and Hanzi Freinacht, among many others, have profoundly influenced the thinking within this thesis by their example more than their academic content, except in the case of John Vervaeke whose work is cited within this document. Another in this vein, who exposed me to these thinkers and experientially led me into novel insights and profoundly helped in my personal relationship with and response to bigger-than-self reality, was Mark Feenstra. Mark, your mentorship and guidance on a personal level, and example in committing your life to embodying a more coherent response to the bigger-than-self context facing us today has been profound and transformational for me. I also owe thanks to the individuals within the process groups initiated by Mark Feenstra that gave a kind of advanced training in working with present moment participatory relevance realisation and led to several significant insights that influenced my developing perspective on responding to bigger-than-self reality distress.

I want to acknowledge my family, extended family, friends, and flatmates. I've been lucky to have had many supportive and life-giving friendships that have helped to see me through the years of life that this thesis project has taken up. My flatmates in the many houses in

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played a pivotal role in the focusing of my energy on what matters most to me and helped me to decide to go outside the mould, with your legacy a guiding sign that one life can make a difference and that it matters what we do with our time.

The final thanks goes to my partner Sarrah, who has been incredibly patient with me and supportive of me in so many ways throughout this process. You've been such a source of joy in my life and someone without whom this project would have never come to completion, certainly not in the way that it has. You've been a muse in this process, with the example of how you live your life with a mixture of grace, surrender, service, integrity, hard work, and love. The way you see me, the love you have for me, and faith you have in me is such a precious gift and I feel very blessed to have you in my life. I can't wait to start the next phase of our lives together, and hopefully contribute together to a world learning to respond more wisely to the challenges of our time, for our children and those who come after them.

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Chapter 1: Defining the Problem: Bigger-than-Self Reality, the Biospheric-Civilisational Meta-Crisis, and Bigger-than-Self Distress

In the current thesis, I attempt to answer the question of how psychologists can assist their clients who are experiencing distress due to phenomena bigger than themselves. I call this form (or cluster of syndromes) of distress "bigger-than-self distress". This is a complex term to fully unpack, as there is a systemic understanding of the world that is implied in the term which will only be more thoroughly articulated through the course of the current thesis. However, this chapter will begin to define it, and the first step to this process is through describing a set of symptoms that can be observed within the biosphere and our own global civilisation that will be collectively referred to as the biospheric-civilisational meta-crisis, or simply, "the meta-crisis", a term that has come to be used to refer to the convergence of different global crises, including ecological, political, energy and resource use, economic, cultural, spiritual, psychological, and educational crises (e.g., Bjorkman, 2020; Patten, 2019; Rowson, 2020; Stein, 2022). The meaning of the term meta-crisis as it is used in the current thesis will be given more definition in this chapter, although a fuller understanding of what is meant by it, especially the inner dimensions, will only be within reach once the whole argument of the thesis has been articulated. Bigger-than-self distress is distress that is related to the meta-crisis. Bigger-than-self distress is not mutually exclusive in relation to traditional conceptualisations of mental distress or mental illness, but the primary source of the distress is assumed to be something that exists both outside (as well as inside) the boundaries of an individual's embodied cognitive system.

The phrase "bigger-than-self" has been adapted from the term "bigger-than-self problems", a term used by Crompton (2010, p. 8) in a report on responding to issues such as

global poverty, climate change, and biodiversity loss: large-scale issues that affect us all which are not necessarily within an individual's clear self-interest to invest personal resources to solve. Abraham et al. (2016, p. 543) used the term "bigger-than-self issues" in a chapter exploring the implications of such issues on the professional practice of psychology in Aotearoa New Zealand. In the context of this thesis, the phrase "bigger-than-self" is used in two terms: "bigger-than-self reality", and "bigger-than-self distress". Bigger-than-self reality refers to the cosmos and world that exists outside what is conventionally considered to be the boundaries of the self and an individual's conception of it. Bigger-than-self reality can be seen as the larger whole within which the biospheric-civilisational meta-crisis is unfolding. Bigger-than-self reality can also be understood as being able to be divided into layers of emergent complexity. There are a number of frameworks considered in this thesis which differ in what exactly these layers of complexity are (e.g., Chaisson, 2005; Christian, 2018), and both Christian's (2018) historically oriented Big History system as well as Henriques' psychologically oriented (ToK; 2003, 2011) Theory of Knowledge systems are the primary model used and adapted from in this thesis. The ToK system divides reality into emergent layers of physical, biological, animal nervous system, and human cultural-symbolic complexity. Both Big History and the ToK system will be discussed in more detail later in the thesis, which detail why these models have been used to provide an expanded container within which to understand the meta-crisis and within it bigger-than-self distress. Bigger-than-self distress can be seen as historically linked to both Crompton and Abraham et al.'s terms, yet updated by a more systemic (e.g., Capra & Luisi, 2014) understanding of the current crises denoted by the term meta-crisis.

In this chapter, I will outline how this thesis uses the term "meta-crisis" by describing first some of the salient aspects of it, and then the philosophical position that I take in this thesis

in attempting to both understand and guide responses to it. The symptoms of the meta-crisis include biospheric: climate change, species and ecosystem loss, and stress in other significant planetary boundaries, experienced in individual humans as eco-anxiety, ecological grief, and other emerging eco distress syndromes; civilisation-wide stressors, including (political) polarisation, racism, sexism, homo- and trans-phobia, loneliness, isolation and the breakdown of communities; and an overall atmosphere of rising stress and crises, intractable wicked and complex problems, and lack of positive and realistic vision for the future. Several of these issues are inter-related and causally related to one another. Many, especially the biosphere-related issues, are urgent and time-sensitive, and there are risks of overstepping tipping points, the other side of which lie positive feedback loops that threaten to feed into and intensify other parts of the inter-related biospheric-civilisational systems. After reviewing evidence on these bigger-than-self issues that can be seen to comprise the meta-crisis, I will discuss and define what is meant by the term bigger-than-self distress in more detail. From this will flow an introduction to the full-stack enactive wisdom development approach proposed in this thesis, which emerges out of the conceptualisation of bigger-than-self distress as something that is possible for an individual to feel, discern, and metabolise within their own phenomenological experience.

Biosphere in Crisis: Climate Change, Planetary Boundaries, and Tipping Points

Perhaps the most existentially threatening and time-limited of all the bigger-than-self reality issues are issues pertaining to the environment and biosphere, such as climate change, species loss, resource depletion, and ecosystem devastation (e.g., IPCC, 2022; Rockström et al., 2009; Steffen et al., 2015). The whole of recorded human history has taken place within the holocene, a period of relative climactic stability that has underpinned the rise of agriculture and the rise of cities, then nation states, then a global industrial order

(Rockström et al., 2009). That same rise in energy and resource use has led to the beginning of an epoch which some are calling the anthropocene (e.g., Crutzen, 2002; Moysés & Soares, 2019; Schill et al., 2019), a period in which human behaviours have a decisive impact on both local environments and the biosphere as a whole, and which is leading to extinctions of species and loss of biodiversity at rates comparable with previous mass extinction events. Biospheric issues have the important property of being time-limited, in that if they are not addressed in a time-sensitive manner then a weight of evidence suggests that the capacity of our planet and natural environment to sustain human society in the ways that it has will likely be severely, perhaps catastrophically impacted. As the biosphere is made up of interconnected systems that keep each other in balance, changes to parts of the system can cause changes in other parts of the system (e.g., Steffen et al., 2015). Perhaps most worryingly, evidence indicates that some of these systems have tipping points, where previously negative feedback loops can tip into being positive feedback loops - for example, the melting of ice caps can reverse the cooling effect that was given by ice reflecting light from the sun, as well as releasing dangerous levels of greenhouse gases such as methane, which further accelerate climate change (Lenton et al., 2019). The planetary boundaries framework (Rockstrom et al., 2009; Steffen et al., 2015) offers a concise synthesis of evidence on the health of interconnected biophysical systems at a planetary level.

The planetary boundaries framework (Rockström et al., 2009; Steffen et al., 2015) was developed in response to human-induced changes to the biosphere. Their analysis revealed nine planetary boundaries associated with the planet's biophysical subsystems or processes and suggested that these boundaries represent a safe operating space for humanity to reside within. They suggested that many subsystems of Earth react in nonlinear, abrupt ways, with thresholds that when crossed will transform that subsystem into a new state - states which

may not be favourable to human life, at least in the forms that we have known it. In their attempt to identify subsystems that have thresholds which if crossed would lead to change that would widely be viewed as unacceptable, the researchers identified nine subsystems: climate change; changes in biosphere integrity (measured by rate of species loss and loss of biodiversity at global and large ecosystem levels); biogeochemical flows (such as interference with nitrogen and phosphorous cycles); stratospheric ozone depletion; global freshwater use; ocean acidification; global freshwater use; land system use; chemical pollution; and atmospheric aerosol loading (Rockstrom et al., 2009; Steffen et al., 2015). Five of the nine boundaries have already been crossed (climate change, changes in biospheric integrity, biogeochemical flows, land system use, and novel entities; Stockholm Resilience Centre, 2022), which suggests that if these changes are not reversed quickly that we are at risk of state changes in the stability of the earth systems that have underpinned the entirety of recorded human civilisation.

The planetary boundaries framework has been widely discussed and used within policy, governance, and business sectors to inform efforts towards global sustainability, and it seems uncontroversial to suggest that psychology and psychologists use it as a reputable source of current evidence on bigger-than-self biospheric phenomena that are relevant to us all. The advantage it has over reports that focus on just one issue, such as climate change (e.g, IPCC, 2022), is that it encompasses a wider range of important biophysical subsystems, all of which are critical for a planet capable of sustaining human civilisation. Moreover, the biophysical subsystems are not independent of each other but highly interlinked, meaning that if one boundary is crossed then it negatively impacts on the health of the other subsystems. There are several feedback loops that humanity risks setting into motion as it collectively moves closer to these planetary boundaries, such as loss of ice sheet cover resulting in less

reflection of sunlight or loss of forest cover resulting in less absorption of atmospheric carbon. Rockstrom et al. (2009, p. 473) warn that setting off these feedback loops, which we are currently on track to do in the realm of climate change, "would threaten the ecological life-support systems that have developed in the late Quaternary environment, and would severely challenge the viability of contemporary human societies". Evidence (e.g., Hansen et al., 2015) suggested that some of the tipping points for these feedback loops may be set off within as low as between one and two degrees of warming, while if current pledges under the Paris Climate Change agreement are met by all countries in the agreement we are on track for more than 2.5 degrees of warming (Lenton et al., 2019). At the time of writing meeting the current Paris targets looks far from a certainty, given the scale of international cooperation and individual and collective behavioural change required.

Human Symptoms of a Biosphere in Crisis: Eco Anxiety, Ecological Grief, Ecoparalysis, and Climate Trauma

Distress syndromes related to the crises in the biosphere have begun to appear in popular media, and individuals experiencing such biosphere-related distress have begun to present to psychologists and other mental health practitioners. There are more and more frequent reports of individuals experiencing conditions such as eco anxiety (e.g., Albrecht, 2011; Hickman et al., 2021; Ojala et al., 2021; Pihkala, 2018; Usher et al., 2019), ecological grief (e.g., Clark, 2020; Conroy, 2019; Cunsolo & Ellis, 2018; Cunsolo et al., 2020), climate grief (Constible, 2019; Doherty, 2019; Scher, 2018), climate trauma (Woodbury, 2019), climate-related pre-traumatic distress (Kaplan, 2020), eco-anger (Stanley et al., 2021), and existential dread (e.g., Green, 2017). Of this list, the conditions that have received the most attention are eco anxiety and ecological grief, while some of the other terms can arguably be subsumed within these two labels. This section will focus on eco anxiety, ecological grief, and

climate trauma, as well as a discussion of climate apathy, which can be meaningfully reappraised from a closer examination of the underlying reasons behind what appears as apathetic behaviour. The following section will review these before turning to civilisation-wide stressors and the expanded construct of bigger-than-self distress.

Eco Anxiety

Eco anxiety is an emerging construct, and as such is still being empirically investigated and defined (Clayton & Karazsia, 2020; Hogg et al., 2021). A 2017 report published by the American Psychological Association defined it as "a chronic fear of environmental doom" (Clayton et al., 2017, p. 29), while Albrecht (2012, p. 250) defined it as the "generalized sense that the ecological foundations of existence are in the process of collapse". Constible (2019) framed anxiety related to the environment as a mismatch between need (the scale of the problem) and action (what is being done about it). Hickman et al. (2021) discussed how climate anxiety, a related term which in this chapter is being subsumed under the more encompassing label of eco anxiety, can involve many different emotions, such as worry, fear, anger, grief, despair, shame, and hope. They described how these complex emotions can often appear together or individuals might fluctuate between them (Hickman et al., 2021). Stanley et al. (2021) investigated the differential effects of different eco-related emotions and found that eco-anger was more predictive of wellbeing as well as engagement in pro-climate activism and personal behaviours, while eco-anxiety and eco-depression were associated with worse wellbeing. Eco-depression but not eco-anxiety was associated with increased participation in pro-climate activism (Stanley et al., 2021). It should be noted that none of the emotions here need be considered pathological in the sense of there being something wrong with the individual: indeed, these eco-emotions are overwhelmingly discussed in the literature as being within a range of appropriate responses to current

biospheric realities (Cunsolo et al., 2020; Ingle & Mikulewicz, 2020; Ojala, 2016; Pihkala, 2020), and it has been suggested that perhaps we should be feeling these even stronger than we are now given the lack of decisive global action (Ingle & Mikuliwicz, 2020), and that these emotions can help to precipitate adaptive responses (e.g., Andrews & Hoggett, 2019; Pihkala, 2018, 2020; The Lancet Planetary Health, 2020).

Both news reports and empirical surveys indicate sharp rises in eco anxiety across the western world in recent years (Nugent, 2019; Hickman et al., 2021). Surveys indicate that perception of climate change as an urgent and important threat is on the rise, with 69% of respondents to a 2018 US survey reporting to be at least "somewhat worried" (p. 3) and 29% reporting to be "very worried" (Leiserowitz et al., 2018). There are indications that these rates are even higher amongst young people and have rapidly increased as media coverage of climate change has increased in recent years. An Australian survey of young people (secondary and tertiary students aged 14-23) found that four in five reported being either somewhat or very anxious about climate change, with nearly 50% reporting experiencing those emotions on a weekly basis (Ward, 2019). There is also evidence for pessimism among young people about the future due to climate change and a lack of hope in what is currently being done to address it, with 82% responding in agreement with the statement "climate change is going to diminish my quality of life in the future" and 77% reporting a belief that their generation's concerns about climate change were not being suitably addressed (Ward, 2019). As suggested in the above section, there is an overwhelming amount of scientific evidence to suggest that the anxiety is pointing to something real, rather than the anxiety itself being pathological in its origin. The question of how to support clients who are dealing with this mismatch between the scale of the problem and what is currently being done about it is a question that this thesis attempts to contribute towards answering.

Ecological Grief

Ecological grief is a term that describes another commonly reported emotion or range of experiences in relation to the bigger-than-self reality that individuals are perceiving. Cunsolo and Ellis (Cunsolo & Ellis, 2018, p. 275) described ecological grief as "the grief felt in relation to experienced or anticipated ecological losses, including the loss of species, ecosystems and meaningful landscapes due to acute or chronic environmental change", and that it is a natural (i.e., non-pathological) response to real ecological losses. Ecological grief seems to be affecting those closest to the frontlines of ecological losses the most, such as scientists studying the Great Barrier Reef ecosystems (Conroy, 2019) or young people who have reported severe emotional responses alongside beliefs such as, "we know what's coming, and it's going to be really rough" (Scher, 2018). Individuals from population groups such as these (environmental scientists and young people) seem most likely to present to psychologists with experiences of ecological grief, although this is based on media reports rather than epidemiological evidence of the prevalence of these experiences in the population. Also relevant to the presentation of ecological grief is its quality of being a "disenfranchised grief" (Cunsolo & Ellis, 2018, p. 275), which is a type of grief whose existence is not given acknowledgement in the realms of public discourse, potentially adding to the difficulty of the phenomenon for those experiencing it.

Cunsolo and Ellis (2018, p. 276) point to a potential ramification of this grief being largely unfelt and unacknowledged, which is that it can "bring[s] to light values and objects that are often considered outside the scope of human care and, by association, ethical responsibility." The fact that we experience grief in response to ecological loss brings inescapably to our attention that we are meaningfully connected to the natural environment and as such have ethical and political responsibilities towards it. This can have important ramifications in the

psychological domain, as ecological grief and other forms of bigger-than-self distress can potentially trigger change in the meaning we make of our lives and world, including an expansion of our circles of concern to include those who were formerly excluded from them, including natural beings, ecosystems, and disenfranchised groups in society. In this way, the experience of grief may allow for more generative meanings and solutions to come into form which might contribute towards resolving the source of the environmental devastation. Psychologists' role in creating the conditions for ecological grief to be acknowledged, whether within the privacy and confidentiality of a one-on-one or group session or in advocating for more spaces for public recognition of the grief, could in this way provide important steps in contributing towards initiation and reinforcement of human behaviour that is beneficial for the environment rather than harmful. This is in line with evidence suggesting that meaning-based coping is a type of coping that leads to potentially the most positive outcomes in children coping with climate change, in terms of both wellbeing and environmental engagement (Ojala, 2012, 2013).

Climate-related Apathy, Ecoparalysis, and Socially Constructed Silence

Another common response to bigger-than-self issues is commonly framed as denial or apathy, although this may be overstated and misunderstood, resulting in a non-visibility of a lot of latent concern about the biosphere. As stated above, 69% of US adults report being at least somewhat worried by climate change, while 29% are very worried, and these numbers seem to be even higher in young people (Leiserowitz et al., 2018). Biospheric values are some of the most commonly and strongly held values among people around the world (e.g., (Bouman et al., 2021). At the same time, 59% say that they never or rarely discuss climate change with friends and family (although this figure dropped by 15% from March 2015 to December 2018). Closer analysis, however, reveals that what might appear as denial or a lack

of care is actually a lack of expression reflecting paralysis, rather than a lack of care about, avoidance, or denial of the issues. Albrecht (2011, p. 50) points out how "the intractable nature of the problems, the fact that they are tied to the very foundations of our present economy, generates dilemmas not seen before in human history". Albrecht (p. 50) uses the term "ecoparalysis" to describe this lack of action that he posits as being due to gaps between values (e.g., biospheric values), knowledge (e.g., of the seeming intractability or difficulty of solving the problems), and behaviour (e.g., not having discernible action affordances able to be taken in their environment). Pikhala (2018) suggests that many people may actually care too much, rather than too little, and in the face of such difficulty turn to psychological and social defence mechanisms. Norgaard (2011) points to a socially constructed silence that is often created around climate change. This phenomenon of socially constructed silence acts as a kind of implicit social contract not to speak about difficult and disturbing phenomena within a social group (Noorgaard, 2011). Taken together, this gap between values, knowledge, and behaviour, as well as the socially reinforced silence, can explain much of what might otherwise be taken to be apathy, and this reframing offers hope that if channels can be carved out through which this latent caring and emotional charge can flow, it might be helpful for both the experience of individual eco anxiety and for adaptive collective responses to these biospheric crises.

Climate Trauma

Up to this point, the distress syndromes discussed in relation to the biosphere have mostly focused on describable symptoms, without going into too much etiological or existential detail (with the notable exception of Pikhala (2018) who's excellent writing on these topics was not reviewed in detail here for the sake of brevity). Two authors, however, who go into further detail and interpretation of the distress symptomatology as a climate-

related set of trauma responses will now be discussed. White (2015) writes to start building a bridge between our understanding of climate science and individual and collective responses and our understanding of trauma and how it affects the brain and human cognition. White (2015, p. 192) describes climate change as "indisputably traumatic and is perhaps even the greatest trauma" and puts forward the idea that collective trauma is at the root of both the cause of climate change and our inability to deal with it. Whatever the source of the trauma, symptoms of it can be seen in responses that closely resemble individual dissociation responses (e.g., van der Kolk et al., 1996), addiction responses (e.g., Bullitt-Jonas, 2021), and also perpetrator (e.g., Barrett et al., 2011) and victim responses, each of which are routine responses to trauma and have been used to describe contemporary individual and collective relationships to climate change (White, 2015). This climate-related trauma response then actively prevents the kinds of rational, empathetic, and complex responses that are needed to address such an issue, as trauma impacts on the brain to shut down the areas involved in these higher-order cognitive functions (e.g., Lobo et al., 2011). This perspective is consistent with what will be discussed in the next section with systemic white supremacy and internalised oppression (e.g., David & Derthick, 2014), and the increasingly polarised responses that resemble trauma-related aggression (e.g., Iyengar et al., 2019; Worthen et al., 2014).

Woodbury (2019) builds on White's earlier (2015) work and takes it further, going so far as to describe climate trauma as a new, superordinate category of trauma, akin to existing categories of personal (e.g., Andreasen, 2010), intergenerational (e.g., Bezo & Maggi, 2015; Bowers & Yehuda, 2016; O'Neill et al., 2018), and cultural trauma (e.g., Alexander et al., 2004). Woodbury puts forward that the psychological community at large has missed what he calls the single most important fact of the climate crisis: that the crisis itself is a new form

of trauma which pervades the circumstances of the lives we live, rather than the trauma being relegated to a symptom. He puts it succinctly and sharply in the following: “when we say the words ‘‘climate change,’’ are we not talking about a pervasive, continual assault on the global biosphere? One that threatens mass extinction and overwhelms our emotional capacity? Is this not the very definition of trauma?” (Woodbury, p. 1). Woodbury proposes reconceptualising the term “climate change” itself to “climate trauma”, to reflect a more psychologically accurate description of what we are experiencing, in comparison to the term climate change that he describes as “disarmingly innocuous” and as an expression of a “psychosocial defence mechanism” (p. 1). This reformulation as a systemic assault from all angles at once rather than a technological and economic externality implies a different kind of response to the climate phenomenon: rather than a merely incrementalistic, technocratic response that is primarily the response of institutions, it becomes more personal, inviting us into and even demanding greater personal responsibility and global solidarity. Woodbury posits that the current clinical paradigm is not sufficient for holding and understanding the overarching, more expansive category of climate trauma, and calls for a greatly broadened, more ecopsychological and Earth-oriented paradigm beyond the confines of the Cartesian scientific-materialistic worldview that modern mainstream psychology sprang from and is still largely confined to.

Ultimately, this thesis finds much to sympathise with in both White (2015) and Woodbury’s (2019) arguments, while advocating for a consilient but distinct understanding of the phenomena in question and the type of response that is needed. They both draw from the tradition of ecopsychology (e.g., Roszak et al., 1995), which is an attempt to recontextualise psychology along ecological, earth-based grounds. The overall aims and methods of ecopsychology are concordant with, and indeed can be considered an important

inspiration for, the positions presented in this thesis. However, my hesitation in fully embracing ecopsychology as a field in general, which applies to White and Woodbury's work too, is that it overly dissociates itself from the civilisational aspects of reality and how these play out and inform most human lives today. In critiquing Western psychology, and proposing a distinct new paradigm, it alienates itself from the mainstream of the civilisational ways of being and knowing it is critiquing, and in the nearly 30 years since its seminal publication (Rozsak et al., 1995), and despite maintaining an active journal and research and practice community, ecopsychology remains a fringe branch of psychology, seemingly irreconcilable with the onwards march of the mainstream psychology literature.

My critique of Woodbury advances along similar lines: while I think there is much truth in what he is saying, I think it is a mistake to single out climate as the solitary defining feature of the systemic assault that he describes. Climate change is certainly a huge, important, and threatening aspect of the difficult-to-describe hyperobject (Morton, 2013) that I am using the term meta-crisis for, but stopping there misses important aspects and also risks relegating the crisis to something that is an issue for environmentalists, rather than something that is all-inclusive of humanity as a global whole in who it effects, regardless of beliefs or political leanings. The crisis, or set of interlinked crises, is in my view both biospheric and civilisational, and all-pervasive. What White and Woodbury articulate very usefully, however, is the nature of the phenomena as all-pervasive, traumatising systemic assault on our lives, and that understanding our individual and collective responses as trauma responses adds a great deal of utility in conceiving of the phenomena in question. What I will ultimately go on to argue is that the locus of the systemic assault is the meta-crisis, which presents in individuals as bigger-than-self distress, and that perceiving it from a still broader cosmological, biospheric, and human cultural systemic perspective is the beginning of being able to get a more optimal

grip with which to grasp such distress and respond to it. To get to this argument, I will now turn to describing civilisational aspects of the biospheric-civilisational meta-crisis.

Civilisation-Wide Stress Symptoms

In the current section, I highlight some salient aspects of the meta-crisis that have to do with our global human civilisation and its systems and cultures. I use the term civilisation to distinguish the current iteration of how humanity has structured itself, as opposed to the broader term of humanity, which connotes a broader range of possible expressions of the species Homo sapiens. There have certainly been many radically different cultural expressions existing within humanity that do not fit the description of the globalised, technological civilisation existing today. It can no longer merely be referred to as Western civilisation, either, as while there are still huge global disparities, other nation-states have caught up in both industrialisation, access to technology, and exposure to global culture, largely mediated by the internet. Another reason for using the term "civilisation" rather than the more common "society" is that the global bigger-than-self issues facing humanity and the more-than-human world today are the result of civilisation as a whole: though rich Western industrialised countries certainly deserve a large majority of the blame for emissions to date (e.g., United Nations Environment Programme, 2021; Wiedmann, Lenzen, Keyßer, & Steinberger, 2020), it is globalised humanity that suffers the consequences and must come together to find solutions. A final proviso applying to this section is that it is undoubtedly representative of an Anglo- and Euro-centric worldview that focuses mostly on the United States and other European and English-speaking countries. This potentially creates problems in using the term "civilisation-wide", but this section is only a sketch of important global issues, and many of the cultural phenomena discussed here, while led by and often most intensely felt within the anglosphere and US in particular, are exported globally via the

cultural dominance of the US and its economic and military might, as well as the soft power of its media, industries, and institutions. I write as a New Zealander of European descent (pākeha) and feel my life and the culture I have grown up in has been profoundly shaped and influenced by US-American culture. For these reasons, I believe something important is still pointed at despite the limitations of the US-centric perspective. As will be seen, I do not discuss this US-centric perspective uncritically and see aspects of the US-Centric culture as a being profoundly linked to the meta-crisis itself.

Affective Societal Polarisation on Political and Scientific Issues and Its Effects

There is evidence to suggest that societies are becoming more highly polarised across a range of issues, both political and scientific. Political partisanship has been steadily rising in the United States for the past 50 years (Levendusky, 2009), and since the midpoint of the last decade evidence suggests this has morphed into a dramatic increase in political, especially affective, polarisation in the United States (Iyengar et al., 2019; van der Veen, 2021) as well as the United Kingdom (Hobolt et al., 2020) and continental Europe (Reiljan, 2020). Affective polarisation, as opposed to ideological polarisation, is defined not in relation to beliefs about specific issues or policy positions, but instead in relation to affect towards one's political in-group and political out-group(s) (Iyengar et al., 2012; Mason, 2015). More highly affectively polarised groups have more positive affect towards the in-group over which the issue is polarised (e.g., political party affiliation, as in the US, or issue-based as in the UK with the Brexit vote). Groups can also become polarised over issues that are, at least originally, not political, such as issues of scientific fact (Rekker, 2021). Anti-science sentiment and activism have been rising in recent years (Hotez, 2020). Two prominent examples are that of climate change and COVID-19 vaccine science. In the US, where affective polarisation is arguably highest, beliefs about climate change are divided along party political lines, with 84% of

Democrats and 43% of Republicans attributing changes in Earth's temperature to human activities (Dunlap et al., 2016). Beliefs about and uptake of the COVID-19 vaccines also became a polarised issue in the US and other places, with conservative-leaning media and members of the public more likely to have refused the vaccine and also to have believed and propagated anti-government, anti-science messages and conspiracy theories (Bolsen & Palm, 2022; Jiang et al., 2021).

There are many potentially undesirable and distress-inducing effects of society becoming highly polarised, both at the societal and individual level. It can lead to political deadlock and the hampering of a country's ability to solve problems collectively (Hetherington, 2009). It can encourage political parties to use anti-democratic means to stay in power, such as happened in Turkey and threatened to happen in the US after the 2020 election (Aydın-Düzgit, 2019). Polarisation has also been found to be predictive of increased chances of civic conflict (Esteban & Schneider, 2008) and can hamper attempts at peace and reconciliation (Feldmann, 2019). At the individual level, there is evidence to suggest that societal political polarisation is linked with increased levels of mental distress and physical ill health (Nayak et al., 2021; Smith, 2022). A survey taken during the Trump administration found that politics had been negatively impacting on a large variety of health markers, and the effects were particularly pronounced in people who are more highly politically engaged, young, and Democrat-leaning (Smith, 2022). Smith et al. (2019) also describe the relational costs of politics reported by about 20% of survey respondents, who reported damage to friendships and problems with family, friends, and in home life. Navak et al. (2022) investigated the link between mental health and political polarisation specifically and found that individuals who had reported an increase in polarisation had a 52-57% higher likelihood of developing depression and anxiety disorders than those with no reported increase in polarisation. There

is strong evidence that discussion of politics has increased in therapy rooms in the US, with 87% of therapists reporting discussing politics in therapy sessions (Solomonov & Barber, 2019), and 64% of therapy clients reporting having discussed politics with their therapists (Solomonov & Barber, 2018).

It should be noted that much of the data discussed in the last two paragraphs pertains to the US, because that is where much of the research data exists at this stage. While this means caution should be taken in equating this with global or civilisational trends, it should be noted that similar yet less severe trends in polarisation have been observed in many countries over the past decades (van der Veen, 2021). It should be taken into account, too, the position of the US as a global superpower and cultural exporter, which has an often outsized influence on the cultures of other countries, so it can be anticipated that the issues arising in the US will be and continue to be present in our global civilisation for the foreseeable future. The position is multifaceted and still debated: interested readers are encouraged to consult van der Veen (2021) for more comprehensive analysis of political polarisation around the world.

Racism, Sexism, Homo- and Trans-phobia, Colonialism, and White Supremacy

The presence of systemic forms of discrimination in our societies, both within countries and globally, is obvious and well-documented. However, it bears mentioning here that racism, sexism, homophobia, trans-phobia, and discrimination against minorities in whatever form obviously includes and impacts on the lived experience of a huge proportion of the human species alive today. Relevant to the position this thesis takes in looking at reality and society through a systemic lens, much of this bias and prejudice happens not only at the level of individuals but of systems, with systemic barriers existing for minorities that prevent access to power, economic resources, means of self-determination, and cultural self-

expression (e.g., Harrell & Sloan-Pena, 2006). These forms of systemic discrimination are the result of historical systems for the most part set up and perpetuated by white people and especially white men, who dominated historical hierarchical power structures that produced violence, slavery, and colonisation towards minority groups in a multitude of ways (e.g., (Cornelius, 2020; Morgensen, 2011). Colonisation was particularly violent towards non-white populations and cultures in areas where Europeans settled and established colonies, with the results often devastating to local cultures in ways that continue to be strongly felt today (Cornelius, 2020). Much of this aspect of the meta-crisis is well documented within literature on white supremacy and intersectionality. The term white supremacy has been used to refer to "a political, economic, and cultural system in which whites overwhelmingly control power and material resources, conscious and unconscious ideas of white superiority and entitlement are widespread, and relations of white dominance and non-white subordination are daily reenacted across a broad array of institutions and social settings" (Ansley, 1997, p. 592). An important distinction in this definition is that systemic whiteness is not the same as merely having white skin, and so not necessarily synonymous with white people, and so can be disentangled from the identities and ways of being of people who have white skin. Systemic whiteness is a way of being maintained, in large part, by psychological and cultural processes.

In this thesis, I take the position that systemic whiteness, as well as internalised sexism, homophobia, transphobia, and other forms of systematised discrimination, can be understood as distinct yet similar processes with deep psychological and embodied roots. I also take the position that systematised whiteness is ultimately detrimental to those in the grip of it just as it more obviously is to those who are oppressed by it, and that liberation from such a way of being is as good for the individual as it is for the whole. It is my hope, and

belief, that the methods developed through the course of the current thesis can be applied to bring awareness and transformation to such internalised systems of oppression. These positions are similar to and consilient with the theories of internalised oppression (e.g., David & Derthick, 2014) and somatic abolitionism (Menakem, 2017). Internalised oppression is a term used to point to the ways in which oppression - the means by which maintenance of a status quo of domination of one group over another occurs - is internalised and taken on by members of the oppressed group (David & Derthick, 2014). Internalised oppression is a psychological process that can be conceptualised in a multitude of ways, for example in CBT terms (e.g., David, 2009), or through ethnic minority psychology literature on acculturation, which maps the extent to which an individual is connected to both their heritage and dominant cultures (e.g., David, 2006). Menakem, in his (2017) articulation of what he calls somatic abolitionism, maps out how internalised oppression is deeply encoded within an individual's somatic conditioning, or embodied cognition to use the term that will be used more frequently in this thesis, and how this is passed down transgenerationally in embodied ways. Menakem also points to ways in which this somatically encoded internalised oppression can be healed and transformed, in ways which are broadly similar to what is ultimately discussed in the current thesis.

Rise of Individualism, Social Isolation, Loneliness, and Breakdown of Communities

There is evidence to suggest that individualism, social isolation, loneliness, and breakdown in communities, have been on the rise in recent decades. Grossmann and Varnum (2015) outline the results of eight cultural-level markers of individualism in the US, all of which had risen over the course of the 20th Century. Santos et al. (2017) examined global data over the period between 1960 and 2011 and found that, with some exceptions, individualism had been rising in most of the 78 countries in the analysis. Concurrently, rates

of social connectedness appear to have been falling, while social isolation and loneliness are high. While it is more difficult to determine change in rates of loneliness and isolation due to lack of availability of adequate longitudinal data, there are indications that these are high now and have risen over recent decades (e.g., Holt-Lunstad, 2017; Holt-Lunstad et al., 2017). Putnam (2000) made the case that social isolation was a defining feature of contemporary life in the US, and there have been arguments made that this has only increased and intensified with the advent of smartphones and social media (Turkle, 2011). The case has been made that social isolation and loneliness is a significant public health problem (Holt-Lunstad, 2020), with the two being associated with significant increased risk of mortality, comparable with smoking or obesity (Holt-Lunstad et al., 2015). The incidence and prevalence of social disconnectedness is put in special relief given that the nature of the societal and environmental problems facing us are often best solved collectively. Decreased social connectedness could make it more difficult to collectively solve problems, and may also be a factor predisposing both individuals and society for increased polarisation. Conversely, joining together to work on collective problems presents a potential avenue for increasing social connectedness.

General atmospheres of rising stress, intractable problems, and despair for the future

The final civilisation-wide stressor is more difficult to pin down and discuss. It refers to, especially prevalent amongst younger generations, a generalised feeling or atmosphere (e.g., (Costa et al., 2014) of society being characterised by stress everywhere one looks, seemingly very difficult or intractable problems or crises existing in several important areas of society, and a sense of angst towards, despair about, or inability to envision a positive vision of, the future. Costa et al. (2014) define atmosphere as spatially diffuse feelings that are neither confined to an individual subject's body, nor a property of an external object (e.g., the 'aura'

of a mountain). Rather, atmospheres arise "in the space between a person (or a sentient being) and a setting (person, thing, or situation) and cannot be traced back to any of them" (Costa et al., 2014, p. 352). Costa et al. speak in the realm of clinical encounters within the therapy room, although the same general meaning of the term atmosphere has been applied in distinct ways in a wide variety of settings (Griffero, 2019). I posit that there is a similar atmosphere or collection of interacting atmospheres in our civilisation that is analogous to Woodbury's (2019) conceptualisation of climate trauma as an ongoing systemic assault on all aspects of life. Being an atmosphere, this overarching characteristic being posited and pointed to is by its nature a hard-to-pin-down, between-constructs kind of phenomenon. However, there are some signs of it that I draw both from my own life experience and global events.

In my own life, I have gone out of my way to connect with people in multiple sectors of society, from government, healthcare, mental health, education, business, housing, agriculture, and more, and a general picture has emerged of systems in distress, if not nearing or past breaking point: entrenched systemic issues that have no easy fixes. This may be a case of selection bias, I acknowledge, but the reverse may also be true: individuals who do not wish to see something could avert their eyes from signs that many of our systems are in crises simultaneously. Survey data confirms the intuition that burnout rates seem high in almost every sector, so much so that exhaustion and fatigue has come to be simply a normal occupational hazard (American Psychological Association, 2022). If we look at the global picture, after a period of relative peace, stability, and economic prosperity through the 1990s and early 2000s, society has faced an increasing number and rate of crises in multiple sectors. An economic and financial sector crisis starting in 2008 was followed by rising populism, white supremacist and anti-science, post-fact, anti-immigrant sentiment increasing

markedly in 2015, a global pandemic starting in 2020, and in 2022 rising international conflict that could conceivably result in the deployment of nuclear weaponry, accompanied by supply chain shocks and worrying levels of inflation that have eroded real incomes and raised cost of living around the world, and which threaten further economic instability. All this is occurring in a backdrop of global climate change, biodiversity in alarming decline, culture war narratives dominating social and mainstream media, income and wealth inequality at historic highs, and crises in housing in many parts of the developed world. Many of these issues have been described as wicked problems (e.g., Bache, Reardon, & Anand, 2016; Sahin et al., 2020), which are very difficult to solve with traditional means of government intervention or market-driven solutions, perhaps leading to a widespread view of the problems facing us today as being intractable. All these issues are falling on what we have established to be increasingly polarised, isolated, and stressed individuals. These crises are not independent of one another and are certainly not experienced as such by the individual existing at the intersection of many or all of them.

The Meta-Crisis and Bigger-than-Self Distress

The above sections on biospheric and civilisational signs of stress attempt to point to some salient symptoms of what I am referring to as the meta-crisis, a corollary of which can be experienced phenomenologically at the individual level as what I am calling bigger-than-self distress. This distress may be associated with specific fears about specific problems (e.g., climate change), but it may also be perceived as a difficult to pin-down, almost ineffable overall atmosphere of distress and uncertainty, leading to existential angst, denial, meaninglessness, anxiety, disassociation, and despair. This distress may be associated with appraisals that there is something about the status quo that is deeply not working; or, conversely, with a sense that things could be so much better than they are, and a felt inability

to actually get there. This section will first discuss what is meant in this thesis by the term meta-crisis, and why this term is used rather than alternatives such as Woodbury's (2019) climate trauma. Most of the section, however, will be devoted to a discussion of bigger-than-self distress, and particularly how the understanding of bigger-than-self distress and the meta-crisis given by the conceptualisation used here lead to ways of understanding and working with both the individual distress and the meta-crisis itself. This conceptualisation scales back the responsibility for the meta-crisis from technocratic institutions to individuals connected to other beings in their everyday socio-ecological niches, and points to a possibility for connected individuals to transform the root causes of both the meta-crisis and their own experience of bigger-than-self distress and enactively bring forth a new world that can be understood as a radical simultaneous continuation and transformation of the current civilisation.

The Biospheric-Civilisational Meta-Crisis

Despite many of our best efforts, and phenomenal advances in science, technology, and propositional knowledge on an ever-expanding range of areas, it can appear as if humanity is on a difficult-to-arrest slide towards undesirable outcomes and futures. These undercurrents of existential angst and warnings, particularly environmentally, have existed in society since at least the 1960s (Carson, 1962; Meadows et al., 1972). In the early 2020s, however, with everything mentioned above, it can feel particularly acute, and one can imagine that this is highly likely to intensify in coming years. Worryingly, despite stronger efforts and emissions reductions commitments being legislated into policy in recent years, existing plans, even if implemented fully, are still predicted to fail to keep global temperature rise below 2°C (Fekete et al., 2021). Perhaps even more worryingly, post-truth, climate-denying, and authoritarian-leaning populist movements have been rising in the US and elsewhere (e.g.,

Parmar & Furse, 2021; Sandrin, 2021), which potentially threaten the multilateral international order and the capacity of countries to coordinate to address issues such as climate change and other biospheric and civilisational issues (Albuquerque, 2021; Lake et al., 2021).

Stein (2022), mirroring arguments by Vervaeke (2019), Rowson (2020), and Bjorkman (2020), posits that these societal and environmental crises are meaningfully interlinked, and related specifically to the failure of our culture and institutions to adequately prepare us to face and respond to these kinds of collective problems. Each of the aforementioned authors (Vervaeke, 2019; Rowson, 2020; Bjorkman, 2020; Stein, 2022) use the term meta-crisis to describe different aspects of the interlinked global crises facing humanity in contemporary times. Each of these authors, while putting forward meaningfully distinct conceptualisations of what they argue is happening, has used the term meta-crisis to describe this interconnected set of global problems and the meta-patterns in our civilisation that have given rise to them. Stein (2022) points to the central role of education in preparing individuals to face the complexity of reality and particularly the need to integrate psychological development into education in a much more comprehensive way. Rowson (2020) discusses, among other things, how our very inability to understand how the many crises we face are interlinked and organise coordinated responses to the underlying causes are part of the meta-crisis. Bjorkman (2020) argues that it is not simply tweaks to the current system that are needed but changes to the fundamental structures of the present system, and that these changes need to come from the right sort of place in our selves. Vervaeke (2019) traces the roots of what he terms the meaning crisis to philosophical and religious roots that can be understood in cognitive scientific terms.

These contemporary descriptions of an underlying meta-crisis in civilisation echoes the pioneering work of Bateson (1972), who pointed to a fundamental disconnect between how (the currently dominant culture of) humanity thinks and how nature works. While there is clearly value in each of these perspectives and I encourage interested readers to engage with each of their content independently, I in this chapter put forward a distinct conceptualisation of the meta-crisis which is the subject of this thesis. This definition is constrained, usefully I hope, by a focus on the resolution of bigger-than-self distress within the individual, rather than more abstract systems-level solutions to proposed meta-crises. However, the two are not so disconnected: the ability to see and feel a genuinely, non-naive, hopeful way forward individually requires some form of narrative of how one's actions fit into bigger-than-self reality of our civilisation and biosphere. I therefore do offer some thoughts on the nature of the meta-crisis as it appears from the lens of working with individuals experiencing bigger-than-self distress.

It is now appropriate to return to where the earlier discussion of Woodbury's (2019) and White's (2015) works on trauma, climate change, and the over-arching novel conceptualisation of climate trauma left off. Woodbury characterised climate trauma as being a systemic assault on every aspect of our lives, and White labelled climate change perhaps the greatest trauma. I would agree with these assessments and extend them: climate change is part of a still larger systemic assault that is both biospheric and civilisational in nature. It has its roots in a way of being that is contracted, self-focused, and cut off from a more embodied, preconceptual knowing of our deep interconnectedness with nature and each other. This way of being, I posit, is embodied within us, in our psychology and cognition, as well as our culture, for those of us that have been enculturated within the Western-dominated global culture that prevails through much of the world today. This way of being is

further embedded in our institutions, such as our economic, legal, financial, health, and educational systems, as well as the dualistic and reductionistic scientific worldview that holds much ontological, epistemological, and institutional power in this global culture. The very pervasiveness of this cultural conditioning, and our own psychological closeness to it can make it difficult to see, and to know what to do in response to it.

The focus of this thesis is practical as much as it is theoretical. What I will lay out in this thesis is my journey towards a way of understanding bigger-than-self distress and the meta-crisis from a psychological and scientific point of view. The first half of the thesis focuses on mindfulness-based interventions and the evidence from the empirical clinical psychology as well as historical mindfulness literatures. What this led to was what seemed to be insights into the depth and breadth of the meta-crisis, and a related need to both zoom out further (scientifically) and zoom in further (psychologically) to take a broader and deeper view of the meta-crisis and bigger-than-self distress. Scientifically, zooming out to see humanity and cognition within a broader, scientifically informed cosmological view of reality, the biosphere, and history (e.g., Christian, 2018) helps to give a more appropriate perspective from which to view the meta-crisis and our place in it, individually and collectively. An updated version of cognition is also constructed based on the field of 4E cognition (e.g., Bruineberg & Rietveld, 2014; Bruineberg et al., 2021; Clark, 2016; Fabry, 2021; Newen et al., 2018; Varela et al., 1991), autopoiesis (Maturana & Varela, 1980), the concept of self-organising relevance realisation (Vervaeke, 2019; Vervaeke & Ferraro, 2013a, 2013b; Vervaeke et al., 2012), the Free Energy Principle (Friston, 2010), predictive processing (Clark, 2013), and Vervaeke's (2019; Henriques, 2021) meta-theory of knowledge. This updated understanding of cognition in combination with the broadened cosmological scientific understanding of history provides

an understanding of humanity and human cognition as being continuous with the cosmos and biosphere in profound ways.

This scientific understanding of humanity and human cognition as being continuous with the cosmos and biosphere provides a more adaptive perspective from which to understand the meta-crisis. Specifically, from this broadened perspective, we can begin to understand that we are not simply individuals with identities that reflect our roles within society, but inescapably part of larger wholes and systems down to the level of our very identity. That our culture and everyday psychological experience of ourselves does not reflect this reality goes a long way towards understanding the meta-crisis as it is presented in the current thesis. The resolution of bigger-than-self distress utilises psychological interventions that work with the understanding of cognition as self-organising, and makes use of a present-moment, embodied, release constraining, unfolding way of working with psychological content (March, 2021; Schwartz & Sweezy, 2020). These ways of working naturally unfold, over time, towards an experience of presence and nonduality, which can then be combined with psychoeducation about the scientific narratives mentioned above to lead to a progressive psychological metabolising of the gap between that scientific understanding of the world and our participatory, embodied experience of it on a moment-to-moment basis. These methods are then expanded on to enable individuals to extend into both a psycho-cultural metabolisation of one's own conditioning and its embedded corollary in socio-ecological metabolisation of aspects of the meta-crisis.

What these scientific understandings and psychological ways of working with experience converge upon is a way of metabolising bigger-than-self distress to transform one's own cognition. The distress is used to transmute ways of being that are resistant to reality as it is, and which maintain what can be considered a self-illusory sense of separation from reality,

the biosphere, and other beings, human and non-human. Through this metabolisation process, an individual's understanding and experience of self is transformed from a static, mostly head-based, separate and individualistic concept to a dynamic and nondual process of unfolding in embodied ways with the physical, biological, social, and cultural environment in which one is embedded. It is from this mode of being that the meta-crisis can be more usefully responded to, and contributions can be made to collective responses to it. It is also in contrast to this mode of being that the understanding of the meta-crisis put forward in the current thesis can be more usefully understood. That is, our everyday, moment-to-moment experience of being an individual self, separate from the world, and the embeddedness in our culture and institutions of this perception, is illusory, from both scientific and experiential (nondual) perspectives. Moreover, this experience belies a lack (Loy, 2002) that is pervasive in Western culture and out of which flows many of the behaviours that have led to and now maintain the meta-crisis at the collective level and bigger-than-self distress at the individual level. Transforming the structure of our cognition in the ways laid out in this thesis both helps to render bigger-than-self distress more manageable and allows us to metabolise and make contributions towards easing and transforming the meta-crisis.

The root causes of the meta-crisis, seen from this lens, are much more psychological than most narratives about bigger-than-self issues tend to be. This conceptualisation puts the work of clinical psychologists, and the field of psychology in general, in a much more central position to be able to assist in addressing the meta-crisis. This need not negate other lenses: clearly there are problems to solve with our energy, agricultural, industrial, political, economic, and other systems lenses through which we can perceive the meta-crisis. What this conceptualisation does do, however, is imply that the role for psychology is more than just a series of "psychological triage tents in the wake of increasingly common, unnatural

disasters", as Woodbury (2019, p. 2) characterises an earlier APA and ecoAmerica report (Clayton et al., 2014) on the role of psychology in climate change. Focusing too much on this characterisation perhaps does a disservice to both Woodbury and the more mainstream response to climate change within psychology, however. Clearly, there will be psychological damage done to many people as a result of climate change, and psychology can and should play a role in helping such individuals. What Woodbury is pointing to, in a more generous interpretation, is this response, while admirable, does not go nearly far enough, and that there is a material difference in the implied role for psychology from this proposed overarching trauma understanding of the climate change phenomenon. This material difference in role for the broad climate-aware community is what Woodbury was pointing to for climate trauma and the position I am coming from in this thesis for the role of psychology and psychologists the meta-crisis and bigger-than-self distress.

An important implication from seeing the roots of the meta-crisis as being in an overarching cognitive and cultural trauma that is distributed throughout our civilisational way of being is that it is at once much more personal, as Woodbury (2019) points out with climate trauma. We are all implicated and all can take much more direct and personal responsibility for its resolution. The implied action pathways, too, are different. While actions in the world and change in external systems are undeniably needed, for many individuals the more immediate and actionable work can be healing from the trauma and dissociation by which the meta-crisis is encoded within their embodied cognitive systems. The primary language for action that flows from this view is one of healing in contrast to fighting, and the focus switches from external projections to an inquiry into internal experience that is nonetheless nonseparate from the world. As Woodbury (2019, p. 6) puts it when discussing the high proportion of the population who agrees something needs to be done about climate change:

“By viewing this crisis through a personal trauma-lens, rather than a global politics-lens, members of this ‘‘super-majority’’ could choose to shift their activism from the dysfunctional ‘‘acting out’’ of blaming and/or trying to convert the unbelievers, with voting and marches viewed as the ultimate expressions of power, to a more functional and rational reaction of organizing among themselves to exercise their power more directly and effectively.” The meta-crisis, in its attempt to describe the interconnected nature of the crises facing humanity in contemporary times, is even more all-encompassing than the climate crisis, which it includes, and so presents even greater opportunity for the kind of “universal solidarity” called for in response to the climate crisis (Catholic Church & McDonagh, 2015).

From this perspective on the meta-crisis, a kind of universal suffering reminiscent of Buddhism’s first Noble Truth can be witnessed to underlie the polarising divides in politics and many of the other aspects of biospheric and civilisational crises outlined above. To take affective polarisation as an example, both sides of the partisan divide seem more distressed, distrusting, and holding more negative emotions towards the other side than in living memory. I posit that each side are in essence picking up on different aspects of the same meta-crisis, simply experienced in different ways and couched in different language, when we get down to the psychological roots of the experience. These roots, as with most trauma, are stored down lower than the verbal, narrative renderings an individual has of what is going on. Though language and cognitive appraisals most certainly play a part in how trauma is expressed (e.g., Ehlers & Clark, 2000; Resick & Schnicke, 1992), there is also incontrovertible evidence now supporting how trauma is stored in the body, somatically (e.g., Levine, 2012; Menakem, 2017), and impacts on limbic structures of the brain that evolutionarily predate and functionally can override the verbal, language-based aspects of the brain (e.g., Porges, 2011; van der Kolk, 2014). What is missing with most contemporary discussions of bigger-

than-self issues is how they, and our response to them, are mediated through trauma-infused minds and bodies. In this way, the meta-crisis can be seen as a kind of noble truth for our times: that we are all caught in it and suffering from it. This need not be connected to Buddhism or any particular religious or philosophical system: the point is that this is global and involving all of humanity. The meta-crisis is rooted in and maintained by distributed trauma, experienced by individuals as bigger-than-self distress encoded in their embodied cognitive systems, and fruitful solutions will arise through a process of healing of our embodied cognitive system, distributed cognitions, and cultures.

Bigger-than-Self Reality and the Approach of the Current Thesis

The view of the meta-crisis presented here is accompanied and underpinned by a broader, more all-encompassing view of bigger-than-self reality itself. Many of the perspectives reviewed in this thesis have, in grappling with similar subject matter, found it useful to quite drastically broaden and deepen the lens through which they were looking at the phenomena in question (e.g., Henriques, 2003; Christian, 2018; Vervaeke, 2019). In articulating the meta-crisis, we have already significantly zoomed out to a global biospheric and civilisational context. However, still more broadening and deepening seems to be highly useful in being able to grapple with the meta-crisis and bigger-than-self distress. That is, zooming out in space and backwards through time can give us a view that encases even the meta-crisis, as a pregnant mother's body encases a stressed foetus. The universe, as far as we can tell, is not in crisis. The biosphere might appear to be in crisis, but it has weathered worse storms before. The self-organising systems of the biosphere will recover: on a geological timescale this is highly unlikely to be a death blow to the biosphere itself. Humanity, too, on some level, is not in crisis. This is where the distinction between our civilisational systems and culture and humanity itself is important. We might be a humanity

steepled by trauma, reacting with what from a wide view can look like addictive, narcissistic patterns in relation to each other and the more-than-human world - certainly this view is held quite commonly amongst the environment movement and seems justifiable given the evidence. But this view need not define the way we view humanity as a whole, or our potential as a species. That potential, unconditional aspect of humanity, in imaginal space, remains untainted. This is not just a theoretical point: in the Wider Embraces practices (Deurell, 2022) that will be discussed later in this thesis, the unconditional embrace of the physical universe, the biosphere, and humanity are something that can be experienced phenomenologically, and this phenomenological experience can have real effects on our nervous systems and experience of distress.

The broadened view of bigger-than-self reality advocated in this thesis combines a naturalistic science perspective that is captured by the work of Henriques' (2003; 2019) ToK system and Christian's (2004; 2018) Big History narratives, complimented by a pluralistic, systems meta-ontology that views reality and life as being comprised of interacting systems in relationship with one another and understandable through a systems lens that values multiple perspectives and a meta-cognitive awareness that can switch between different ontologies flexibly. This systems view is aligned with the cybernetics tradition (e.g., Bateson, 1972), the Santiago theory of autopoiesis (Maturana, 1970; Maturana & Varela, 1980), the enactive view of cognition (Varela et al., 1991), the systems view of life (Capra & Luisi, 2014), and 4E cognition (e.g., Newen et al., 2018), and helps to link the historical and scientific cosmological narratives with life, cognition, and ultimately the still-emerging capacity for self-awareness in human cognitive agents. Throughout this thesis, this view will be shown to be consistent with existing trends in cognitive science, psychology, philosophy, and global thought that integrates insights from Western, Eastern and Indigenous knowledge systems

and wisdom traditions. It is both a continuation of current trends in psychology as well as a radical evolution of them, and this is important to articulate clearly: these views have historical precedence, and do not require abandoning any of the foundational tenets of a scientific worldview or philosophically sound ontology. Rather, the view presented here seems more consistent with an extension of Darwinian principles of evolution and the understanding of self-organising complex systems that has emerged out of his fundamental insights. The worldview proposed here would integrate these insights into more aspects of human society, in order that we might become more adaptive to the planet and cultures we are actually living in, in such a way that is more in alignment with human and planetary flourishing on individual and collective levels.

Aspects of this broader emerging view will be discussed in more detail in chapters throughout the thesis. However, the main focus of the thesis is not on defending this or any view per se. This emerging view, like any series of intellectual propositions, is intended to be enable these ideas to be put forward into a community of peers who might critique, improve, or offer alternatives to it. Many of the issues and content discussed in this emerging view are still areas of live debate, for example the field of 4E cognition. The emerging narrative here has arisen out of my own journey and phenomenological experience in trying to come to grips with bigger-than-self distress in my own life, and in my intention to be a psychologist and assist others experiencing similar. As will be seen, the enactive and phenomenological components of this worldview are given more primacy than the specific narrative and intellectual interpretations that follow from them. This is not to say that the interpretations in the narrative emerging worldview presented here are unimportant, but more to say that there are many possible ways to interpret and make distinctions in this still-nascent, emerging area of human experience and scientific and philosophical exploration. The primary

focus, which informs the structure of the thesis, is in: (1) describing the enactive journey, in my own life, of how I came to adopt this view on the meta-crisis and bigger-than-self distress that begins with an expanded emerging view of bigger-than-self reality itself; (2) and even more centrally, outlining in cognitive scientific and clinical psychological terms the theoretical basis for a way of transforming and enacting a way of being in the world that is consilient with the emerging pluralistic meta-worldview and which offers a way through or out of bigger-than-self distress. A third (3) focus is in providing examples of what this change might look like if enacted through providing vignettes from my own life and individuals and communities or organisations who are enacting aspects of the kind of impulse that is being alluded to.

The thesis starts, after a discussion of methodology, near the beginning of my journey in grappling with what I now call bigger-than-self distress. It starts within conventional contemporary clinical psychology and makes use recent literature that offer recommendations for assisting clients experiencing eco-anxiety to summarise the approaches that conventional contemporary clinical psychology and mental health would offer for such distress. This is an appropriate place to begin because, as I will try to demonstrate throughout the thesis, what I discuss in this thesis is but an extension of conventional clinical psychology, rather than a departure from it: this thesis merely develops certain ideas further, and in doing so arrives at what might be considered more radical results. A focus on normalising climate-related feelings, cognitive restructuring to make new meaning and adjust one's relationship with the climate (bigger-than-self reality), building emotional resilience, and engaging in purposeful action in relationship and/or community with other like-minded people are all recommended within this conventional approach (Feder, 2022), and I disagree with none of this. However, my own experience of working in this way with climate / bigger-

than-self related distress has taken me much deeper in all these areas. Climate change, and the meta-crisis, in my assessment, is something that requires a more radical change, as it is something that challenges the very foundations of many of our culturally entrenched ways of being (Andrews & Hogget, 2019), and facing up to this has led me in the direction I outline in this thesis.

This is not to say that the approach advocated in this thesis will be for everyone: probably for a lot of individuals, at least initially, the recommendations offered by Feder (2022) will suffice and satisfyingly help them to address their eco-anxiety and engage in more meaningful responses to it in their own lives. This is a good thing and to be applauded: I am not in opposition to this at all. However, for some people, the existential aspects will remain untouched by such an approach, and only some form of deeper transformation of self and life of service and contribution to humanity, the biosphere, or some other more idiosyncratically articulated purpose will ultimately satisfy. This is the area and population that this thesis focuses on. This kind of transformation is inherently existential, and might involve questioning deep assumptions about reality, society, the self, and the kinds of issues discussed in the earlier summary of aspects of the meta-crisis. It is not for the faint-of-heart. But what I have found is that these issues can provoke these kinds of deep, existential responses in people, where there is a depth of feeling and also desire to make a contribution that is both rare and existentially gripping for such individuals. Either the meta-crisis, or some adjacent expression of it such as the pursuit of a positive vision, can become a kind of superordinate, organising force in the individual's life, through which other aspects of life become reinterpreted. This is what happened to me after my father passed away: an awareness of the current state of reality we are in emerged both as distress at what was

happening as well as a huge inspiration for what could be, and a desire to show up in service of things and beings larger than myself.

The kind of transformation that might beckon for such individuals cannot be wholly predicted ahead of time. A caterpillar does not know how to be a butterfly - at least not until after it is almost completely dissolved and remade. However, there is a set of processes that can be usefully articulated about the process of transformation. Others (e.g., Plotkin, 2021) have articulated similar processes of transformation, out of which theories about that process and practical recommendations, practices, and frameworks have been created. What I am seeking to do in this thesis is to articulate the cognitive scientific and psychological architecture of this transformation. This underlying architecture can then be built on top of with more client-facing models that are adapted to their individual and socio-ecological contexts. I offer some of these models in the latter part of the thesis, but these should be understood as examples rather than exhaustive or final words on the topic. A secondary goal of this thesis is to provide a theoretical account that can contribute to an emerging field of scientific inquiry and literature about this kind of more transformative, enactive response to bigger-than-self distress. The meta-crisis is too large for simply one approach: what seems to be needed, or at least what would be hugely helpful, is to use our scientific methods and the inherent creative rigour within them to develop a multitude of approaches that can mutually inform and improve one another. Psychology has done this for the treatment of many individual mental health disorders, and something analogous yet at the same time (and perhaps radically) different can be done here.

Briefly put, the underlying cognitive, scientific, and philosophical architecture focused on in this thesis include a focus on wisdom and metastable attunement as opposed to just rationality (e.g., (Bruineberg et al., 2021; Grossmann et al., 2020; Rolla, 2019; Vervaeke &

Ferraro, 2013a); enactive (e.g., Varela et al., 1991), predictive processing (e.g., Clark, 2013; Nave et al., 2020), and 4E (e.g., Newen et al., 2018) approaches to cognition over more purely computational models of cognition (e.g., Hohwy, 2016) favoured in earlier instantiations of cognitive therapy (e.g., Beck et al, 1979); and of deeper structural change in an individual's embodied autopoietic cognitive system as opposed to a focus on changes in executive control. What this change affords is a broadening of the scope of what can be included in cognitive behavioural tradition to incorporate practices and insights both from Western, Eastern, and indigenous wisdom traditions and enactive metaphors from religion, the arts, and culture. A change in this direction is already underway within the cognitive behavioural tradition: what I am proposing is a more systemic theoretical underpinning for this integration and inclusion, which allows these frameworks to be understandable within cognitive scientific and philosophical frameworks. At a practical clinical level, it ultimately supports a shift to a focus on supporting the internal wisdom of the client through collaborative and nondual approaches; a kind of groundless (e.g., Varela et al., 1991) or systemic metastable attunement (e.g., Bruineberg et al., 2021; Miller et al., 2022) between poles of dialectics (e.g., individual and collective; hope and tragedy; being and doing; freedom and mutuality; present moment and horizontal time (e.g., Lewis et al., 2020; Pihkala, 2018); and a foregrounding of the enactive wisdom development (i.e., participatory and perspectival knowing; Vervaeke, 2019; Henriques, 2021) of the clinician over a more narrow focus on adherence to evidence-based practice (which tends to focus on propositional and procedural knowing).

The final aspect of this approach that is worth highlighting here is that, in grappling in this way with these difficult, highly complex themes of meta-crisis, bigger-than-self distress, and the kind of superordinate trauma that this represents, something that I can only describe as

profoundly beautiful, hopeful, and human has emerged in my experience. I believe that this experience, which for me has shown up on the other side of processing the trauma and distress that has lived in my own embodied cognitive system, is something potentially universally accessible to humanity, and represents something like the gift in the meta-crisis. This gift, I believe, is there but requires us being able to enact the wisdom necessary to be able to burrow through, metabolise, and transform the layers of dissociation, anger, grief, despair, stuckness, and other challenging emotions that can commonly co-occur with facing up to the depths of the meta-crisis. This gift is not something that is meant to be experienced alone: by its nature it is systemic, participatory, and developmental. The gift is something like that pointed to by the poetic phrase "the more beautiful world our hearts know is possible" (Eisenstein, 2013): a possible world that is waiting for us to enact it.

This more beautiful world, as I relate to, does not exist in some far-off, abstract future, nor is it bound up in some or other particular ideology or set of beliefs. It exists, in some way, within us, potentially accessible in each moment. Coming into contact with a direct phenomenological experience of an essential beauty - for example, underneath civilisational trauma or, in IFS terms, burdened parts - can give us the personal resources, inspiration, and felt sense example of the kind of world that we want to live our lives towards. How I relate to the term more beautiful world is that it is not a utopia, rather a way of being which we can indwell and from which we can grapple with the systemic messiness of reality as it is. It requires deep engagement with practical considerations, many of which are (sometimes deeply) difficult or uncomfortable. The phenomenological experience of connecting with something like the experience of a more beautiful world shares analogies, perhaps, with parenthood: the beauty of and overwhelming love for one's child can motivate parents to do the difficult, imperfect work that responsive and loving parenting requires. Enacting a more

aligned, beautiful world furthermore will not be reached through a kind of spiritual bypass or transcending out of the world, but as an evolving into it: being moved by it to become an aligned and aligning part of it.

To enact this seemingly requires deep systemic change of a kind that has its best but still limited historical precedent in the Enlightenment: a transformation of how we see ourselves in the world, and our political, economic, religious, philosophical, scientific, energy, industrial, and agricultural systems and institutions. To enact this would require individual and groups of humans who can honestly grapple with this, which to my mind requires the kind of enactive wisdom developmental transformation that I try to articulate in this thesis. In this way, the work presented in this is hopefully something that can contribute towards a more beautiful and aligned future becoming slightly more possible, and in so doing contribute to offering a way out of the seemingly intractable crises of our time. At least it might present one possible starting place for those who want to attempt in their own lives to live more wisely into whatever happens in the next decades, in ways that might benefit people and planet.

Chapter 2: Methodology

This chapter describes and justifies the methodology used in the current thesis. The approach used was a combination of theory and autoethnography. The thesis question led to an inquiry into a novel area of psychological practice in which my own journey as a practitioner was not unimportant. As a scientist-practitioner, I sought to find consilience between established empirical psychological practice and principles and the emerging findings that my inquiry led to. Initially, this inquiry was contained within empirical clinical psychological interventions, but ultimately led past the boundaries of established empirical knowledge within the field of clinical psychology. This led to looking outside of psychology into adjacent fields, including systems thinking, cognitive science, philosophy, and literature on Eastern religion, indigenous worldviews, and ecopsychology. An important aspect of the inquiry was an openness to novelty and finding what made sense and aligned with a scientific worldview without being constrained by a dualistic and reductionistic approach to science. This stemmed from my experience of working with clinical psychological interventions that were empirically established and finding that while they offered some utility, they ultimately feel quite far short of being able to reckon with my own experience of bigger-than-self distress. Given that the empirical road of clinical psychology "ran out" midway through the journey, what I attempted to do in the current thesis is to articulate a philosophical and cognitive scientific basis to describe the kinds of practices and perspectives that I found to be helpful after this point. This link between personal experience and theory made the use of autoethnography a good fit, particularly the layered approach to autoethnography that allows for multiple sources of information to be woven into the overall text (Ellis et al., 2010).

The method that I have employed is an evocative autoethnography (e.g., Bochner & Ellis, 2016; Ellis et al., 2010). This approach combines the use of autobiographical narrative and ethnographic research. The use of autobiographical narrative is designed to draw on experiences from one's own life, conveyed in a way that is evocative of human emotion and connection. The ethnographic side is the study, originally from anthropology, of cultures from the inside out, and is particularly applied in the studies of cultures which are marginalised, emergent, or for which there is not yet much existing research. I have chosen a layered approach to evocative autoethnography, which allows for the integration of multiple lines of evidence from different ontologies and epistemologies. This approach has been chosen to allow a relationship between what might be otherwise at time quite abstract and theoretical literature and the deep concern for and embeddedness within the real, concrete, and living world that is the subject matter of this thesis. Specifically, and consistent with the content of my argument, this methodology allows these different strands to come together and be grounded in the life of an actual person (me), or embodied cognitive agent embedded in webs of relationships within socio-ecological niches, as the clients of psychologists are. The following sections will describe the autoethnographic approach, provide reasons it has been used in this thesis, and describe how it has been applied during this research.

Autoethnography Affords Thinking with Theory

Autoethnographic research combines evocative autobiographical storytelling with ethnographic analysis of the cultural context that that experience takes place within (Ellis et al., 2010). Autoethnography, like other qualitative research methods, arose in an intellectual context of concerns about how dominant (e.g., post-positivistic) research paradigms tended to produce certain kinds of facts and truths and to suppress or make invisible other forms or expressions of truth (e.g., Rorty, 1982). Auto-ethnographic research is often used in fields of

research that are emerging, or which are representative of minority or non-mainstream perspectives where there is not an established literature or where the established literature is not representative of that culture's perspective (Ellis et al., 2010). As such, it is also often used in contexts that can affect personal and social change by revealing points of view that might otherwise be obscured (Ellis et al., 2010). Auto-ethnographic research recognises the limits of attempts at researcher neutrality or objectivity: personal choices made by the researcher influence the research in profound ways, from the research question, choice of methodology, research participants, literature reviewed, and conclusions drawn (Ellis et al., 2010). All these factors are also shaped in profound ways by the cultural norms of the institutions and the wider systems they exist within. Auto-ethnographic research attempts to make these factors explicit and conscious rather than implicit and unconscious (Ellis et al., 2010). Autoethnography also allows for the explicit inclusion of the emotional experience and subjectivity of the researcher, which can facilitate ability to discuss the breadth of factors that impact their research process.

In the context of the current research, I found that the dominant post-positivistic research paradigm that predominates in empirical clinical psychology did not allow for the kind of fine-grained analysis of phenomenological experience that the inquiry ultimately involved in this thesis. It did not allow for novelty: instead it reified what is already "known" as empirical evidence. What this prevented was the ability to see things in new ways, to "think with theory" as Jackson and Mazzei (Jackson & Mazzei, 2019, p. 1230) put it. In my view, the capacity to see existing reality in new ways is key to addressing bigger-than-self distress and to many potential contributions from the field of psychology to addressing bigger-than-self issues themselves. "Thinking with theory" is introduced by Jackson and Mazzei (2012, p. 1; 2019, p. 1230) as a new analytic for qualitative research that attempts to

point to this capacity to see things through new eyes, to the "emergent, unpredictable, and always rethinkable and redoable" process of a theory emerging through which to see experience anew in the very same process of viewing that experience. Thinking with theory as an analytic implies that the theories that inform our lenses prior to going into an experience (or research project) are continuously subject to change, held tentatively, rather than reified and ossified as describing a fundamentally unchanging external reality or construct. Jackson and Mazzei point to the philosophical basis of 17th Century Rationalism that reified knowledge as being formed by innate structures that pointed to a universal and unchanging structure of reality, and how we are still influenced by this philosophy today, even in qualitative research. In qualitative research methodology, while eschewing the kind of positivistic view of the world as being universally knowable, it is still possible to reify constructs as having some universal validity. In this view, an individual research participant is capable of giving a real and authentic account of their experience which can then be treated as something that "represents truth—something to be served up, prior to analysis and for analysis" (Jackson & Mazzei, 2019, p. 1240).

To cut through this reification of constructs into something representing an unchanging and settled truth, Jackson and Mazzei (p. 1238) propose a kind of prehensive thinking: thinking with a "noncognitive feeling" that permits "an onto-epistemological creation of the new from within". To link this with cognitive scientific terminology, this is a type of cognitive act that can bring forth new worlds. In Maturana and Varela's (1980) Santiago theory of cognition, cognitive agents are autopoietic organisms, continuously bringing forth their own world: this is at the heart of their conception of what it means to be a cognitive agent, which is defined more broadly as a biological organism, rather than being constricted to what we think of as highly intelligent creatures such as humans. Thinking with theory uses the capacity

for prehensive thought to draw new meaning out of perceived reality and lead to the possibility of enacting new worlds. It is something like this capacity that has been used in this thesis to make sense of climate change and other aspects of the meta-crisis and to position psychological theory within this context. This necessitated a methodology that could afford this kind of thinking. Autoethnography allowed for a charting of the kind of "thinking with theory" that occurred in my own life in the inquiry into the research question of this thesis. Theory allowed for a kind of experiential re-perception of reality, which afforded new kinds of experiences, which then fed into the continual development of theory, and so on.

Layered Autoethnography and Cultural Identity

This weaving of personal experience with theory is characteristic of most forms of autoethnography, but particularly of layered approaches to autoethnography. Layered approaches weave in relevant literature, data, and abstract analysis alongside the author's own experiences. Layered approaches to autoethnography are similar to grounded theory in that they weave together observation of experience and the creation of theory with which to understand it (e.g., Jørgensen, 2001). In contrast to grounded theory, vignettes from the author's own life, as well as their reflexivity and voice are used to give readers a sense of the emergent experience of doing research. Layered accounts tend to focus on the process of the research as well as the outcomes - to share how the theory and data weaved together in an emergent process within the author's own life (Ellis et al., 2010). This helps to give scientific and theoretical accounts of a process that does not claim that this understanding represents the only understanding of a world: it presents theory as intimately connected to one's own experiencing and cognising of the world and subject matter of the topic at hand (Ronai, 1995). Personal narrative content from the author's own life is used to bring the reader into the experience and evoke a response, give the reader an experience of what it

was to live through the journey of doing the research and undergo the often transformational and revelatory encounters and insights that occurred in the course of the research.

The "ethnographic" element of autoethnography distinguishes the personal sharing components from being simple autobiography. Experience is examined analytically, using theory derived from literature, to situate it within being part of a particular culture or cultural identity, and to say things about that culture (Ellis et al., 2010). Generally, the topic of autoethnographies involve certain epiphanies or transformative shifts in perspective that stem from being part of a particular culture or having a particular cultural identity (Ellis et al., 2010). Often the personal narratives will be chosen from a time of existential crisis or periods that both forced significant reflection and after which the author's life and, often, conception of self was changed irrevocably (Ellis et al., 2010). Usually, the author will not intend ahead of time to have such a transformative experience or life crisis, and the experiences shared will be chosen retrospectively with the benefit of hindsight (Ellis et al., 2010). Theory and analysis is used to draw lines between the author's experience and the larger culture that the author is a participant within: to make the text of their experience say something about that culture or the experience of being a participant in that culture which is being written about.

Within the current thesis, I identified culturally both as a psychologist scientist-practitioner as well as an individual human within a global human culture living through a web of interconnected bigger-than-self existential crises and experiencing bigger-than-self distress. My own experience of bigger-than-self distress presented an existential crisis for me as a human within a global human culture, and my identity as a psychologist scientist-practitioner informed the lens that I viewed the bigger-than-self crises through. The experience of engaging in the thesis question and living the related question of how to

respond to bigger-than-self crises in my own life, presented existential challenges to my person, which involved deep reflection and growth, intellectually, professionally, and personally. This personal crisis changed me as a person in ways that I could have scarcely imagined ahead of time, in ways analogous to a metamorphosis. This metamorphosis process itself, which involved changes in the structure of my own embodied cognitive system as well as the socio-ecological niches I participated in, and the relationship between my own being and the socio-ecological niches I was a part of. This thesis marks my attempts to bring insights back from this experience of personal metamorphosis journey, into the cultures of clinical psychology and humanity as a whole.

Story in Autoethnography

Bochner and Ellis (2016, p. 55) emphasise the evocative aspect of autoethnography, that it should aim to evoke a response in the reader, to give not only an intellectual understanding of the culture but a personal one that invokes an experience of what it is like to exist in that culture: for people "to think ***and*** to feel". This is done, for example, through the discarding of jargon and celebration of "erotic, close to the bone prose in which knowledge is delivered through emotional arousal, identification, and self-examination rather than abstraction and explanation" (Bochner & Ellis, 2016, p. 60). Bochner and Ellis emphasise the role of the researcher as storyteller, to not simply dryly convey the facts of the research and findings but to engage and connect with the reader, so the reader wants to read it and so the messages and knowledge conveyed by the research can be made accessible and used. They outline the essential features of a story as something that autoethnographic research should involve: character, setting, time, plot, a moral, and drama. The plot gives the reason for telling the story in the first place: something is happening, events are moving towards some arc. The drama, or trouble, provides the interest: usually the author has some issue or disruptive life

experience to navigate, and their struggle with that encompasses a dramatic journey often involving the transformation of the author from one identity to another, a tale of two selves. The moral helps the reader to make meaning of the story: this need not be simple, or neatly wrapped up by the end of the story, but there should usually be some movement towards larger meaning or significance (Bochner & Ellis, 2016).

This focus on story and evocation flows through to stylistic qualities of the writing itself, which differs from much standard academic writing. Bochner and Ellis (2016) emphasise the active voice, and movement, action, sensory details. The aim is to evoke rather than inform or analyse. To arouse the senses. There is dialogue between characters, enabling readers to enter the scene as if it was happening now. Present tense is the tense most commonly used, although past tense is acceptable as well. The first- or sometimes second-person voice is common, while third person is rarely used. Bochner and Ellis (p. 112) stress a focus on showing rather than telling: show through sensory descriptions, dialogue, action, that puts readers in the moment: “Two good lines of dialogue can stand in for one or two pages of expository telling”. They balance this with a practical need to explain in many settings, given that most autoethnography is published in academic journals, chapters, and books. They recommend layering between showing and telling, to weave in the evocative with the explanatory.

The current thesis does not fit perfectly within the evocative narrative style of Bochner and Ellis (2016), but instead represents an innovative approach to autoethnography that does use heavier layers of theory than most conventional autoethnographies have tended to to date. While there are vignettes of personal experience throughout, this is more of an addition of colour and concrete examples to illustrate the theory. The first person is used quite often, but sensory details only rarely. This befits the themes of bigger-than-self systems

and phenomenological awareness, which is not necessarily easy to create a sensory scene to illustrate it. To draw in the work of Jackson and Mazzei (2019), they call for innovation in qualitative social science research along the lines of what I attempt in this thesis. They emphasise the always-tentative, lightly held nature of our constructs and methods, and encourage researchers to build off an awareness of, but innovate from, current research methods in qualitative research. They also advocate thinking with theory, as discussed above: a recursive process of theory formation and data collection, analysis, and description all in one messy, complex mix. In this thesis the text or data is both experience in the world and literature. They are interwoven. The theory emerges from both and neither, but from a messy in-between that comes from a kind of in-dwelling of the questions of this thesis in my own life. This, I believe, is consistent with the spirit of autoethnography and also of empirical science, while being wholly neither but some blended new. What exactly this blended new is will take the rest of the thesis to describe. The next chapter will begin in the world of empirical evidence-based psychology and mindfulness-based interventions.

Chapter 3: Empirical Beginnings: The Cognitive Behavioural Tradition and Mindfulness-Based Interventions

Having set some of the context for the thesis and outlined the methodological choices made, I can now start out on the journey of the thesis itself. In beginning to address bigger-than-self distress, I started where any psychologist might: by perusing the research literature, and using my own clinical judgment as to what interventions might be appropriate for such forms of distress. My clinical training was based in cognitive behavioural therapy, and I had recently completed an honours dissertation looking at experiential avoidance, a construct from Acceptance and Commitment Therapy (ACT; Hayes et al., 1999). The process of engaging in this honours research project introduced me to the idea of a developmental trajectory within the cognitive behavioural tradition. My own clinical training had educated me relatively well in both cognitive and behavioural interventions and the evidence base for these across a broad range of psychological disorders. I had learned about the progression from Skinnerian behaviourism (e.g., Skinner, 1974) and the application of its principles to clinical disorders (e.g., Foa et al., 1991; Foa et al., 1989) to the re-introduction of cognitive ideas that traced their philosophical roots back to Stoicism in the Ancient Greek tradition. How these two paradigms, at first quite fiercely opposed to one another, were merged together to form what Hayes et al. (Hayes, 2004; Hayes et al., 2004) referred to as the second wave of the now cognitive-behavioural tradition that started with behaviourism. This fusion recognised the benefits of both ways of looking at human psychology, and led to a fruitful proliferation of interventions and, by the time I encountered them, a quite vast swathe of empirical evidence that had accumulated across the decades for a wide range of disorders, from mood disorders (e.g., Driessen & Hollon, 2010), anxiety disorders (e.g., Hoffman &

Smits, 2008), trauma and stress-related disorders (e.g., Kar, 2011), and other disorders (Hofmann et al., 2012).

This chapter outlines how some of the now-conventional approaches might be applied to the phenomena of bigger-than-self distress. I highlight the cognitive-behavioural tradition because its methods have become so ubiquitous, at least in the country I practice in (Aotearoa New Zealand) as to represent the conventional evidence-based approach in psychology. This is not without reason, and I do not highlight its ubiquity to be critical of therapies within the cognitive behavioural tradition. Their methods are demonstrably effective and have clearly benefited hundreds of thousands, if not millions of people around the world. However, in recent years, standard cognitive behavioural approaches have been both complemented and supplanted by what Hayes (2004) describes as the third-wave of the cognitive behavioural tradition, which add in a focus on acceptance and mindfulness-based approaches. The third wave was initially exemplified by popular evidence-based interventions ACT (Hayes, Strosahl, & Wilson, 1999), Dialectical Behaviour Therapy (DBT; Linehan, 1993), and Functional Analytic Psychotherapy (FAP; Kohlenberg & Tsai, 1991).

These third wave approaches all use, to varying degrees, principles or practices that have been derived from mindfulness training, most commonly acceptance principles, which are used to assist with cognitive defusion in ACT, emotion regulation in DBT, and to stay present with difficult internal experiences in FAP. The third-wave approaches conserve an emphasis on behavioural principles, and still typically include a focus on cognitions, although their ways of working with both cognitions and behaviour represent a broadened repertoire for clinicians to choose from: clinicians can now work to change cognitions through reappraisal, as was emphasised in second-wave cognitive therapy, or to use mindfulness-based approaches to skilfully accept or defuse from such cognitions. Mindfulness-based

interventions (MBIs) can be located within this third wave of the cognitive behavioural therapy tradition. These will be discussed later in the chapter: for now, attention turns to an examination of bigger-than-self distress from the point of view of established clinical psychology interventions, represented to a large degree by the cognitive behavioural therapy tradition.

Conventional Evidence-Based Practice Recommendations for Addressing Eco Anxiety

The recommendations laid out by Feder (2022) represent a concise summary of cognitive behaviourally informed treatment methodologies to use with clients experiencing eco-anxiety, which is the nearest construct currently in the literature to what I am describing as bigger-than-self distress. Feder recommends clinicians focus with their clients on some combination of normalising eco anxious responses, cognitive restructuring, psychoeducation, strategies for building emotional resilience, and engaging in purposeful action. First, emotional responses such as fear, anxiety, grief, despair, anger, frustration, and inspiration should be validated as part of a normal and understandable response to climate change. Once they have established that these emotions are non-clinical (in which case clinical interventions for the disorder they meet criteria for are indicated), clinicians can proceed with cognitive restructuring. Cognitive restructuring should focus on shifting away from catastrophic, black-and-white thinking towards a more dialectic kind of thinking that can hold both negative characteristics and responses while also acknowledging and focusing on the existence of positive actions and hope at the same time (Feder, 2022). Psychoeducation about the impact of anxiety and trauma on the body and its autonomic nervous and hormonal system, and the flow on effects these have on immune response, gut health, the cardiovascular and reproductive systems (Feder, 2022). Feder recommends cautioning clients

against the use of substances or other maladaptive coping strategies that are likely to make their symptoms worse while not addressing the issue.

Feder (2022) discusses how many techniques that are used in building emotional resiliency for general stress and anxiety can be applied to climate-related distress. These include meditation, mindfulness, deep breathing, progressive muscle relaxation, as well as taking care of physical health factors like diet, exercise, and sleep. Feder also includes spending more time participating in outdoor activities and in nature generally as something that may be of particular help for individuals experiencing climate-related distress. Guided imagery, exploration of and finding ways to use the client's strengths and spiritual beliefs, and identifying and strengthening social supports are all recommended. In particular, Feder suggests joining groups that involve giving back or some sort of prosocial or pro-environmental purpose, potentially but not necessarily related to climate change. In combination, Feder (p. 5) concludes that clients should leave climate-related therapy knowing how to "productively deal with climate stresses, and use them as a stimulus to increase meaning, purpose, and hope." By the end of treatment clients should have an understanding of how trauma and stress effect their minds and bodies, have skills and a social support network among other resources to use in times of high distress, and to have come to a degree of acceptance of the condition and complexity of the world as it currently is with a concurrent commitment to using their skills to help other people and the environment (Feder, 2022).

Feder's recommendations all fall within conventional therapeutic techniques common to the cognitive behavioural tradition. Baudon and Jachens (2021) expand on this in their scoping review of interventions for the treatment of eco-anxiety. Baudon and Jachens identify, amongst 34 published works spanning from 2005 to 2019, 7 records of

psychoanalytical approach, 4 records of ecotherapy or ecopsychology approaches, 2 records of Jungian depth psychology approaches, and a range of other approaches recorded just a single time. 14 records in their review did not claim to reflect any specific approach. The four most common approaches of psychoanalytic analysis, ecotherapy and ecopsychology, and Jungian depth psychology focused on slightly different things as befitted their schools of thought. The psychoanalytic tradition focused on practitioner connection to their own experience of climate change, societal and systemic themes related to climate change, and connecting the client's personal history to how they were processing climate change. Ecotherapy and ecopsychology approaches focused on time in nature outside therapy, relationship to nature inside therapy, and cognitive reappraisal of catastrophic climate-related thinking and the client's participation in meaningful climate-related action. Jungian approaches focused on dreamwork as a way of connecting personal myth to collective myth. Interestingly, all three recommended group work as a tool for processing emotions and connecting to larger themes: some specifically named groups such as Macy's (2014) The Work That Reconnects, an ecopsychological approach, or the Carbon Conversations project (Randall & Brown, 2017). While these four schools are not as empirically driven or well-supported as the cognitive behavioural tradition in general terms, they do represent established psychotherapeutic approaches, or in the case of ecotherapy and ecopsychology, established nature and environment related psychological approaches to intervention, and so were important to include in this brief review of conventional best-practice recommendations for addressing eco anxiety.

All of the recommendations listed above are eminently sensible, responsible things to include in first-line treatment of eco-anxiety and climate-related distress, and indeed all forms of bigger-than-self distress. As a clinician I would wholeheartedly endorse any of the

approaches recommended by Feder (2022), and plan on implementing these recommendations with clients myself. However, at the same time I do not believe that these approaches will resolve the experience of bigger-than-self distress for all individuals. In my own personal life I followed all these recommendations, for years. I implemented the practices in my own life that were recommended here. I joined groups, and both participated in heartfelt, thoughtful, and determined actions towards the issues that I cared about and surrounded myself with people who were doing the same. It did help, for a little while. However, I found that there were deeper, more existential aspects of bigger-than-self distress at play for me that these actions did not touch. What it resulted in instead was a state of chronic low-level despair and repeated cycles of (broadly defined) climate- and values-oriented action followed by burnout. And I was not alone in this. I met some truly inspirational individuals doing incredible work: for example, many of the people behind Generation Zero, a group of young climate activists in my local Aotearoa New Zealand, who ran many successful campaigns that influenced both public opinion on climate change as well as significant areas of government policy. Yet privately, many of these people, who became friends, reported similar experiences of despair, a feeling that it was not going to be enough, while simultaneously doing all they could do, in highly creative, engaging, collaborative, and intelligent ways.

This provided motivation to go further. What would help with the deeper, thornier, more existential aspects of experience of bigger-than-self distress? Was it simply inevitable that engaging with it would result in worse mental health, and a kind of bind where not engaging resulted in inescapable guilt or requirement to suppress feelings, but engaging would result in feelings of it never being enough, constant threats of burnout, and despair? These were not simple issues to engage with. There were not any straightforward answers. I had followed

many of the recommendations of conventional wisdom, and it still was insufficient, for me and for many of my generation who were doing all that they could to address the crises facing us. I was aware that this was still a very emergent field, a whole new and often overwhelming set of phenomena that individuals and society itself was still in quite nascent stages of coming to terms with. Much of the emotion I was feeling was what I would later find to be described by the term "disenfranchised" (e.g., Doka, 1989): experiences that society did not provide means for processing or even recognise as valid emotional experiences to have at all. In seeking to expand on conventional approaches within clinical psychology outlined in the current section, what I focused on initially was the emerging evidence on mindfulness meditation and mindfulness-based interventions (MBIs). There seemed to be several compelling reasons to do so, which I will outline in this section.

Mindfulness-Based Interventions: Evidence Base and Rationale for Bigger-than-Self Distress

MBIs as treatment for Mental Disorders

In my initial explorations into the question of how to assist clients experiencing bigger-than-self distress was motivated by a desire to identify psychological interventions that could assist with clinical forms of distress as well as lead to increases in prosocial and pro-environmental behaviour. This led me into the literature on MBIs, which integrate mindfulness and other forms of meditation as a large part of the overall treatment. These interventions go further than the early third-wave behavioural interventions reviewed earlier in their use of not only mindfulness principles but the use of daily meditation practice, generally structured into eight week or longer programmes involving 45 minutes or more of meditation per day (e.g., Cayoun, 2011; Kabat-Zinn, 1990; Segal et al., 2002). MBIs typically have much more of a focus on body sensations and the connection between mind and body,

or embodied cognition than any of the previous third wave or earlier cognitive behavioural traditions. They also may include other forms of meditation or practices that were typically included in the Buddhist traditions that MBIs were historically adapted from, such as loving-kindness meditation (e.g., Hofmann et al., 2011; Kearney et al., 2014; Lutz et al., 2008). Over recent years, the evidence on the impact of MBIs on a range of mental disorders has been expanding rapidly, particularly for the two most widely implemented MBIs; Mindfulness Based Stress Reduction (MBSR; Kabat-Zinn, 1990) and Mindfulness-Based Cognitive Therapy (MBCT; Segal, Williams, & Teasdale, 2002).

Meta-analytic evidence has suggested that MBIs are comparable to evidence-based treatments in their effects on depression, anxiety disorders, pain management, smoking cessation, and addictions (Goldberg et al., 2018; Sancho et al., 2018). There is also preliminary evidence supporting the use of MBIs in the treatment of Attention Deficit Hyperactivity Disorder (ADHD; Mitchell et al., 2015), as a treatment or adjunct treatment for Obsessive Compulsive Disorder (OCD; Key et al., 2017; Kumar et al., 2016), and as a treatment for Posttraumatic Stress Disorder, especially in the reduction of avoidance symptoms (PTSD; Banks et al., 2015; Liu et al., 2018). The breadth of evidence for mindfulness training in the treatment of different conditions was promising and indicated to me that MBIs could be integrated into the cognitive behavioural tradition and specifically into the third wave behavioural approaches category that Hayes (2004) posited. What MBIs seemed to add, on top of the earlier third wave approaches, was a focus on specific meditation techniques, training the brain in ways that involved continual present moment practice, and the inclusion of more skilful ways of working with body sensations and the body more generally. However, this evidence should not be interpreted to mean that mindfulness is a panacea. It is far from the only evidence-based treatment approach that has shown

success over a range of symptom types and clinical experience suggests that different clients respond to different approaches, even when presenting with similar distress symptoms. There are some scenarios in which mindfulness should not be applied: for example in MiCBT contraindications for mindfulness training include active positive psychosis symptoms or acute intoxication due to drug use (Cayoun, 2011).

Mindfulness is often communicated and taught as a way of being, a way of orienting to life (e.g., Kabat-Zinn, 1994). The significance of mindfulness being primarily a way of being rather than just a therapeutic technique or treatment programme is at risk of being missed in its conversion into manualised treatment programmes in mental health settings. The evidence base for mindfulness discussed so far mostly pertains to participation in these manualised MBI programmes, and it is normal for clinicians to use this kind of evidence in making decisions about which interventions to use in the treatment of clients. But there is another body of literature of the impacts of state mindfulness on mood/emotional states in experimental settings that further supports the notion that mindfulness has a beneficial effect on mental distress. A meta-analytic review of this literature found that mindfulness induction in experimental settings significantly reduced negative affect such as low mood or anxiety relative to control regulation strategies (d = - 0.28; Leyland et al., 2019). This suggests that it might be possible to say that mindfulness is almost always more beneficial than not and is a desirable state to have present as a sort of ever-present component to be interwoven throughout mental health treatments of all kinds: that is, as a pedagogical way of being rather than just a treatment programme or intervention. There is also evidence to suggest that mindfulness has benefits on prosocial and pro-environmental behaviour, and it is to this literature that our attention now turns.

Effects of Mindfulness Training on Prosocial and Pro-Environmental Behaviour

In the Eastern Buddhist cultures from which contemporary MBIs draw most of their historical roots, mindfulness training was but one part of a larger path towards living an ethical life (e.g., Huxter, 2015; Krägeloh, 2016; Lomas, 2017). Practitioners practiced within a context of having committed themselves to live in a way that reduced suffering towards self and others, and most commonly would have committed themselves to living by certain ethical precepts that were designed to assist in this process (e.g., Huxter, 2015; Lomas, 2017). In contemporary MBIs, this is rarely the case, and mindfulness is instead presented as a therapeutic tool or a practice for promoting individual wellbeing or some other individual construct, such as workplace performance or engagement or ability to learn in educational settings (e.g., Mindfulness All-Party Parliamentary Group, 2015). Nonetheless, there is research to suggest that mindfulness training, especially when combined with other practices, can lead to increases in prosocial behaviour, pro-environmental attitudes and behaviours, and alterations in what is known as self-other identification.

Two meta-analytic reviews investigating the link between meditation and prosocial behaviours and emotions offer differing conclusions. Luberto et al., whose (2018) meta-analysis included 27 studies involving mostly healthy adults and mostly compassion-focused or loving-kindness meditation (n=18) as the intervention, found small to medium effects on self-reported emotions (SMD = .40; e.g. compassion for self and others, empathy scales) and observed outcomes (SMD = .45; e.g., helping behaviours). Kreplin et al., whose (2018) meta-analysis included 26 studies involving mostly healthy adults and mostly MBIs, compassion-focused or loving-kindness meditation as the intervention, found small to medium effects on self-reported and observed outcomes on compassion (ES = .37) and empathy (ES = .40), but no significant difference from control groups on measures of connectedness, aggression, or

prejudice. A significant limitation of both meta-analyses for the purposes of this section is that they focus on all forms of meditation, not just mindfulness, so do not give a clear picture of the link between mindfulness specifically and prosocial emotions and behaviours. A more recent meta-analysis (Donald et al., 2019), did focus specifically on mindfulness, both as a trait construct and as an intervention. In Donald et al.'s meta-analysis, which included 31 studies and 73 effect sizes, they found a consistent medium-strength effect size for the link between mindfulness and prosocial behaviour. These effect sizes did not differ significantly between self-reported and observed prosocial behaviour, and, interestingly, did not differ between mindfulness-only MBIs and MBIs that taught mindfulness as well as cultivation of prosocial emotions (e.g., loving-kindness or compassion meditation). Taken together, these three meta-analyses suggest that mindfulness and MBIs are reliably associated with increases in prosocial helping behaviours towards others, although not necessarily with the reduction of aggressive behaviour, prejudice, or with increases in connectedness.

The link between mindfulness and pro-environmental attitudes and behaviours does not seem to have been studied as extensively as the link with prosocial attitudes and behaviours at this point. Wamsler's reviews of the role of mindfulness in climate adaptation (Wamsler, 2018a) and sustainability science, practice, and teaching (Wamsler et al., 2018) provide a recent summary of the diverse fields of research that relate to this area. Wamsler (2018a) pointed out that while there is little research directly investigating the role of mindfulness and climate adaptation, there are studies that point to the differing roles that mindfulness can play in this area, such as its role in post-disaster response, the link with individual wellbeing, how it affects organisational management practices, its relationship with pro-environmental behaviours, its relationship to social justice, and its role in knowledge production. The diversity of the fields she points to helps to illustrate the multifaceted role

that mindfulness and mindful ways of being and relating can have in responding to the reality of bigger-than-self issues in many levels of society.

Wamsler (2018) points to the role of mindfulness at different levels of adaptive response: individual, organisational, societal, and ontological / epistemological, and critiques the fields for the lack of a holistic view of these. For example, the studies that point to the role of mindfulness in fostering high-reliability organisations and organisations which relate compassionately or co-operatively with other organisations do not also look at the role of mindfulness on individual behaviours within those organisations or point to the wider societal context that this plays out in and how the change at organisational levels might impact that. Public institutions that are seeking to respond adaptively to climate change on behalf of the public good seem to stand to benefit from implementing organisational mindfulness practices, and yet there is very little research looking at the link between organisational mindfulness or related practices and their effectiveness in implementing effective climate change solutions. Wamsler's portrayal of mindfulness's role in changing organisational and societal behaviour is suggestive of arguments made later in the current thesis, that mindfulness can help individuals foster adaptive behaviour within their socio-ecological niches.

Wamsler and Brink (2018) also collated several studies looking at the relationship between wellbeing and environmental research, which illustrate some of the ways that mindfulness might link to behavioural shifts that are positive for the environment. They found a number of studies showing exposure to mindfulness practice is correlated with increases in measures of nature connectedness, both implicitly and explicitly, and especially when combined with spending time in nature (Howell et al., 2011; Unsworth et al., 2016; Wang et al., 2016). Studies have shown that both empathy (Berenguer, 2010) and

compassion (Geiger et al., 2019; Pfattheicher et al., 2016) for others is linked with greater engagement in pro-environmental behaviour. In the domain of values, Ericson et al. (2014) provided a review of research in support of a link between mindfulness, wellbeing, and intrinsically-oriented values, and between intrinsic values and sustainable behaviours. Engagement in ecologically sustainable behaviours has been shown to be predicted by both mindfulness and subjective wellbeing (Brown & Kasser, 2005; Jacob et al., 2009). Mindfulness has been shown to promote sustainability-oriented innovations in individuals and organisations (Siqueira & Pitassi, 2016). Mindful learning focused on expansion of self to include other humans and the biosphere has been shown to increase pro-environmental behavioural intentions (Tang et al., 2017). Mindful capacity building, that is, the concurrent development of non-self-view that is central to Buddhist conceptualisations of wellbeing and the de-anthropocentrisation of the individual's worldview, leading to a more ecological way of viewing and participating in life, has been proposed as an approach for sustainable development in the twenty-first century (Mabsout, 2015).

Mechanisms of Change in Mindfulness Training

The mechanisms of change for MBIs also encouraged me to see them as potentially well-suited for addressing bigger-than-self distress. These mechanisms have been a subject of much debate in mindfulness research over the past 10 to 15 years, with many perspectives offered from neuroscience, cognitive psychology, and other fields. The following section will give an overview of some evidence-based perspectives on the mechanisms of mindfulness meditation.

Empirical Review: Attention Regulation, Body Awareness, Emotion Regulation, Self-Referential Processing

Hölzel et al. (2011) proposed four major mechanisms by which mindfulness meditation operates, that are supported by empirical psychological and neuroscientific research: (1) attention regulation; (2) body or interoceptive awareness; (3) emotion regulation (including reappraisal and exposure, extinction, and reconsolidation); and (4) change in perspective on the self or changes in self-referential processing. Attention regulation centres around the ability of the practitioner to maintain a focused attention on a desired target stimulus, most often the breath or body sensations in mindfulness meditation. Attention regulation is often touted as foundational for other skills to be learned or effective, because if the attention is not centred in the present moment then it is difficult to regulate emotions or gain different perspectives on the self (e.g., Cayoun, 2015). There is evidence for a beneficial impact of mindfulness training on attention regulation from behavioural research into executive attention tasks, neuroimaging studies mapping brain regions implicated in attention regulation, and changes in clinical populations that involve alterations in attention regulation (Hölzel et al., 2011).

Body or interoceptive awareness refers to the ability of the practitioner to be aware of sensations in the body in the present moment, especially subtle sensations, and awareness of body is traditionally taught as the first of the four foundations of mindfulness. There is evidence of alterations in body awareness as a result of mindfulness training from self-report, functional and structural neuroimaging studies, and also evidence to suggest that increased body awareness is associated with increased capacity for empathy (Hölzel et al., 2011). Emotion regulation refers to the ability of the participant to adaptively regulate one's emotions. Hölzel et al. cite evidence for the efficacy of mindfulness meditation on emotion

regulation from behavioural, physiological, and neuroimaging research, as well as in research into psychological disorders. Evidence suggests that emotion regulation through mindfulness seems to occur through two primary strategies: reappraisal and extinction (Hölzel et al., 2011). In reappraisal, mindfulness seems to allow the practitioner to decentre from the emotional experience and from this decentred place examine other ways of appraising the experience or the stimulus that was seen to be causing the emotional response. In extinction, practitioners turn towards unpleasant or uncomfortable sensations with an attitude of welcoming or acceptance and find that "the unpleasant emotions pass away and a sense of safety or well-being can be experienced in their place" (Hölzel et al., 2011, p. 545}. Over time, this can lead to the extinction of a conditioned emotional response and freedom from the reactivity inherent in that conditioning.

Changes in perspectives on the self refers to the tendency to perceive the "self", the "I" which we might habitually think of as having a permanent form as being essentially illusory and conditioned. In mindfulness meditation, the practitioner learns to perceive internal experiences as mental events, continually arising and passing away, rather than as reality itself. To briefly explain what is meant by this, a metaphor commonly used to describe the emptiness of a permanent and unchanging self is of a river (e.g., Hanh, 2017). When one observes a river, there is a sense of continuity of form, despite the fact that the water flowing through the river is different from moment to moment, never the same. The perception of a self that is doing the thinking, inhabiting the body, carrying out the actions can be broken down into a series of moment-by-moment arisings through observation in meditation, and is reliably reported by experienced meditators (e.g., Ekici, Garip, & Van Gordon, 2020). As the essentially illusory nature of the self is observed, it can lead to a liberation from the clinging and reactivity that is associated with unwholesome or highly self-referential thinking

patterns. Things get taken less personally, and it is possible to give up things that the self was clinging to that are understood to be causing suffering. Hölzel et al. (2011) quote psychologist Jack Engler, who describes how "those who have understood this report a sense of spacious lightness and freedom. They exhibit deep concern and tenderness for others." While this more extensive de-identification with the sense of permanent self generally takes dedicated practice over years to attain, shifts in this direction can and do happen within even eight weeks of participation in an MBI, and tend to be associated with reductions in self-referential processing. Self-referential processing refers to thinking patterns that have a strong sense of a permanent self being implicated in them, for example statements that generally begin with "I am… (unworthy, unreliable, always too much, etc)". Self-referential processing has been shown to be attenuated in mindfulness meditation, and for these changes to lead to reductions in mood dysregulation (e.g., Farb et al., 2010, 2007), such that there is a shift from narrative self-referential processing to non-conceptual, sensory focused processing of experience.

Upward Spiral Dynamics, The Mindfulness-to-Meaning Theory, and the Arc of Mindfulness to Self-Transcendence

One theory that can account for and include many of the proposed mechanisms of change discussed in Hölzel et al.'s (2011) integrative review, as well as start to answer the question of the inclusion of ethics and prosocial/pro-environmental behaviour in the context of climate change is the Mindfulness-to-Meaning Theory (Garland et al., 2015), especially when a recent extension of it is included (Garland & Fredrickson, 2019). The Mindfulness-to-Meaning theory is an evolution of Fredrickson's earlier (1998) broaden and build theory of positive emotions, and was extended in a series of articles that broaden and build on the theory itself to integrate the cognitive and neuroaffective science of mindfulness (Garland et

al., 2010), eudaimonic meaning (Fredrickson et al., 2015), and self-transcendent and nondual experience (Garland & Fredrickson, 2019). The broaden and build theory posits that positive emotions such as joy, interest, love, gratitude, hope, and awe act to broaden an individual's awareness (or "momentary thought-action repertoire"; Fredrickson, 1998, p. 300) and lead over time to a building of personal physical, intellectual, and social resources.

Garland et al. (2010) add insights from affective neuroscience and mindfulness literature to this theory and posit that both mindfulness and loving-kindness meditation help to unlock broadened states of awareness and thus precipitate and reinforce this broaden and build pattern. They posit that when practiced over time, mindfulness and loving-kindness meditation can lead to a mutually and serially reinforcing positive feedback loop: what is referred to as an upward spiral dynamic whereby broadened states of awareness through mindfulness or loving-kindness practice lead to the building of increased ability to cope with distress, and personal and social resources, which increase the propensity to experience positive emotional states, which with continued mindfulness and loving-kindness practice then fosters another round of the cycle. They contrast this with downward spirals whereby negative emotional states contract attentional resources and lead to less adaptive behavioural repertoires, which lead over time to a decrease in personal and social resources that then feedback on themselves.

An interesting distinction is made by Garland et al. (2010, p. 851): that "upward and downward spirals are not mirror opposites that simply trade negative content for positive content. Rather, consequential structural differences set them apart. Whereas downward spirals lead to narrowed self-focus and rigid or stereotyped defensive behaviour, upward spirals lead to increased openness to others and novel or spontaneous exploratory activity. In effect… positivity may develop a "life of its own."" This points to is a quality of open-

endedness to the mechanisms of an upward spiral, relative to downward spirals. In downward spirals, there's a predictable contraction and reactivity: if an individual is sad and reacts from a place of cognitive fusion with that sadness, then it can reasonably reliably lead to withdrawal and rumination, and if this is repeated over time perhaps depressed mood. But if an individual is feeling a lot of joy and playfulness, then the play could be expressed in a number of creative or social ways that have different emergent properties: there are more options available to the individual in that moment and so the behaviour is less predictable, even though the pattern or process of the change is able to be described (as a broadening and building, for example). One could end up making a new friend, learning a new skill, discovering a new interest, any one of which would lead to an expanded set of possibilities for that individual's future that would be different if the person had expressed the playful impulse in a different way. The upward spiral pattern has the quality of open exploration and the possibility of discovery of new insights, ways of being, skills, and personal and social resources.

This difference between upward and downward spiral sequelae, or between negative and positive emotional states and their effects on the momentary thought-action repertoire of an individual, points at something incredibly important in the context of responding to the bigger-than-self reality that we are in. That is, the sequelae of being fused with and reactive to negative emotions such as fear, sadness, loneliness, hopelessness are easier to predict and much less adaptive and desirable than the sequelae of being mindfully decentred from whatever emotions are present. Conversely, the sequelae of adaptive processing, in this model, opens the way for novelty in response to the original stimulus that is being perceived in present-moment awareness. Garland et al. (2011) discuss how one of the principal ways that mindfulness helps with regulation of negative emotional states is through fostering in-

the-moment broadened awareness that allows for what they refer to as positive reappraisal of the stressor: another way of perceiving it that they could not originally see when fused with the emotion but that becomes available to them afterwards.

The difference in the sequelae of reaction from fusion with negative emotions versus responding from a place of decentred, positive reappraisal and possible positive emotions is significant for many reasons in the context of the current thesis question, but two stand out as useful to point to here. First, paying attention to certain aspects of bigger-than-self reality as it is right now almost certain to lead to experiences that include negative emotion (e.g., anxiety, fear, despair, depression, anger, grief). Being able to respond to these without looking away but from a state of broadened awareness in a way that leads to upward spirals of increased creative and adaptive responses will be critical to meeting the challenges of bigger-than-self reality as predicted negative impacts on the natural environment and on society (e.g., through threats to food security) become more pronounced and difficult to ignore. Second, paying attention to certain aspects of bigger-than-self reality as it is in the present moment will tend to lead to experiences that include positive emotion: love, hope, awe, gratitude, resolve, calmness. These states, and their sequelae, such as fresh insights, creativity, play, increased connectedness, expansion of ethical circles of concern, and a seeing of novel possibilities, will be crucial in meeting the challenges of bigger-than-self reality. Novel solutions are needed, as is human creativity, collaboration, and ability to change and update our frames of reference, and these will not tend to emerge from contracted, downward spiral dynamic states of being or processing experience.

Fredrickson et al. (2015), added to the upward spirals of positive reappraisal hypothesis in ways that are relevant to responding to both negative and positive emotional stimuli that spring from bigger-than-self reality. First, the Mindfulness-to-Meaning Theory includes an

emphasis on sensory awareness and a process they label interoceptive recovery, which seems especially useful in the context of processing negative emotional states and second as might be surmised from the name of the theory, it adds an emphasis on the construction of eudaimonic meaning in the reappraisal process. Fredrickson et al. noted that in cases of high arousal or chronic negativity, such as in individuals with longstanding major depressive disorder symptoms, reappraisal might be difficult or impossible to engage in through cognitive processes alone. In these cases, they draw on evidence showing that strategies of shifting attention away from elaborative/conceptual processing and towards sensory processing can promote a re-stabilisation into a more neutral or positive affective state, from which it is more possible to engage in reappraisal (Farb et al., 2010). Note here that in some MBIs, such as Mindfulness-integrated Cognitive Behavioural Therapy (MiCBT; Cayoun, 2011; 2015), there is even more focus on interoceptive sensations, and the development not only of interoceptive awareness but also training in non-reactivity to interoceptive sensations, which enables a progressive extinction of conditioned interoceptive reactions, and increasing freedom to mindfully respond rather than react to life as it unfolds. It may be that for some individuals, interacting with the bigger-than-self reality of the consequences of climate change or other planetary boundaries being overstepped interacts with pre-existing chronic conditioning of negative states such as depression, generalised anxiety, or lack of self-efficacy that are reinforced by interoceptive sensations, and that interoceptive recovery can assist such individuals to loosen and change even deeply conditioned patterns of reactivity or negative affectivity.

Fredrickson et al. (2015) emphasised the role of mindful savouring of positive states and their role in fostering positive reappraisal and building eudaimonic meaning. This is consistent with research showing that hedonic wellbeing (e.g., positive emotions) and

eudaimonic wellbeing (e.g. meaning and valued action) can reciprocally reinforce one another (L. A. King & Hicks, 2012), that having positive affective experiences increases one's likelihood of finding positive meaning (Fredrickson et al., 2008), and vice versa: when an individual finds positive meaning, they are more likely to experience positive emotion (Yamasaki et al., 2009). They stress that finding positive meaning is not to be mistaken for some sort of bypassing phenomenon whereby negative states are blocked out or unacknowledged, that in fact quite often the positive meaning is constructed out of difficult experiences. As an example of this, Fredrickson et al. (2015, pp. 306-307} described a case study where the individual noticed a thought that "cancer has strengthened my gratitude muscle", and how this noticing then unfolded into deeper gratitude and joy, and a sense of wanting to devote even more time to spending with his family, which gave his experience of life an increasing amount of meaning and purpose. It seems possible to imagine how a client dealing with a large degree of ecological grief might, through this or similar processes, encounter deeper states of love and gratitude for plant life or healthy soil, and find connection and purpose in community that shares an appreciation for these (perhaps newly re-)valued things and works towards making a contribution to local plant or soil life.

In the most recent update on the Mindfulness-to-Meaning theory, Garland and Fredrickson (2019) extended the model to include more complex positive psychological states such as self-transcendence and non-dual experiences and described how these states seem to be relevant and useful to the treatments of both addiction and chronic pain (e.g., Garland, 2016). They discuss how as the process of mindful decentering, positive reappraisal, and savouring moves through cycles, there can be a gradient of self-transcendence that unfolds. They identify positive self-transcendent emotions as an initial level of this gradient: emotions such as awe, love, elevation, gratitude, compassion that include something larger

than the self or beings other than the self in the emotional experience. As the cycle is repeatedly activated, these self-transcendent emotions can give way to experiences of absorption, oneness, and bliss. These states seem to involve a softening of the boundaries between subject and object, with accompanying positive affective experience - for example, ranging from appreciation of the beauty of a sunset; to then noticing the affective sequelae of that sort of experience and appreciating that in a sort of second-order way, such as feeling deep pleasure, meaning and gratitude in an appreciation of the warmth of feelings that arise when experiencing the sunset; to savouring so fully the feelings of pleasure meaning and gratitude that it opens into feelings of bliss, which can trigger dissolution-type experiences whereby the experience of the distinction between subject and object become more permeable or even disappear completely. Non-dual states appear at the outer edge of this continuum, in Garland and Fredrickson's (2019) conceptualisation of it, whereby there can be a temporary complete dissolution of the experience of a separate self and the world is experienced without reference to the normal subject-object boundaries that characterise everyday human consciousness. The existence and seeming consistency of experience of nondual states raises interesting questions in the context of responding to bigger-than-self reality, as the experiences of nondual awareness can represent something of a merging with bigger-than-self reality, the self dissolving into bigger-than-self reality as a river might merge with the ocean.

One practically applicable possibility that this arc of self-transcendence and nondual experience provides is in the area of altered reward processing. Garland and Fredrickson (2019) described how nondual experiences can help to alter reward processing in ways that decrease individuals' propensity to engage in addictive behaviours. That is, in having these kinds of experiences, via cycling through the upward spiral process described, there is a

gradual coming together of hedonic wellbeing (or present-moment positive affective experience) and eudaimonic wellbeing (meaningful experience, which is aligned with concepts such as service, giving back, loving, actions which tend to engender gratitude). As one has these experiences with more frequency and regularity, there can be an increasing reduction in need for the addictive behaviour or substance. It seems possible, even probable, that the same alterations in reward processing can help to motivate engagement in behaviour that is aligned with meeting the challenges of bigger-than-self distress. That is, behaviour and cognitions that are based on past conditioning that is not adaptive in the current bigger-than-self reality could be let go of in favour of behaviour that is aligned with the new eudaimonic meanings that get made in the upward spiral/reappraisal process. This process, by including the alterations in reward processing, would be self-reinforcing. It may also be worth speculating that behaviour that come through this route would be qualitatively different and much more appealing than through any external reward/punishment systems or extrinsic motivational systems in general. That is, the further an individual has travelled along the upward spiral, it seems the more nuanced their meaning-making systems would get, the more pleasurable affective experiences they would tend to experience, and the more the natural reward processing conditioning of their brains would enable the adaptive kinds of behaviours and rational responses that would contribute towards optimal grip on a field of affordances that allows one to contribute positively and wisely to one's socio-ecological niche: less experiential avoidance, more prosocial and pro-environmental behaviour, more creativity, and more ability to flexibly align with others and build social connections.

It seems unlikely that participants in an eight-week MBI would experience the changes at the outer edge of this continuum, but it has been included here to give a sense of the possibility of mindfulness-to-meaning-to-self-transcendence as a process that can continue

for clients long after acute treatment has ended, and to give a preview of interventions with similar such mechanisms of change discussed later in the thesis (e.g., March, 2021). For the purposes of this chapter within the context of this thesis, the above discussion of the mechanisms of change in mindfulness training is meant only to summarise reasons that mindfulness seems worthy of further investigation in the context of responding to the challenges presented by bigger-than-self distress The potential to allow a responsiveness to both negative and positive affective components of the experience, alter chronic or difficult-to-change past conditioning and weave them into more adaptive novel appraisals that build personal and social resources and eudaimonic meaning, a cycle which has the potential to be self-reinforcing, indicates that mindfulness training is worthy of further exploration and investigation. The next chapter will further explore and detail what mindfulness is, starting from its historical foundations, looking at how it is integrated into contemporary mental health settings, and discussing issues of the inclusion of ethical teaching in MBIs that are pertinent for the topic of bigger-than-self distress. It will also include an outline of Mindfulness-integrated Cognitive Behaviour Therapy (MiCBT; Cayoun, 2011) and McCown's (2013) relational pedagogy of MBIs as examples of approaches to teaching ethics in MBIs.

Chapter 4: Deeper into Mindfulness: Embodiment, Ethics, and Bigger-than-Self Reality

Historical Foundations

Traditionally, mindfulness has been most commonly identified and associated with Eastern Philosophies, especially Buddhism (e.g., Husgafvel, 2018; Huxter, 2015). However, mindfulness, broadly understood, can be identified within Western traditions as well, for example many authors have drawn parallels between Christian contemplative practices and mindfulness (e.g., Kopel & Habermas, 2019; Schneider, 2021; Zolner, 2019), and many of the ancient Greek philosophies as originally practiced involved a similar focus on embodiment within the present moment of the ideals that were central to those ways of being (Hadot, 2004). Practices similar to mindfulness can also be found within many indigenous cultures (Capel, 2014; Le & Shim, 2014; Syarifuddin et al., 2020). The cross-cultural presence of mindfulness or practices sufficiently similar to mindfulness across time and geographical space is suggestive of mindfulness being something that is an innate human capacity, and in some sense pre-conceptual, existing as a capacity that is inherent to the human condition, and which different cultures have created different narratives and frameworks to encase it within, similar in that sense to theories of language as something that our brains are biologically pre-inclined towards in generality but which depend on culture to develop in its specifics.

This quality of mindfulness as being to some degree cross-cultural leads to the perspective taken within this thesis that mindfulness is irreducible to a single, objective definition. Instead, mindfulness is presented in this thesis as something that is ultimately non-conceptual and experiential in its nature, which emerges in experience spontaneously,

and which can be cultivated through the practice of different pedagogies. Despite this unwillingness to ultimately define mindfulness didactically, or to forget or understate the significance and existence of similar practices in different cultures around the world and throughout history, it is useful to examine most carefully the Buddhist lineage that emerged in India around 500BC and has been transmitted mostly throughout Asia until the 20th Century where it has become popular in Western countries. Most contemporary mindfulness practices in the West can be traced most clearly back to how it has been conceptualised and practiced within Buddhism, and it is from this source that it has been transmitted from its traditional context within Eastern cultures to the West with increasing acceptance into the mainstream from the second half of the twentieth century onwards (e.g., Chaskalson & Hadley, 2015).

Within Buddhism, mindfulness was conceptualised as one limb of an eight-limbed path, the Noble Eightfold Path (Huxter, 2015). The Noble Eightfold path describes eight interconnected limbs that, when practiced correctly support each other to lead to the cessation of suffering, by addressing the "three poisons" of greed, hatred, and delusion. These limbs are right view, right intention, right speech, right action, right livelihood, right effort, right mindfulness, and right concentration. The distinction between right and wrong is made simply by whether the action would lead to the cessation or continuation of suffering. Mindfulness, in its part of the Noble Eightfold Path, was represented by the Sanskrit word "sati", which is often translated as "to remember" (e.g., Anālayo, 2004). Sati was a practice of remembering, and came quite late in the overall path, although each of the limbs mutually reinforced one another. Right View, for example, was understood as seeing clearly the nature of mind and the causes of suffering. This involved a phenomenological practice of being with experience and deconstructing it, and not merely an intellectual understanding or ideological

viewpoint. For example, experience was deconstructed into five aggregates, or dhammas: translated by Anālayo (2004) as material form (the physical body), feeling (the body sensations that make up affect), cognition (the labels and identifications the mind gives to sense objects), volition (reactions and intentions, which condition behaviour), and consciousness (in the sense of being conscious of something, and the sense of an "I" that is having such an experience).

These five aggregates were traditionally investigated in a progressive manner, as there was a hierarchy of gross to subtle nature in their phenomenology and building sharpness of capacity to perceive these distinctions in perceiving the earlier aggregates helped to give clearer capacity for the mind of the practitioner to distinguish the more subtle later aggregates. From clear and skilful meditation on the five aggregates, one could begin to perceive, in an experiential manner, the nature of their co-dependent arising, or essential emptiness of separate self-hood: that as aggregates of experience, none of them were or could be made separate from the other. To do this, each of the aggregates, once perceived, were again practiced with again with the consideration that they are devoid of "mine", "I", and "I am", to decouple these experiences of the aggregates from an ongoing sense of self that was producing the experience. Instead, the aggregates could be seen to influence each other and make up one's usual non-meditative global experience of reality, which typically includes a duality between an active self, that is producing and controlling one's experience, and the world, which is outside of and separate to the self that is perceiving. This is one way in which the Noble Eightfold Path led to Right View, which is the phenomenological, direct realisation of the emptiness of a separate self. That is, the separate self is seen to actually not have a nature that was independent of the aggregates that made it up. This was not an

intellectual realisation but something that was observed directly within one's own phenomenology (Anālayo, 2004).

Of course, in the investigation of the five aggregates, which was just one form of practice of right view, each of the other limbs was active as well (Anālayo, 2004). The direct experiential realisations occurred usually only after substantive practice, and so one can see how right intention (intention to engage fruitfully in correct practice), right effort (putting forth effort in the direction contextualised within the Noble Eightfold Path), and right concentration (which refers to states of concentrative absorption described elsewhere in the Buddhist cannon, contextualised within the Noble Eightfold Path), would be involved in the maintenance of meditative practice over time that was necessary to enable right view. Right mindfulness, in the context of the Noble Eightfold Path, meant to remember, in each moment, everything that made up the path, so as to not err in one's practice from moment to moment. It meant to remember the five aggregates, the eight limbs of the path, and many other aspects of the Buddhist path and teachings that were relevant to it. It came from a recognition that the untrained mind had a tendency to wander, to forget what it was trying to do, which would have negative effects on the individual's development of insight and the aims of the Noble Eightfold Path, which was to reduce suffering for all beings (Anālayo, 2004).

This intention to reduce suffering for all beings is where the other limbs, too, came in: right livelihood ensured that those on the path were not deviating from reducing suffering through actions they took in obtaining a livelihood for themselves or their family; right speech applied right mindfulness, right view, right intention and the other limbs to the interactions that the practitioner had with others, and right action applied the same to their actions (Huxter, 2015). Altogether, this path was conceived to provide a means to liberate

oneself from suffering, and in so doing to reduce the suffering of others. The Noble Eightfold Path represents an example of what, later in this thesis I will refer to, in reference to distinctions made by Vervaeke and Ferraro (2013a), as a self-organising vehicle for the development of wisdom. As a self-organising vehicle, its component parts interact with one another to produce progressive and successive changes in the being mode of the individual engaging in the wisdom development vehicle. The parts reinforce one another: as one develops in one's capacity for right view, one's capacity for right concentration and right effort is increased, which feeds the capacity for right view further, and so on. Note that this is the context, within Buddhism, that mindfulness was traditionally practiced: within a self-organising wisdom development vehicle that as well as providing a means of self-transformation, was carried out in a context that provided a clear ethical link between one's own behaviours and the world around them, which itself was a part of the wisdom development process.

Contemporary Conceptualisations of Mindfulness Training and First and Second Generation MBIs

Moving from traditional to contemporary contexts, the following section will attempt to outline what the nature of mindfulness training in contemporary clinical psychology settings: what does it actually involve, what skills does it require one to learn, and what related practices are commonly included alongside or within mindfulness training programmes? What seems important to emphasise from the beginning of this section is that mindfulness training - both traditional and contemporary versions - is a highly experiential activity, and it is not possible to learn from reading about it or understanding a cognitive framing of it: mindfulness is primarily a practice that is learned through spending time engaging, in an embodied, participatory way, in its pedagogy (e.g., McCown, 2013). The field of

contemporary mindfulness teaching is a large and growing area, with a proliferation of different programmes, teaching styles, and emphases even without including the history of mindfulness training in Buddhism, which involves 2500 years of development and a plethora of different schools and perspectives defining mindfulness and mindfulness training (e.g., (K. Cheung, 2018). These and other factors make it difficult or impossible to actually define what contemporary mindfulness training is in purely objective terms, but this chapter will attempt to give an overview of some predominant views. This is not an exhaustive review but is intended to orient the reader to the territory and give context for other sections where mindfulness is discussed within this thesis.

Contemporary Conceptualisations of Mindfulness Training

A common definition given by Kabat-Zinn (1994, p. 4), is that mindfulness involves "paying attention in a particular way: on purpose, in the present moment, and non-judgmentally." On top of these components, other definitions emphasise awareness of sensory experience, freedom from reactive emotions, states and personal identification with experience, and a continual awareness of wholesome and unwholesome states (states which lead to suffering or the cessation of suffering; Cayoun, 2011, 2015). There are many varieties of how mindfulness is taught, but it inevitably involves the practice of retraining one's capacity for sustained attention, as the individual learns to notice when the mind wanders off and re-centre into what is happening in the present moment. In contemporary clinical settings, one informative way of understanding the basic facets of mindfulness is through looking at the facets of it that have emerged from factor analysis research. Baer et al. (2006) delineate five facets that make up the skills of mindfulness: observing, describing, acting with awareness, non-judging, and non-reacting. Unpacking what is referred to by each of these facets, which emerged out of factor analysis research and have demonstrated adequate to

good internal consistency and divergent and convergent validity, may serve to point to some of the skills that are being practiced within mindfulness training and what differentiates a skilled mindfulness practitioner from an unskilled one.

The observing facet refers to the ability to notice what is happening in the present moment, particularly one's internal sensations, thoughts, feelings, and was represented by items such as, "I notice changes in my body, such as whether my breathing slows down or speeds up" (Baer et al., 2006, p. 34) and "I pay attention to how my emotions affect my thoughts and behaviour" (Baer et al., 2006, p. 34). The describing facet refers to the ability to describe or label with words what is being noticed in the present moment and was represented by items such as "I'm good at finding the words to describe my feelings" (Baer et al., 2006, p. 35) and "When I have a sensation in my body, it's hard for me to describe it because I can't find the right words" (reverse scored; Baer et al., 2006, p. 35). The acting with awareness facet refers to the ability to act with focus in the present moment, without being distracted or operating on autopilot, and was represented by items such as "It seems I am 'running on automatic' without much awareness of what I'm doing" (scored in reverse, Baer et al., 2006, p. 34) and "I am able to pay close attention to one thing for a long period of time" (Baer et al., 2006, p. 35). The non-judging facet refers to the ability to accept what is happening internally in a given moment without judgment, avoidance, or pushing away the experience, and was represented by items such as "I tell myself that I shouldn't be feeling the way I'm feeling" (scored in reverse, Baer et al., 2006, p. 35) and "I make judgments about whether my thoughts are good or bad" (scored in reverse, Baer et al., 2006, p. 35). The non-reacting facet refers to the ability to hold internal experiences in awareness without reacting to them or getting lost in them, and was represented by items such as "I watch my feelings

without getting lost in them" (Baer et al., 2006, p. 34) and 'In difficult situations, I can pause without immediately reacting" (Baer et al., 2006, p. 34).

The five facets of mindfulness described above seem to map well to skills taught within contemporary MBIs. In reality, all of these facets are happening simultaneously: in any given moment, there can be a variable quality of observing experience, a variable quality of describing the present moment experience, a variable qualities of focusing one's attention on the present moment, varying qualities of acceptance and non-judgment of the experience, and varying qualities of getting caught in or fused with reactivity or remaining calm and equanimous (e.g., McCown, 2013). These skills can be identified and practiced within meditation and are generalisable to daily life and the mind's ability to relate to present moment experience in this way in day-to-day activities. This is not to say that the mindfulness teacher or clinician will necessarily teach the skills in this formulation: MBI programmes differ in their approaches to teaching and much of the teaching occurs through participants engaging in the practice and noticing the things that are difficult (such as maintaining attention or observing without judging or reacting), which become the focal points of the practice itself.

First and Second-Generation MBIs

MBSR (Kabatt-Zinn, 1994) has been hugely influential within both the popularisation and establishing of an evidence base of contemporary mindfulness training. MBSR contains within it the popular definition of mindfulness given in the above section. MBSR also influenced the development of MBCT, which first applied mindfulness principles and meditative practice to prevent relapse of recurrent depression. Together, MBSR and MBCT represent the most popular MBI programmes in the first generation (FG-) of contemporary MBIs. While they have been hugely successful in establishing an evidence base for mindfulness training, and

indeed in helping popularise mindfulness to such an extent that observers were calling it a worldwide movement (Walsh, 2016). Subsequent to this dramatic rise in popularity there was also somewhat of a backlash, both in popular media and in the empirical literature, critiquing mindfulness and particularly the ways that it was being presented and taught within contemporary MBIs. This is not to say that these FG-MBIs have been written off as having no value – quite the contrary – but the critiques have prompted critical reflection within the field in general, across a number of areas (e.g., Walsh, 2016). In the wake of these criticisms, new forms of MBI have arisen, many of which have closer ties to traditional ways of teaching mindfulness and which can be seen to at least partially address some of the criticisms of earlier programmes. I do not wish to paint an overly black and white picture here: there is clearly value to both FG- and SG-MBIs, but it is instructive to look into FG- and SG-MBIs, as well as the critiques of them, as it reveals details about how mindfulness is taught within different contemporary approaches to mindfulness training that are relevant to our exploration of what mindfulness training is.

Singh et al. (2014), who first made the distinction between FG- and SG-MBIs, defined a key feature of SG-MBIs as being that they were aimed at producing a personal transformation in the practitioner and not just increasing that person's wellbeing. Singh et al. describe their Mindfulness-Based Positive Behaviour Support (MBPBS) programme as an example of an approach that aims to gain insight into the impermanent, interdependent nature of reality and the self-construct, which leads to a natural wish to benefit both self and others as there is a recognition that the distinction between self and others is illusory (Singh et al., 2014). The intention to produce a personal transformation in the practitioner seems potentially highly relevant in the context of assisting clients who want to respond to distress related to bigger-than-self reality. Personal transformation in the direction offered by certain

second-generation MBIs may be a key mediator in lasting, sustainable change in behaviour that is more adaptive in the context of current bigger-than-self reality. Furthermore, it is the kind of personal transformation offered by mindfulness-based interventions that may offer a point of difference from other interventions that are more purely cognitively or behaviourally focused. Learning to identify with the self, on a moment-by-moment basis, as part of much larger set of interconnected (eco)systems rather than as an isolated individual or personality, for example, might give rise to behaviour that is qualitatively different than from approaches that do not have such an emphasis on transformation of the mind and its mental processing.

Van Gordon et al. (2015) build on Singh et al.'s (2014) definitions of FG- and SG-MBIs and suggested additional distinctions between the two groups of interventions. They argued that FG-MBIs principally support the definition of mindfulness offered by Jon Kabat-Zinn (1994, p.4): "paying attention in a particular way: on purpose, in the present moment, and non-judgmentally", which they claim risks being interpreted in ways that imply mindfulness involves a passive or non-discriminatory attitude towards experience. SG-MBIs, according to Van Gordon et al. (2015, p. 49), advocate an "active and discriminant form of awareness": that it is possible, and indeed intended, in second-generation MBIs that one learns to observe thoughts and sensations with nonattachment while maintaining discernment about adaptive ways to respond to the observed thoughts and sensations. This is a crucial distinction for SG-MBIs: that it is not just passive acceptance but an active discernment and responding to what is arising. This is related to the criticism reviewed by Monteiro et al. (2015) and outlined in the below section pertaining to discernment between wholesome and unwholesome mental states and actions. In SG-MBIs, active discernment is used to not only accept and welcome all thoughts and sensations, but also to discern the wholesome from the

unwholesome and train the mind to cultivate wholesome thoughts and sensations and drop unwholesome thoughts and sensations.

FG-MBIs can also assume that other forms of meditative practice, such as loving-kindness meditation, do not mediate the outcome or are unimportant in MBIs (Van Gordon et al., 2015). A feature of SG-MBIs is the explicit inclusion of other meditative practices and principles that are traditionally practiced as part of mindfulness training, such as loving-kindness meditation, a focus on ethical awareness and behaviour, and teachings on the nature of impermanence, interconnectedness, emptiness, and other Buddhist concepts. Loving-kindness meditation is a practice that involves active cultivation of kind, generous, and loving thoughts, images, and co-emerging sensations in the chest area, and is often practiced after or at the end of a mindfulness meditation practice session (e.g., Cayoun et al., 2019; Hofmann et al., 2011; Kabat-Zinn, 1994). A focus on ethical awareness and behaviour is consistent with generating wholesome thoughts and sensations in meditation - if these are sincere, then it naturally follows that one will want to act in ways that are consistent with these loving and kind intentions (e.g., Cayoun, 2015). Focusing on ethical awareness and behaviour is a way of practicing mindfulness of the impact of one's actions on other beings in daily life and can also be used as a hook for applied practice of mindfulness (Cayoun, 2015).

Teachings on concepts traditionally focused on alongside mindfulness practice, such as impermanence, emptiness, or interconnectedness can be seen to support naturally emerging awareness that arise in the course of sustained mindfulness practice and may assist in personal transformations in the nature of self discussed by Singh et al. (2014) and referenced above. It may be a useful frame to posit that FG-MBIs mostly focus on basic skills (e.g., observing, acting with awareness) that are included in the five facets of mindfulness from the FFMQ (Baer et al., 2006), while SG-MBIs include these skills but also build on these basic skills

in ways that include deeper and more transformative change. Another difference in SG-MBIs, according to Van Gordon et al. (2015), is the explicit use of the term "spiritual" to describe the nature of the intervention they are receiving, so as to remove ambiguity around this in FG-MBIs: they assert that SG-MBIs still describe themselves as secular and non-religious, yet spiritual in nature. This is not necessarily the case for all SG-MBIs: MiCBT, for example, makes no claim to be spiritual in nature, seemingly leaving it up to the participant to decide whether they want to interpret their experience as having spiritual qualities or not.

Traditional and Contemporary Approaches to Ethics in Mindfulness Teaching

Differences between FG- and SG- contemporary MBIs are similar to tensions existing between traditional and contemporary approaches to teaching mindfulness. These tensions are here summarised into three main criticisms levelled at popular, mostly FG- contemporary MBIs.

Criticism #1: Discernment between Wholesome and Unwholesome Mental States and Actions

The first criticism, a lack of teaching of the difference between Right and Wrong Mindfulness, relates to the process of discernment between wholesome and unwholesome mental states and actions. The distinction between right and wrong is made simply by whether the action would lead to the cessation or continuation of suffering (Monteiro et al., 2015). Within the FG-MBIs MBSR and MBCT, meditation instruction guides participants to pay attention to what is happening in the here and now, with acceptance. A curious and non-judgmental stance towards present moment experience is encouraged. In contrast, in SG-MBI MiCBT (Cayoun, 2011; 2015; Cayoun et al., 2019), participants are guided to learn to distinguish between simply paying attention and right mindfulness. Right Mindfulness is introduced as a state that is free from craving for experiences of states that are not currently

present and aversion away from experiences of states that are currently present, and which takes into account the potential consequences of our actions in terms of the suffering they may or may not cause. MiCBT participants are further encouraged to discern between wholesome and unwholesome mental states and actions, to prevent the arising of unwholesome mental states and abandon those that have already arisen, to initiate wholesome states that have not yet arisen, and then to maintain and perfect wholesome states that have already arisen. In this way, mindfulness in this SG-MBI example is about more than just non-judgmental acceptance of present moment experience but builds on these basic skills to navigate towards more wholesome thoughts and actions and less unwholesome thoughts and actions over time.

In traditional contexts, this discernment into wholesome and unwholesome states is an inseparable part of mindfulness and is practiced within the larger context of the Noble Eightfold Path (Monteiro et al., 2015). The Noble Eightfold path describes eight interconnected limbs that, when practiced correctly support each other to lead to the cessation of suffering, by addressing the "three poisons" of greed, hatred, and delusion. These limbs are right view, right intention, right speech, right action, right livelihood, right effort, right mindfulness, and right concentration. The distinction between right and wrong is made simply by whether the action would lead to the cessation or continuation of suffering. Two observations become apparent here: first that mindfulness is traditionally just one limb of an eight-limbed model, and second is that for each of these limbs there is a great importance placed on whether or not they lead to the cessation of suffering. This in turn implies a necessity of discernment in the practice of mindfulness: that it is important to be able to distinguish between a practice of mindfulness that will lead to the cessation of suffering or not.

In most versions of traditional mindfulness training, investigation is encouraged into which thoughts and sensations tend to result in suffering or the cessation of suffering: while guidance is given in, for example, the traditional five precepts, these are intended to support investigation and ethical living, rather than as dogmatic rules to follow without question. It seems worth noting that wholesome mental states and actions tend to be those which involve a more prosocial, and less self-referential, orientation: for example, compassionate or generous attitudes towards self and others, or that have less focus on the self-construct. Participants might learn that thoughts such as "I am a bad person" tend to co-emerge with heavier, denser, stiller or more highly cohesive body-sensations, while thoughts with less reference to a permanent and enduring self-construct such as "it is worth putting in effort to consider the impacts of my actions on others" tend to co-emerge with lighter, more fluid and spacious sensations in the body. In learning to discern between such thoughts and co-emerging body sensations (which links to the 4E idea of embodied cognition), individuals' affordance landscapes may be shaped in such a way as to enhance that individual's capacity to generate insight and optimally grip reality.

This link with cognitive science language points to the possibility that inclusion of discernment between wholesome and unwholesome thoughts and actions is highly relevant to how mindfulness might help clients in navigating bigger-than-self reality and the process of wisdom development. This recalls the framework built earlier in the current thesis of the importance of developing a rationality of computation, construal, and coordination (Vervaeke & Ferraro, 2013a). The constraining variables of bigger-than self reality (including what scientific evidence suggests about bigger-than-self issues), of seeking to develop a rational response to such issues, and of contextual relevance, can help to link traditional conceptualisations of distinctions between wholesome and unwholesome mental states with

contemporary times. That is, there is the makings of embodied and embedded rational ethical frameworks for contemporary times, which can serve as a kind of relevance-based reappraisal or reimagining of traditional ethical frameworks that guided distinctions between wholesome and unwholesome behaviour. To attempt to construct such a framework is not the domain of this thesis, but it does seem relevant to point to the possibility of doing so. Within such embodied and embedded frameworks, there would be value in the idea, for example, of a distinction between mental states that are more or less likely to be associated with true insight into self-deception and the cultivation of a field of affordances that facilitates an optimal grip on bigger-than-self reality and one's own socio-ecological niche.

Criticism #2: Five Hindrances and Seven Enlightening Factors

The second criticism, a lack inclusion of teaching on the five hindrances and seven enlightening factors, centres on how in traditional Buddhist conceptualisations of mindfulness, obstacles that commonly come up in practice are used to cultivate wise responses (Monteiro et al., 2015). Five of the most common obstacles, traditionally known as the five hindrances (sometimes translated as craving/aversion, frustration/anger, lethargy and drowsiness, restlessness and worry, and doubt or confusion), are used as prompts to cultivate useful action - for example, letting go of craving or aversion as they arise, and a noticing of when these states are present or absent as a marker of progress. The seven factors of enlightenment (sometimes translated as mindfulness, investigation, energy, rapture, calm, concentration, and equanimity) are traditionally used both as wise and useful ways to respond to the five hindrances and as supports for the development of clear awareness. Monteiro et al. note that while there is time in the curricula of most FG-MBIs devoted to discussion of how to deal with common obstacles, there is very little discussion of the seven factors of enlightenment. They note the importance of proper teacher training so

that discussion of obstacles leads participants to meet them wisely rather than bypass them. They note that there is very little discussion of the seven factors of enlightenment in first-generation MBIs and conclude some of the criticisms of FG-MBIs in this area are likely to be valid for this reason.

These teachings on both the hindrances and enlightenment factors also represent a deepening of insight relative to the basic skills represented by the five facets of mindfulness. It is more insightful, skilful, and useful, proponents of SG-MBIs might assert, to practice with an awareness of how the hindrances can be used to develop mindfulness skills, and what the enlightenment factors are so they might be cultivated (e.g., Cayoun, 2017). This refers again to the development of discernment between wholesome and unwholesome mental states and their integration into practice: for example, if the individual is practicing without an awareness of the five hindrances, they may engage in indulging a sensory desire or another of the five hindrances and not actually develop the mind in such a way as to lead to more wholesome behaviour and less suffering for self and others. To put this in perhaps more clinically familiar terms, practicing with awareness of the hindrances and enlightening factors is a way to reduce the amount of experiential avoidance (e.g., Hayes et al., 1996) that is taking place while practicing. In the context of clients who are wanting to respond to bigger-than-self reality, awareness of the five hindrances and seven enlightening factors may be of use in developing capacity for responding more skilfully to difficult mental states and which naturally produces wholesome states more frequently.

Criticism #3: Explicit teaching on Ethics

The third criticism concerns the omission of an explicit focus on ethics. Monteiro et al. (2015) separated these criticisms into three categories: the ethics of the teacher, the ethics of the recipient (organisation), and the ethics in the content of the MBI programme. As the

former two are outside the scope of this chapter, this section will focus solely on the latter category. Monteiro et al. pointed out that most clinical treatment settings have explicit guidelines about not imposing individual values or morals on what can be vulnerable populations, and that psychological interventions are traditionally perceived as being value neutral. However, the truth remains that ethics has traditionally been an integral, inseparable part of mindfulness practice. For example, a commitment to the five precepts is included in traditional mindfulness training: refraining from killing, stealing, lying, sensual or sexual misconduct and from taking substances which would intoxicate the mind and make mindful awareness more difficult or impossible. Discerning between wholesome and unwholesome mental states is an important part of traditional mindfulness practice and is seen as important in liberation from states of suffering. Monteiro et al. noted critics' concerns that the exclusion of explicit teaching on ethics leads to a misunderstanding of the intent of mindfulness practice, giving the impression that its purpose is little more than symptom relief or stress reduction, and does not also involve the reduction of harmful thoughts and actions. Monteiro et al. outlined Jon Kabat-Zinn's (2011) response, who argued that MBIs are taught within personal and professional ethical guidelines, and that the ethics of MBSR are implicit, which is preferable to explicit because of the societal tendency for inner and outer moral stances to be incongruent with one another. They put forward that perhaps the implicit versus explicit debate may come to be settled with evidence about the outcomes of programmes that use implicit versus explicit ways to teach ethics.

Monteiro et al. (2015) discussed how a narrow focus on individual symptoms may be insufficient for the debate on whether to include ethics implicitly or explicitly, as that way of defining outcomes is a product of contemporary clinical research paradigms which may not always align with traditional views of what is important - for example the impact of

behaviours on other life forms. This kind of awareness is arguably highly relevant to the connection between psychology and bigger-than-self issues. While they are not generally designed for taking into account bigger-than-self reality, SG-MBIs do tend to have more of an explicit focus on ethical behaviour within their teaching, and so it could be argued that out of FG- and SG-MBIs, SG-MBIs are closer to being well suited to clients seeking to respond to distress relating to bigger-than-self reality. Ultimately, the inclusion of active discernment alongside a non-judgmental stance towards mental states in SG-MBIs allows for a flexible ethical stance within such interventions that recommends them over FG-MBIs when taking into account bigger-than-self reality distress, where discernment about the impact of one's actions on bigger-than-self reality is of importance to clients.

Chapter 5: Ethics and Embodiment in Mindfulness: MiCBT and McCown's Relational Pedagogy as Examples

In this chapter, I move from more abstract discussions about mindfulness teaching historically and the tensions between traditional and contemporary and FG- and SG-approaches to mindfulness training to consider practical examples of how these tensions are navigated in two contemporary applications and conceptualisations of MBI teaching. The discussion in this chapter is intended to give the reader a more practically oriented view of how MBIs are implemented. This chapter shows how the dilemmas about discernment between right and wrong mindfulness, teachings on the five hindrances and seven enlightening factors, and explicit inclusion of ethics are resolved in these two approaches. The two approaches chosen for discussion are MiCBT (Cayoun, 2019) and McCown's (2013) relational pedagogy conceptualisation of MBSR. These two approaches have been chosen to be highlighted because they offer distinct yet well thought-out and justifiable solutions to the issues discussed last chapter. Additionally, I combine them at the end of the chapter to present an early synthesised pedagogy for a MBI approach to address bigger-than-self distress, which functions as a kind of plateau to ground discussions of further developments in the second half of the thesis.

MiCBT and The Co-Emergence Model of Reinforcement

MiCBT (Cayoun, 2011, 2015; Cayoun et al., 2019) is a SG-MBI and transdiagnostic treatment approach that integrates mindfulness meditation with cognitive behavioural therapy techniques such as exposure and cognitive restructuring. Treatment progresses in four stages, from the personal stage, to exposure, to interpersonal exposure, to the empathy stage. Each stage builds on skills learned in the previous stage. In the first stage, the focus is

on building personal mindfulness skills, and in stages two and three, the mindfulness skills are directed towards exposure to avoided personal and interpersonal life situations, which are held to be maintaining the current sense of distress. In the final stage, participants are taught skills for increasing empathy and building positive relationships with others, which is for the purpose of building lasting wellbeing (Cayoun, 2015). In this and other ways, MiCBT is an intervention that focuses not only on reduction of clinical level psychological distress, but also seeks to give individuals skills to build wellbeing and live a valued life. In the context of clients experiencing distress in relation to bigger-than-self reality, it teaches generalisable skills that can potentially be applied to growing their capacity for wisdom, or cognitive landscape of affordances that are facilitative of more adaptive embodied embedded rational responses within their socio-ecological niche.

MiCBT is based upon a five-part model of reinforcement, known as the "co-emergence model of reinforcement" (Cayoun, 2011; Cayoun et al., 2019). This model is a useful one to operationalise many of the insights of embodied cognition, the observation and perspective that cognition is fundamentally connected to and grounded in the body, not just the brain (e.g., Leitan & Murray, 2014). According to the co-emergence model, stimuli are perceived by the sensory organs in the body or through memory, given an appraisal or judgment of meaning through the evaluative, thinking part of the brain, which produces simultaneous interoception, a co-emergent body sensation. The reaction is then prescribed by the type and intensity of the sensation felt consciously or subconsciously in the body. The co-emergence model of reinforcement holds that resilience is a by-product of the system in equilibrium – and that, conversely, psychological problems and distress syndromes arise when the system is out of balance (Cayoun, 2011).

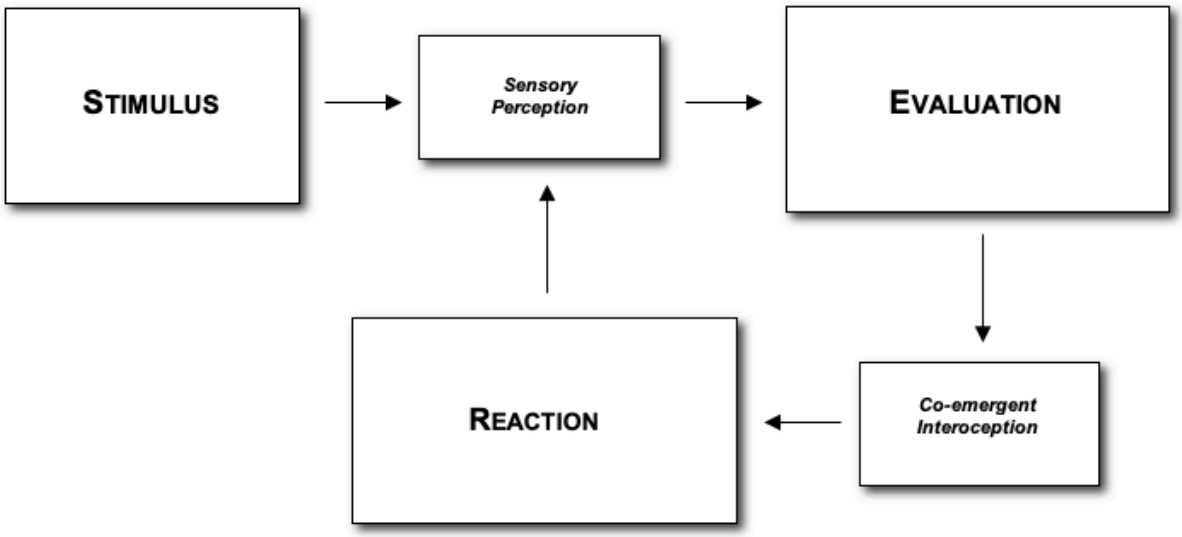

Figure 1. Components of the co-emergence model of reinforcement in a state of disequilibrium in information processing (Cayoun et al., 2019). The model shows an inflation of the Evaluation and Reaction components at the cost of Sensory Perception and Co-emergent Interoception components, pictorially represented by the different size of the boxes, leading to over-judgement and over-reactivity.

Most commonly in people with psychological difficulties, as shown in Figure 1, the system is out of equilibrium such that the evaluative and reactive parts of the system are overemphasized while the sensory and interoceptive parts of the system are underemphasized, if not neglected completely (Cayoun et al., 2019). In MiCBT, the principal purpose of mindfulness training is to help restore balance in the system, which enables the trainee to notice experiences occurring in the present moment with less judgement (e.g., less catastrophic thoughts) and less reactivity (less need to avoid discomfort). The integration of mindfulness training with CBT is believed to increase the individual's overall resilience by restoring balance to the system, rather than limiting the intervention to a specific disorder (Cayoun et al., 2019). When the system is in balance, there is a balance of attentional resources allocated between the evaluative and reactive components and the and sensory

and interoceptive components of the brain. Embodied aspects of cognition are given more attentional prominence, in a mindful, skilful way, and this results in a resolution of the distress according to the co-emergence model of reinforcement underpinning MiCBT.

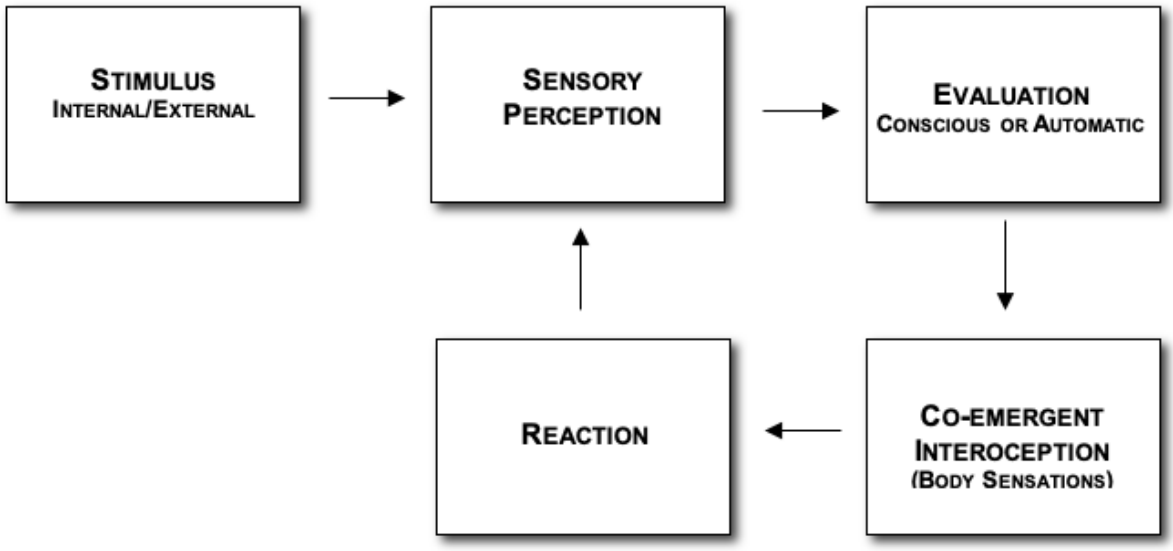

Figure 2. Components of the co-emergence model of reinforcement during equilibrium in information processing (from Cayoun et al., 2019).

MiCBT as a SG-MBI

MiCBT can be categorised as a SG-MBI (Cayoun, 2017). In relation to Singh et al.'s (2014) definitions, MiCBT is an intervention that aims not only for reductions in clinical distress but also a personal transformation in the client. A key aim of MiCBT is a rebalancing of the attentional/affective system, so as to create more balance between components by reallocating attention from evaluative and reactive processing to sensory processing, including co-emergent interoception. A related aim is the development of equanimity and a deepening understanding, at an experiential level, of impermanence. In relation to Van Gordon et al.'s (2015) definitions, MiCBT teaches an active and discriminant awareness rather than passive and non-judgmental awareness. There is still a welcoming of all thoughts and sensations, but also a discernment into the wholesomeness or unwholesomeness of that

mental event. MiCBT makes no explicit references to spirituality, and so in this regard seems to have more in common with FG-MBIs. MiCBT includes a strong focus on many elements that are traditionally taught and practiced alongside mindfulness meditation, presented within a neurobehavioural framework of Buddhist teachings. Included in MiCBT are teachings on mental states and actions that will lead to suffering (unwholesome states and actions) or the cessation of suffering (wholesome states and actions), impermanence (the notion that all phenomena are impermanent and will change in time, and more quickly and easily if we do not react to them), the importance of making effort to behave ethically, and the development of compassionate and loving states towards self and others through loving-kindness meditation. MiCBT, with its emphasis on active and discriminant ways of relating to meditative experience and on elements of practice that are traditionally seen as inseparable to mindfulness training, can thus be seen as a SG-MBI, despite it not making explicit reference to spirituality, and it is expressly referenced as an SG-MBI by Cayoun (2017).

Deep Operant Conditioning Acting Through Interoceptive Sensations

An implication of the co-emergence model of reinforcement (Cayoun et al., 2019) is an increased focus on the role of interoceptive sensations' influence on behaviour through operant conditioning processes. In the co-emergence model, interoceptive sensations are seen as the key component of experience from which all reactions or responses are prescribed. That is, behaviour is seen to be reinforced at a deep level by interoceptive sensations which can be observed through mindfulness practice to co-emerge with cognitions. An individual with a spider phobia may be experiencing fear that they attribute to a spider, but the spider stimulus is acting via the operant conditioning process of interoceptive sensations: there are sensations in the body associated with the spider that the individual with a phobia of spiders finds it difficult to tolerate. The emphasis on interoceptive

sensations means that the individual in MiCBT treatment will be guided to bring equanimous, mindful attention to the sensations in the body that co-emerge with the spider stimulus, rather than the spider stimulus itself. This conceptualisation of interoceptive sensations acting as deep-level operant reinforcers of behaviour has profound implications for treatment, as a major focus of the intervention within MiCBT becomes about skilfully working with interoceptive sensations that are held to reinforce behaviour. Mindfulness training is used to increase awareness and neutralise reactivity involved in interoceptive conditioning as it arises, which helps with emotion regulation and facilitates the deconditioning of the maintaining factors of the presenting difficulties. The co-emergence model of reinforcement also predicts that a thought that has a stronger sense of self implicated within it (e.g., "I am unlovable") will have stronger sensations associated with it than a thought that is less implicational / self-referential (e.g., "I am noticing the thought that I am unlovable"), which links to common theories of the mechanisms of mindfulness involving alterations in self-referential processing (e.g., Desbordes, 2019; Hölzel et al., 2011). The focus on non-identification helps participants to reduce the implicationality (the degree to which a thought has implications that have to do with the self) of all thoughts.

This focus on body sensations and implicationality is highly relevant in the context of clients responding to bigger-than-self reality distress. This example of MiCBT as a SG-MBI demonstrates how MBIs, and especially SG-MBIs, it could be argued, bring a strong focus on embodied aspects of cognition. The co-emergence model of reinforcement is an example of a neurobehavioural rationale for the integration of skilful ways of working with awareness of body sensations into cognitive behavioural tradition. Leaving these and other potentially important aspects of embodied cognition out of an attempt to rationally respond to bigger-than-self distress risks ignoring important aspects of psychological conditioning that maintain

self-deceptive self-defeating construals. It also risks leaving out important tools for dealing with the causes of psychological distress: if the embodied aspects of cognition are not included as part of a range of potential psychological tools within an intervention for bigger-than-self, then the client will be the poorer for it. Given the link of interoceptive sensations and the ability to discern between wholesome and unwholesome mental states, excluding embodied aspects of cognition risks robbing clients of tools that can enhance their ability to see through self-deception and cultivate a field of affordances that facilitates an optimal grip on reality. Wisdom development is richer for the inclusion of skilful approaches to embodied cognition. MiCBT and the co-emergent model of reinforcement represent an example of such an approach.

MiCBT in Relation to Criticism of Contemporary MBIs

This section examines how MiCBT relates to criticisms of contemporary mindfulness programmes discussed first in Chapter Three, in relation to Monteiro et al.'s (2015) three broad categories of criticism: (1) elements of Right Mindfulness, (2) meeting obstacles, and (3) ethics. MiCBT as a programme includes strong teachings on discernment between Right and Wrong Mindfulness; clearly includes teaching of both the 5 hindrances and 10 maturing factors, which are similar to the 7 factors of enlightenment; and a very explicit inclusion of ethical practice.

Discernment of Right Mindfulness

Accurately discerning between wholesome and unwholesome mental states is included as a central part of mindfulness training in MiCBT (Cayoun, 2015). Cayoun (2015) discussed how the purpose of mindfulness training is not to prevent all thoughts from emerging but to prevent mental states that are likely to lead to suffering (unwholesome mental states) and cultivate mental states that are likely to lead to the cessation of suffering (wholesome mental

states; Cayoun, 2015). To enable this to occur an individual requires the ability to distinguish between these wholesome and unwholesome mental states. Broadly, thoughts that are associated with a fixed and illusory sense of self that we judge or compare present moment experience with are explained in MiCBT as being likely to promote craving and aversion to that experience, and so create suffering and are considered unwholesome (Cayoun, 2015). Moreover, these kinds of self-referential thoughts generally co-emerge (as described by the co-emergence model of reinforcement) with sensations that have particular qualities. Unwholesome thoughts will tend to be associated with heavy, dense, agitated and hot sensations in the body, in contrast with more wholesome, loving, kind, calmly determined thoughts that tend to be associated with subtler, lighter, less dense, less agitated, and less hot sensations.

The focus on the link between co-emerging thoughts and sensations appears to be a significant contribution of second-generation MBIs in helping clients to discern into the impacts of their ways of being on other beings and socio-ecological systems within bigger-than-self reality. That is, when focused on and identified with thoughts related to a fixed sense of self, the co-emergence model of reinforcement, which is based on experiential observations of a 2500-year-old tradition, would predict that individuals would tend to feel heavier, more dense sensations, whereas when mindfully relating to the content of experience from a place of less personal identification with it individuals might feel lighter, more diffuse, flowing sensations. This can help to illustrate, on a moment-by-moment, phenomenological level that is able to be tested in our direct experience, the link between internal states of distress or wellbeing and their likely impact, over time, on bigger-than-self reality. What is suggested by this phenomenon is that when individuals are caught up in thinking about how the content of our experience relates to themself (e.g., their career

prospects, personal worthiness, or desirability as a friend or romantic partner), then they are less likely to feel a sense of wellbeing. Mindfulness offers a chance to observe this repeatedly in direct experience and to investigate for oneself the truth of the matter. This is a quite direct example of how mindfulness can help to refocus individuals' attention onto bigger-than-self issues in a way that is consistent with wellbeing, in moment-by-moment experience: when engaged in non-self-referential processing, evidence reviewed through the first half of this thesis suggest individuals will tend to experience co-emerging sensations that are more pleasant.

This aspect of teaching on wholesome and unwholesome states is first delivered in Week 2 of the MiCBT programme, which is when mindfulness is first delivered (Cayoun, 2015). Teaching on preventing unwholesome states and developing and maturing wholesome states is then reinforced throughout the course of the programme, especially in the final empathy stage, where participants are taught loving-kindness meditation and ethical practice. The link between thoughts and sensations is emphasised throughout the programme, and it is this co-emergence that is central to discernment between wholesome and unwholesome mental states in MiCBT. It seems noteworthy that sincere loving and compassionate intentions towards self and others co-emerge with more pleasant co-emerging sensations, and this is suggestive of a relationship between focusing intentionally on cultivation of wholesome intentions towards bigger-than-self reality, even on a moment-by-moment experience basis, is linked with wellbeing. Note that in this conceptualisation of self, the self that is being referred to is the fixed sense of self, the ongoing narrative-based construction that is associated with default mode network processing (e.g., Brewer, Garrison, & Whitfield-Gabrieli, 2013) minds tend to reproduce on an ongoing basis. Note also that this leads to a potentially more psychologically precise definition of bigger-than-self reality, which would

define it as anything outside this ongoing narrative construction of self is referred to as bigger-than-self. This definition would include self-organising processes within the brain that can be perceived to occur without the need for a self to direct it – such as the experience of an intrusive thought or a sudden insight. An understanding of what are traditionally known as the five hindrances and seven enlightening factors can help in training the mind in such a way as to disrupt this default pattern of narrative self-making and assist in developing the mind in such a way that leads to more beneficial impacts on self and other beings.

Teaching on Five Hindrances and Seven Enlightening Factors

The five hindrances are taught as a central component of MiCBT, typically included in week two of the programme. Participants are introduced to the concepts of craving; aversion; lethargy and drowsiness; restlessness, worry and remorse; and doubt through a Frequently Asked Questions section in the MiCBT self-help book that often accompanies the delivery of the programme (Cayoun, 2015). Participants are typically directed back to this section and otherwise reminded of its content several times throughout the course of the programme. The five hindrances are framed as normal, expected parts of the meditation practice that can be used as tools for increasing skills of practice (Cayoun, 2015). This too has significance in relating to bigger-than-self issues, that the times that our attention is drawn away from wholesome states are not seen as problematic or erroneous but instead as opportunities for transforming the normal background mental distress into more wholesome states that lead towards the bigger-than-self issues that we naturally care about.

The seven enlightening factors are not explicitly emphasised in the main course of the MiCBT programme, but the traditional “10 perfections” are introduced in the final week as 10 maturing factors that can support ongoing wellbeing after the formal programme of MiCBT has finished (Cayoun, 2015). These 10 maturing factors are framed as qualities that can help

individuals to grow personally, and as factors that mutually reinforce each other and are quality signals that can be used to maintain a high quality of practice (Cayoun, 2015). The 10 factors are generosity, virtue, renunciation, insight or wisdom, energy or effort, patience, truthfulness, determination, kindness, and equanimity. Note that these are states that lead attention away from the fixed sense of self and have a generally pleasantly valanced feeling tone associated with them: it feels good to experience these states and experiencing them during mindfulness training can reinforce the mind's developing tendency to experience them more often, potentially altering reward signal processing mechanisms within the brain (e.g., Garland, 2016; Geschwind et al., 2011). Also note that these states, or their perceived lack, may trigger one or more of the five hindrances, for example craving to experience one or more of these factors, which in mindfulness training, is something to be noticed, welcomed, perceived in terms of its interoceptive components without identifying with the experience, until it shifts. Cayoun (2015) discussed how insight or wisdom into the causes of suffering can help to increase determination to relieve it, and how seeing these causes in ourselves can help us to be kinder both to ourselves and others, and so these factors can provide motivation and support for continuing to mature in one's practice.

Inclusion of an Explicit Ethical Focus

MiCBT includes an explicit focus on ethics, both in awareness of thoughts and behaviour (see Cayoun, 2017, for an explication of the rationale for and implementation of the inclusion of ethics in MiCBT). The rationale for this is that focus on ethical behaviour is likely to lead to increases in wellbeing, reduction in likelihood of relapse (as focus is on expanding ethical behaviour and feelings of compassion rather than self-referential topics), and increased discernment and wisdom into, for example, right mindfulness and the link between our behaviour and its effects on other beings (Cayoun, 2017). The section of treatment that

focuses most strongly on ethics is the empathy stage of the programme, or week nine of the standardised approach. In week nine, the practice of five daily ethical challenges are introduced alongside the practice of loving-kindness meditation. These ethical challenges are formulated to complement the kind and loving thoughts towards self and others that are generated through loving-kindness meditation and tie them to real-world behaviour in order to ground those intentions in client's the day-to-day activities (Cayoun, 2017). The five challenges are based on the five precepts practiced in traditional Buddhism (harmful speech; killing; stealing; inappropriate sexual action; and taking intoxicants), but are couched in terms of behaviour experiments, as fitting the cognitive behavioural therapy approach that MiCBT takes (Cayoun, 2017). That is, the client is encouraged to experiment with these ethical challenges for a week, to use them as a hook for mindfulness practice, and to observe the results on their wellbeing. Cayoun (2017) further discusses how the focus on ethical behaviour naturally develops in conjunction with the cultivation of loving-kindness and wholesome states, that if these practices are to be sincere then it is necessary to practice this in daily life, and that practicing in daily life can help to reinforce practice done in formal meditation, that ethical behaviour can be a hook for mindfulness in daily life. That is, individuals can use ethical challenges to cue reminders to practice remembering to come into the present and recommit to ethical behaviour, and in this way mindfulness practice and ethical behaviour can be mutually reinforcing.

McCown's Relational Pedagogy: The Ethical Space as a Pervasive Feature of MBIs

Differences between traditional and contemporary approaches to mindfulness training and between FG- and SG-MBIs were discussed earlier in this thesis. McCown's (2013) work on articulating an ethical space of MBIs is informative in this debate and offers an alternative way of synthesising ethics in contemporary MBIs than the MiCBT approach. McCown's work

turns the apparent dichotomy between traditional and contemporary approaches to teaching ethics, implicit and explicit, inside out to some extent and reveals a middle way through the formerly opposing viewpoints. This middle way is made possible through a rethinking of how MBIs are actually taught: not by presenting a different model of MBI but through looking at what happens in existing MBIs (specifically MBSR) in a new way, from a qualitative perspective. He suggested that mindfulness is not so much a technique that an individual performs but a pedagogy that one learns to practice through participating in what he calls the ethical space that is created within an MBI. An understanding of what he means by this ethical space can be informative not only in finding a possible resolution to the debate between traditional and contemporary approaches to MBIs, but in giving an insight into the design of a wisdom development-focused MBI for bigger-than-self reality distress.

Within the ethical space of MBIs, individuals process experience in ways that McCown (2013) argued are characteristic of them (for example, in a corporeal manner which examines the felt experience of subjective phenomena as they present themselves sensorily). McCown delineates seven characteristics of MBIs that come together in the embodied and embedded environment created within an MBI, which he presents as a pedagogy. These seven characteristics (corporeality, contingency, cosmopolitanism, non-pathologising, non-hierarchical, non-instrumental, and friendliness), McCown described as being co-created by participants engaging in the pedagogy together, in the specific time and context of the MBI. This participatory co-creation of the pedagogy, which is conceived as something that is continuously refreshed in each new moment, serves to bring attention to experience in certain ways that affords participants to learn to perceive differently, and it is this mindful re-perceiving that is an emergent property of engaging with the pedagogy that we call mindfulness, in McCown's view. Moments of mindfulness, for McCown, are an emergent by-

product of engaging with a pedagogy, rather than a result of attempting to conform one's mind to some pre-defined idea of a mental state: they emerge out of the process rather than being something that one practices directly. This differs from standard conceptualisations of mindfulness in the research literature, which model it as a form (e.g., "paying attention in a particular way: on purpose, in the present moment, and non-judgmentally", Kabat-Zinn, 1994, p. 4) that is learned, conformed to, and passed on from teacher to participant in a means similar to the transfer of information in didactic instruction. While these definitions have value, they can obscure the qualitative dimension of how moments of mindfulness are arrived at within MBIs, McCown contends.

This focus of McCown (2013) on processes (i.e., engaging in the pedagogy) over content (i.e., mindfulness as a predetermined concept in itself) opens a new way of viewing the relationship between traditional and contemporary approaches to teaching mindfulness. Mindfulness can now be viewed as a continuously emerging and ever-changing output of a living process that unfolds between individuals in a real-time context (e.g., an MBI group, or the relationship between a therapist and their client). In the context of bigger-than-self reality distress, where the interest is in developing wise responses in diverse contexts, this ever-fresh quality allows for mindfulness and its resultant insights and changes to construals to be living and reimagined for contemporary contexts without negating traditional mindfulness instructions or teachings. McCown's way of formulating mindfulness offers a middle way in the debate between traditional and contemporary approaches to teaching. This is achieved, alongside what has just been discussed, with the assistance of one of the seven aspects of McCown's pedagogy, cosmopolitanism.

In cosmopolitanism, the meaning that is made of experiences is not prescribed in advance or conforming to one ideological or theoretical position (McCown, 2013). Instead,

the way of relating to the experience within McCown's conceptualisation of the ethical space or pedagogy is one of openness and curiosity, including in the meaning or interpretation that is overlaid onto the experience. This interacts with other aspects of the pedagogy, notably a non-hierarchical stance towards experience, where no one is the expert in interpreting or prescribing another's experience. Instead, instructions are offered suggestively, and experience is interpreted in a way that is not prescribed by the teacher but co-created, non-hierarchically in the present moment context that is the ethical space of the MBI. The clinician might offer interpretations, but these are not taken as a final or authoritative view of how experience should be interpreted. For example, a client of Māori descent might interpret the practice of observing the breath differently than a client of European descent, while someone of Christian faith might interpret their experience of insight differently than an atheist or Buddhist. A skilled clinician, in this pedagogy, could allow these multiple ways of interpreting experience to co-exist in the space, and for each individual to have their own cultural interpretation of the experience.

McCown's conceptualisation of mindfulness training as being pedagogical and co-created in a participatory fashion rather than being conceived in terms of adherence to one philosophical tradition or therapeutic modality helps to resolve the apparent tension between traditional and contemporary approaches to mindfulness training. Through a stance of cosmopolitanism, traditional interpretations of mindfulness training and teaching can be integrated into contemporary MBIs, as can wisdom from other traditions, frameworks, and cultural worldviews. Cosmopolitanism affords psychological flexibility in interpreting, for example, how much and what kind of explicit ethical instruction the teacher might give, or in articulating the difference and potential complementarity between non-judgment and active discriminatory awareness between wholesome and unwholesome states. These can arise in

the moment, in the practice of the pedagogy, rather than being a feature of a predefined conceptualisation of mindfulness that is assumed to be transferred didactically. Approaches that are in service of the client and their own wisdom development, in the context of them learning to respond adaptively to bigger-than-self reality, are prioritised; whether the source is traditional or contemporary is secondary.

In the to-be-proposed wisdom development pedagogy, it is suggested that McCown's emphasis on mindfulness as something that is co-created by individuals participating in a pedagogy together be retained, and built on. This stance of cosmopolitanism allows, in the proposed pedagogy, the clinicians and clients a flexibility in bringing in sources of wisdom that fit their socio-ecological context, which includes such factors as personal, occupational, or culturally specific knowledge. That is, diverse sources of wisdom can be brought into the pedagogy as a way of helping the clients process their experience and coordinate their wisdom development process in an embodied, enactive way. For example, either the four stages of Cayoun et al.'s (2019) MiCBT or Macy and Johnstone's (2012) ecopsychological work could conceivably be offered within the context of a therapeutic intervention for bigger-than-self distress, allowing the clinician and client a kind of philosophical eclecticism that fits what is judged to be most useful and relevant in that given moment in that particular context for that particular person.

An Integrative Mindfulness-Based Pedagogy for Processing Bigger-than-Self Distress

At this point we are quite close to having an initial, mindfulness-based pedagogy for bigger-than-self distress. In laying out the discussions of MBIs and mindfulness training more generally, and MiCBT and McCown's relational pedagogy specifically, we now have sufficient ingredients on the table to synthesise them into such a integrative pedagogy. Such a pedagogy starts with the phenomenological experience of the present moment, with

bringing curiosity to it in such a way that is characteristic of McCown's pedagogy and the MiCBT approach. Bigger-than-self distress is experienced, like any mental or emotional experience, in the present moment, and so bigger-than-self distress can be observed and inquired into using such a pedagogy. Such an integrative pedagogy would integrate the nonjudgmental acceptance stance of FG-MBIs with the active discernment stance of SG-MBIs. It would integrate the implicit and explicit stances on teaching ethics through a cosmopolitan freedom of including wisdom and insights from multiple external sage systems that can be plugged or woven in to the pedagogy depending on the individual or group and socio-cultural context that it is being practiced within. It would allow for a kind of embodied cognitive restructuring to occur that integrated a more co-emergent understanding of the relationship between appraisals and interoceptive body sensations, and the deep operant conditioning that sustains certain patterns of thinking that if often untouched by cognitive reappraisals alone.

However, as yet it is premature to fully flesh out such a pedagogy here. I mention the possibility of doing so as a kind of bookmark of progress at this point in the thesis. For a number of years, a pedagogy such as this was what I used in my personal life to process bigger-than-self distress. This helped a lot, and I found it helped me to develop along a trajectory that, as mentioned earlier, was consistent with the cognitive behavioural tradition yet which extended beyond it. The focus on continual present moment practice seemed to help to address the systemic assault nature of bigger-than-self as I conceptualised it in Chapter 1. Because bigger-than-self distress was experienced as something that was everywhere I looked, it helped to be able to be present in mindful ways in each present moment. It allowed me to become aware of the co-emerging sensations, my embodied

experience of this bigger-than-self distress, and to practice interoceptive exposure to these sensations.

Engaging in a kind of mindfulness-based pedagogy as I moved through daily life also led to a broadening of awareness of different ways of reappraising my experience of bigger-than-self distress. This was a process that was highly recursive and intertwined with my thesis: I was fortunate to be able to spend time intellectually making sense of the issues and to feed this intellectual sense making process back into my mindfulness practice. What this led to was a kind of continuously iterative process that led to an expansion and complexification of my own practice that become something more than a mindfulness pedagogy. This was quite destabilising and deeply confusing to go through, but ultimately has led to something that has genuinely got to the heart of my experience of bigger-than-self distress and allowed for its transformation into something resembling flourishing in the face of bigger-than-self distress. In this process, the integrative mindfulness pedagogy alluded to here evolved into something more complex, broad, deep, and transformative resulted, something I am calling nondual enactive wisdom development. It is this nondual enactive wisdom development process that is the more elaborated response to bigger-than-self distress presented in this thesis, and the rest of the thesis is focused mostly on setting up and articulating this.

Chapter 6: Big History and The Systems View of Life

Autoethnographic Intro: Mindfulness as a Gateway to Systems Thinking

On a personal level, I found the mindfulness practices outlined in the first half of the thesis very beneficial, and they helped me process a significant amount of bigger-than-self distress. However, after a certain amount (years) of daily practice as per the MiCBT protocol, the mindfulness practices I was using started to become less effective: more effort went into maintaining the practice and the gains in awareness, ease, and reduction of distress were relatively less. My awareness of this phenomenon grew slowly over the course of about a year. I then spent another 12 months experimenting with other psychological and embodied practices, including attending longer-form meditation retreats, to attempt to find practices that genuinely helped in processing the deeper levels of distress that mindfulness practice (in the form taught in MiCBT) did not seem to reach, at least in my own embodied system.

What follows in the second half of this thesis describes the results of what I found to be helpful in addressing this deeper level of bigger-than-self distress. This was not a simple or linear process, and I found that I lacked the psychological and scientific vocabulary to describe many of the changes I went through. My view is that this area of embodied embedded psychological responding to bigger-than-self distress is in many ways a new frontier of both human and scientific endeavour, one that we lack both the vocabulary and cultural frameworks to describe and participate in easily. This in some ways is an unconventional gap in the literature: it is difficult to discuss because in my estimation our existing language and cultural frameworks do not easily afford us to, so the gap is not one that can necessarily be filled with a more conventional empirical study and requires some theoretical innovation. I have tried to cite relevant literature wherever possible – for

example, the general territory I am exploring of embodied embedded responding to bigger-than-self distress is partially covered by discussions of the Cartesian split between mind and body, mind and matter, man from nature, and science from spirituality (e.g., Capra & Luisi, 2014), and corresponding dualistic understandings of cognition (e.g., Varela et al., 1991). As a result, science has developed in a way that has been relatively disconnected from everyday human experience (e.g., Varela et al., 1991; Merleau-Ponty, 1962), human experience has been relatively divorced from scientific understanding, and examples of integration of the two are under-developed. The interdisciplinary field of cognitive science, including that of 4E cognition, which will be discussed in greater detail in Chapter 7, is one attempt from the scientific side of this polarity to draw science into closer relationship with everyday embodied embedded human experience. The praxis of responding to bigger-than-self distress through nondual enactive wisdom development that is outlined in the remaining chapters of the current thesis could be understood as an attempt from the experiential side to integrate a scientific understanding of what is happening in the world today into human experience.

As this is in my view a relatively new frontier of both scientific and human experience, it has been relevant and useful to invent new terminology in places where existing terms do not appear to suffice. There is precedent for this in the field already, with the terms "autopoiesis" (Maturana & Varela, 1980, p. 73), "enactive" cognition (Varela et al., 1991, p. xx), "relevance realisation" (Vervaeke et al., 2012, p. 79), "free energy principle" (Friston, 2010, p. 127), "hierarchical predictive processing" (e.g., Clark, 2013, p. 183), "field of affordances" (Bruineberg & Rietveld, 2014, p. 2), "developmental niche construction" (Stotz, 2017, p. 1) "metastable attunement" (Bruineberg et al., 2021, p. 12819) all being introduced and defined, albeit some partially imported from other fields, in the development of the field

so far[1]. I have found it relevant and useful, too, to find and present novel scientifically informed cultural frameworks to contextualise the individual within a bigger-than-self context. Such a bigger-than-self framework is the subject of the current chapter. Again, the need for such a framework emerged in part from my own mindfulness practice and the emerging nondual enactive wisdom development journey that unfolded from it – both occurring in the context of completing a doctoral thesis and reading over and engaging deeply with relevant literature and thesis question.

The framework I present in this chapter, informed to a large extent by Big History (e.g., Christian, 2018), as well as the Systems View of Life (Capra & Luisis, 2014) and the Theory of Knowledge (ToK; Henriques, 2003) system, is one of many conceivable ways of situating humanity within a contemporary scientific worldview. These sources have been chosen for the way they integrate broad domains of scientific knowledge, their developmental and emergentist cosmology, and how they situate human experience and cognition within this larger scientifically informed cosmology. This broader contextual framework will inform the psychological interventions presented in later chapters of the thesis, and in combination with the updated view of cognition presented in the next chapter, help provide frameworks and vocabulary to better discuss and describe potential praxis for processing bigger-than-self distress and enacting nondual wisdom development.

One way of understanding the link between the first and second half of the current thesis is that the second half of the thesis builds on the empirical and theoretical understanding of mindfulness training and MBIs to include a focus on the relationship between self and world. This focus helps to bring bigger-than-self reality into the context of the therapy room by

[1] Each of the terms here are included for discussion within the current thesis and help to make up the new cognitive scientific vocabulary presented in Chapter 7.

paying attention to the appraisals, affects, and body sensations that individuals experience in relation to bigger-than-self reality and situates therapy in more mindful relationship with bigger-than-self reality by paying attention to the way that individual's embodied cognition brings forth an understanding and enactive gripping of bigger-than-self reality. Vervaeke (2019) calls this relationship between self and world the agent-arena relationship, and this relationship is included in a much more central way in enactive theories of cognition (e.g., Varela et al., 1991). This unfolding relationship between self and bigger-than-self reality is consistent with (but not explicitly included within) the mindfulness-to-meaning theory of Garland and Fredrickson (Garland et al., 2010; Garland et al., 2015; Garland & Fredrickson, 2019) where mindfulness training can serve to broadens one's perspective and also facilitate changes in meaning structures that underpin ways people relate to and make sense of their experience of self and world. One way of capturing some essential aspects of this shift is in describing the way I was viewing the world in terms of a "systems view of life" (Capra & Luisi, 2014).

In what Capra and Luisi (2014) synthesise under the moniker of the systems view of life, both the self and world can be seen ultimately as being made up not of separate and self-existing objects, subjects, and phenomena, but instead as giant interconnected networks existing within networks, extending down to the basic elementary levels of physical and biological organisation and upwards to highly complex multicellular life forms, society, and the biosphere of the planet itself. This systems view of life is presented as a synthesis of many converging lines of evidence and as representing a paradigm shift in our understanding of life that is occurring in diverse fields from physics to biology to cognitive science, sociology, ecology, and health, as well as presenting a viable way forward in addressing many of the systemic bigger-than-self issues facing humanity in contemporary times (Capra & Luisi, 2014).

Moreover, it is a view of life that is already being enacted in many fields, in science, business, health, education, and which many psychologists will feel a natural affinity towards, being trained in systems views in areas such as case formulation and systemic (e.g., family) therapeutic approaches. This chapter will first outline the Big History perspective that is concordant with the systems view of life and which provides among the broadest conceivable bigger-than-self contexts within which individuals might situate themselves as the current thesis moves toward a discussion of a nondual enactive wisdom development response to bigger-than-self distress.

Big History and the Cosmos: A Science-Based Creation Narrative to Situate a Global Humanity Within

The systems view of life which Capra and Luisi (2014) describe is perhaps best introduced with a narrative that starts right at the beginning, as far back as our scientific understanding of the cosmos goes. That is, we begin with the Big Bang, situated within a synthesising narrative that has been advanced within the interdisciplinary field known as Big History (e.g., Benjamin et al., 2020; Christian, 1991, 2005; Hughes-Warrington, 2002; Nazaretyan, 2005; Spier, 2008), which is fully consilient with a systems view of life. Proponents of the emerging field of Big History have been trying to re-contextualise the study of history within a larger cosmological context. Big History begins not with the beginning of written records of early civilisations where the discipline of history traditionally has started, but instead with the Big Bang (Christian, 1991). This expansionary turn arose out of interdisciplinary perspectives on history from cosmology, evolutionary biology, evolutionary psychology, and geology (Hughes-Warrington, 2002), and has involved continued contributions from multiple disciplines, including astrophysicists (e.g., Chaisson, 2005; Chaisson, 2013), economists (e.g., Grinin et al., 2011), futurologists (e.g., Last, 2017; Voros, 2019), sociologists (Patomäki, 2007), as well

as historians (e.g., Christian, 2018). A central thread linking together scholars of big history is in looking for patterns that help to organise our understanding of history in a deep, cosmological sense: for example that of the evolution of complexity from physical to biological to multicellular life, and to then human life and culture (e.g., Chaisson, 2005, 2013; Christian, 2005, 2018, Last, 2017).

Examining these big history narratives, especially the patterns of evolving complexity of the universe, can help to initiate us into a broader, more systemic view of life, humanity, and our place both within the cosmos and on this planet. We will here examine Christian's (2018) narrative in the most detail, as Christian has arguably done more than anyone to initiate and popularise big history as a serious academic discipline (e.g., Christian, 1991, 2005, 2018). Christian breaks big history of the cosmos into nine distinct stages, separated by thresholds of organisational complexity that mark the junction between stages. The first stage began 13.8 billion years ago with the Big Bang, which the best available scientific evidence available to us today suggests was the beginning of the universe, starting from an infinitesimally small point to expand out to a size far beyond anything we are likely to see from our vantage point on Earth today, within a matter of tiny fragments of a second. Within a few more tiny fragments of a second, energy had differentiated out into four different fundamental forces of gravity, the electromagnetic force, and the strong and weak nuclear forces. Before the end of the first second, energy had differentiated itself sufficiently for the appearance of matter to emerge. Structures started to appear within the first seconds: protons, neutrons, and electrons, which within a few minutes had started to form the first atoms. With the Big Bang, the universe had been born (Christian, 2018).

Until the second threshold, however, the universe was extremely simple (Christian, 2018). The second threshold brought the emergence of galaxies and stars. Entropy, or the

second law of thermodynamics, had the universe cooling, expanding, and breaking down from very early on. This force of entropy was countered by gravity, the electromagnetic force, and strong and weak nuclear forces, though, to lead to the emergence of more complex forms. Gravity brought energy and matter together even as it was expanding. As more and more atoms gathered, their gravity attracted still more particles, and this process snowballed to lead to the formation of incredibly large, dense collections of particles, which became incredibly hot. These extremely high energy conditions allowed for protons to fuse together - with hydrogen molecules (essentially protons) fusing together to form helium atoms. These fusion events produced huge amounts of energy, and when enough of these reactions happened with sufficient density, the system crosses a critical threshold of about ten million degrees, when a self-organising gigantic furnace is initiated that produces enormous amounts of energy, and which continues for as long as there are enough hydrogen atoms for fusion to continue. This is how the self-organising structures we know as stars get born. The energetic threshold for initiation of such a structure is extremely high, but once started, the structure can temporarily (even if for several billion years) avert the effects of entropy that tend to move things towards dissolution and decreasing complexity. Such self-organising structures thus temporarily increased the complexity of a universe that otherwise operated by laws of entropy – this will be a pattern throughout Christian's thresholds of emergent complexity. Similar self-organising dynamics drew stars into relationship with one another, and lead to the formation of galaxies, also occurring within Christian's (2018) second threshold.

In the third threshold, the chemical complexity of the universe greatly increased (Christian, 2018). The vast majority of atoms created in the Big Bang were hydrogen and helium, with small amounts of lithium (with three protons) and beryllium (four protons) also

created. The rest of the elements on the periodic table were not produced until this third threshold event, another event that required huge amounts of energy to initiate: the collapse of stars. Once all the hydrogen atoms have been used up, stars will end up with huge densities of helium atoms at their core. Because helium atoms require much more energy to fuse than hydrogen atoms, the furnace stops, but gravity keeps working, and stars collapse under their own mass, causing it to then heat up again. These stars are known as red giants, as their outer layers greatly expand and cool to maintain balance. Meanwhile, in the core, temperatures are hot enough to fuse helium atoms to create still heavier atoms such as carbon (six atoms) and oxygen (eight atoms). This process can continue and escalate further in very large stars, producing heavier and heavier atoms up to iron (26 atoms), at which a limit occurs. Atoms heavier than iron are created in supernovae explosions and collisions between super heavy neutron stars. This enrichment of the chemical complexity of the universe created the conditions for the next threshold, without which it would not have been possible.

The fourth threshold began with the formation of molecules, which were created from combinations of these newly formed heavier atoms, and lead to the possibility of other kinds of structures that had not previously existed in the universe: planets, moons, and asteroids (Christian, 2018). These new structures were much cooler and more chemically rich than stars, and themselves provided the conditions for entirely new levels of complexity to arise, in the form of what we know as life, whose emergence marked the fifth threshold in Christian's story. This move, to the emergence of life, which could only happen on something like a planet, or possibly large moon, as it required the chemical complexity present only on these structures, and the existence of something like an atmosphere to protect from outside cosmic forces. This move constitutes threshold five, and with it a transition in Big History

terms from the thresholds of the cosmos to the biosphere. Hopefully it is possible to see at this point how each of the preceding thresholds was necessary to lead to the emergence of a planet where a biosphere could emerge. It should be noted also that none of this implies a teleology: there is no necessity for any creator or intelligent design driving these systems inevitably towards complex life and the emergence of humans. In this way, the cosmological story of Big History differs from many pre-modern, religious, or indigenous creation narratives. It also differs from these earlier narratives in that it is a global creation story, rather than one that has arisen in a specific bioregion.

Big History and the Biosphere: From the Origins of Life to the Emergence of Human Cognition, Culture, and Global Civilisation

From the fifth threshold onwards, Christian's (2018) Big History narrative unfolds on Planet Earth. Despite its cosmological origins, Big History is still a history of this planet, and of human civilisation, which obviously arose only on this planet. From the emergence of life (threshold five), Christian recounts the journey of evolution over billions of years through prokaryotes to eukaryotes and then to multicellular life. One characteristic that stands out as potentially relevant to the predicament we as humanity find ourselves in today is the notion that breakthrough or large changes in the complexity of life is a function of both long-term trends and highly disruptive events. Evolution has been proposed to not be a smooth, gradual process but instead one characterised by punctuated equilibria, where there are long periods of relative stability where there is relatively little change that are interrupted by drastic, often catastrophic events, which precipitate much more drastic changes in either the diversity or complexity of life, sometimes both (e.g., Eldredge & Gould, 1972).

Often these changes to the environment were themselves caused by feedback mechanisms that arose from the activity of life itself impacting on the biosphere (Christian,

2018). For example, when prokaryotes then cyanobacteria learned how to convert energy from sunlight through photosynthesis, a waste product of this process was oxygen, which over time transformed the chemistry of the whole biosphere in profound ways. Oxygen was highly toxic to most living organisms at the time, and broke down a lot of atmospheric methane, a powerful greenhouse gas. Without this protective greenhouse gas to keep in heat, the Earth plunged into a period of glaciation that covered most of the Earth's surface for a period of about 100 million years. Out of this, a combination of systemic factors in the Earth's geology and biosphere eventually righted the balance. Earth's tectonic activity played a part, as volcanoes broke through the ice and spewed carbon dioxide into the air. The ice covering the surface stopped almost all photosynthesis, causing oxygen levels to drop again. And eukaryotic life evolved, which had the feature of being able to respire, a kind of opposite process to photosynthesis, which took in oxygen and produced carbon dioxide - in effect, this gave the biosphere a new way of achieving homeostasis to balance out the runaway positive feedback loops created by the introduction of photosynthesis.

Another characteristic of life that is highlighted by Christian (2018) is the centrality of information processing to life from single-celled organisms upwards. Prokaryotes had thousands of sensors in their walls, which enabled them to detect environmental changes in light, acidity, the presence of nearby food, and whether they had collided with some solid object. From these sensory perceptions, they were able to change their behaviour. This represented something like elementary forms of cognition. From prokaryotes onwards, living organisms created basic sketches of their environment. Eukaryotes added levels of complexity to their information processing, with membranes forming inside cells as well as around them and forming sense making units within the cells. They also were more skilful in movement through the environment in response to sensory inputs. Eukaryotes, because they

have nuclei, reproduced differently than prokaryotes. Rather than sharing genetic material relatively freely and somewhat chaotically, their genetic material was locked up and only shared when specific conditions were met. It would combine with another organism's DNA to create a situation where each new organism has two parents. Because of this, as well as the inherent imperfection of the copying of genetic material, the conditions were much riper for more variation in the eukaryotic world than the prokaryotic one. This increased variation and evolutionary potential created the conditions for, eventually, multicellular life to emerge (Christian, 2018).

Multicellular life required a lot of molecular architecture, which was developed in the evolution of eukaryotes over hundreds of millions of years (Christian, 2018). The era of multicellular life has born witness to many cycles of mass extinction events, followed by explosions of new species variation. The activity occurring during these periods of explosive new creation of species is known as adaptive radiation. The most recent mass extinction event, of 65 million years ago, famously led to the extinction of most dinosaur species, and paved the way for a new adaptive radiation. In this most recent adaptive radiation mammals came to the fore. Previously mammals had occupied niches in the food chain that had them be much smaller, often rodent-size or similar. Now, they evolved to be much bigger, even occupying the spots of mega-fauna. One thing that distinguished mammals from dinosaurs and other classes of animal was a tendency toward increased information processing capacities. Good information and ability to act on it gave living organisms adaptive advantages. Mammals (and birds) seemed to embody a trend towards greater capacity for information processing that had been observable throughout the evolutionary trajectory of multicellular life. This was literally embodied in their brains, which tended to devote more neuronal architecture to cortical areas which are involved in complex calculations and

problem-solving. Large brains likely evolved in mammals because, being warm-blooded, they needed to pump a lot more blood than reptiles to keep their bodies warm, and so needed increased adaptive advantage to access these increased flows of energy, which they got from becoming better information processors. This led, eventually, to Christian's (2018) sixth threshold of complexity, that of humans.

Thresholds Six, Seven, and Eight: The Emergence of Humans, Farming, and the Anthropocene

The Big History perspective grants us a broader narrative within which to view humans, and our broad similarity with, but also differences from, the rest of the cosmos and living world. Christian (2018) argues that one of the defining differences in humans is how we process information: specifically, that we go beyond just gathering it to domesticate and actively cultivate it. This allows for cultural knowledge to be formed and passed down, and for the emergence of reasoning about how the world works that can be evaluated, passed down, and even improved upon. It is from this capacity for information domestication and cultivation that cultural technological improvements developed: this could be seen as cultural evolution, which happened on timescales several orders of magnitude quicker than biological evolution. Christian (2018) calls the cultural ratchet afforded by the development of language "collective learning". Improved capacity to process information, among other factors, allowed humans to spread out around the planet to the point that by at least 40,000 years ago, populations existed in Africa, Europe, Asia, through Indonesia and Australia, joined at least 15,000 years ago by settlements throughout the Americas after humans crossed the Bering land bridge during the Last Glacial Maximum. Increasing density of population, increased stability of climate in the Holocene period since the end of the last ice age, and technological advancements from collective learning set the stage for the next and seventh threshold of complexity in Christian's (2018) narrative: farming.

The emergence of farming was analogous to that of photosynthesis in the single-celled organism era: it created an energy boom (Christian, 2018). This energy boom allowed human societies to undergo a massive increase in both size and complexity. There was enough spare energy left over from farming for some humans in society to specialise - e.g., chiefs, priests, and craftspeople. As the climate continued to be stable, human population size and density increased to the point where the first cities emerged, followed by the first states. These states represented, according to Christian, a new trophic level - they represent an organism that fed on the produce of farmers, similar to how animals feed on the produce of photosynthesising plants. The massive increase in size and complexity of states, fuelled by the energy boon from farming, both necessitated and precipitated a ratcheting up of collective learning. Contact between groups of humans, particularly in the Eurasian continent, through trade, and also competition, through war, meant that cultural and technological changes could be transmitted across local cultural groups and combined in ways that led to further innovations. This cultural and technological ratcheting increased right through to the next period of breakthrough in complexity: that of the fossil fuel revolution and the advent of modernity, including modern states and a networking of human culture that stretched across the entire planet.

Threshold Eight, for Christian (2018,) begins with the discovery of the fossil fuels coal, oil, and natural gas, and move through to the post-WWII period we are in now. It marks an era, known as the Anthropocene (Crutzen, 2002) where a single species of organism became the dominant force for change on the biosphere for the first time. This was unique in the history of the planet, with the possible exception of when the first prokaryotes and cyanobacteria learned to photosynthesise and there were no counteracting organisms to process the oxygen pumped out by this new biological innovation. In the Anthropocene, for the first time

in human history, quality of life improved for more than just a small proportion of the human population, interpersonal and inter-group relationships have become less violent overall, modern medicine has drastically decreased mortality from many diseases, and we have unparalleled technological capability and complexity compared with any other period in history. However, many of the aspects of the Anthropocene period have produced less than ideal outcomes, too, for humans but arguably especially for ecosystems and non-human life forms. In terms of human life, the Anthropocene is not without struggles and injustices for many humans – in the forms of inequality, poverty, conflict, prejudice, lack of access to quality healthcare. As reviewed in Chapter 1, the developments of the Anthropocene have put existential stress on the biosphere's ability to support a complex global human civilisation, let alone many other species of life. These "bad" aspects of the Anthropocene period are obviously worrying if not deeply disturbing, and bigger-than-self distress can be seen, from a systems lens, as information pointing us towards aspects of our ways of living that are in need of correction in some form.

The challenge humanity faces now, according to Christian (2018), is to see whether we can "preserve the best of the Good Anthropocene and avoid the dangers of the Bad Anthropocene". Christian focuses on the pattern that had emerged again and again throughout his analysis of Big History, that of flows of energy, and whether we can learn to harness energy in ways that are gentler, and which do not shake the very foundations on which our complex civilisational architecture is built. He posits that to do this some new and not-yet-known threshold will have to be crossed, a hypothetical Threshold Nine, which will enable us to achieve three goals: avoiding a crash, ensuring the biosphere can continue to thrive, and that the benefits of the Good Anthropocene are available to all humans. He argues that many of the systemic factors necessary for such a shift are already present or

emerging: a huge amount of intellectual scholarship and scientific understanding of the world (huge complexity of information), a much better understanding of how the biosphere works, and a growing awareness that we all share one home and one fate, that of Planet Earth. Despite this, the picture he paints is one that is far from inevitable and hanging in the balance. What happens next is up to the current cohort of humans and, if we keep the quest alive for long enough, those immediately following us.

From Big History to Cognition: Self-Organising Systems, Autopoiesis, and Continuity Between Life and Cognition

Implications of the Big History Cosmology and Links to Systems View of Life

Christian's (2018) invitation into humanity taking responsibility for keeping the game alive and steering away from catastrophic collapse scenarios brings us back to the main thrust of this thesis, and what individuals can do within this larger cosmological and biospheric narrative to contribute towards this quest. Christian's narrative also lands us, in context, in the middle (not the end) of a long process of evolving cosmological and biological complexity. This evolution of complexity has continued in humans, through the evolution of our cultural knowledge and capacity, which relies on our cognitive capacities to process information. This Big History framing presents an opportunity for individuals to view themselves in a broader, deeper narrative that connects them to the cosmos, planet, and human culture past, present, and future. This narrative may differ from those which tend to predominate in day-to-day life, which can tend to focus on short-term political cycles (e.g., Stewart, 2020), individual happiness (e.g., Shrader-Frechette, 1996), consumerism (e.g., Kasser & Kanner, 2004), and more exclusively or unbalanced anthropocentric views of the world (e.g., Kopnina et al., 2018) and utilitarian views of nature (Monday, 2021), cultural legacies handed down to us from recent centuries.

Mindfulness practice in the context of bigger-than-self reality and bigger-than-self distress allows these and other predominant narratives and framings to become an object of meditation: to see how these cultural patterns exist and are maintained in our personal psychologies. Mindfulness also opens individuals to the potential for reappraisal of these narratives and the psychological factors that maintain them. By acting as a container for and catalyst of metacognitive awareness of one's appraisals, affects, and body sensations in relationship to bigger-than-self reality, mindfulness practice can serve as a kind of fulcrum for cognitive change in an individual's agent-arena relationship. I suggest that the Big History narrative is one overarching narrative that can be used as material for such reappraisal of bigger-than-self reality that individuals understand themselves as existing within, and so can help to reform one's individual agent-arena relationship. The notion that one can be mindful of and change cultural legacies within one's own cognition is an important idea within this thesis, and warrants further discussion. In order to do so, discussion now turns to Henriques' (2003) ToK system, which complements and builds on Christian's Big History narrative and situates psychology as a field within a similarly expansive cosmological bigger-than-self picture.

From Life to Cognition to Culture, and Situating Psychology Within It All: The Theory of Knowledge System

Having established a narrative that links cognition with life, and life with a larger narrative of cosmological evolution of complexity, we can begin to explore how psychology, both as a field as well as that of individuals, fits into these broader narratives and understandings of life and cosmos. The threshold at which complex human cognition emerges is also the level at which human culture arrives: they co-emerge together (Christian, 2018). This is true in Christian's Big History framework and is also true in Henriques (2003) ToK system, which

posits a similar emergentist cosmology that also begins with the Big Bang. The level of cultural cognition, as it is understood within the Theory of Knowledge (or ToK; Henriques, 2003) system described below, is the level at which psychological interventions affect change. This cultural cognitive level is highly relevant to processing bigger-than-self distress and finding ways forward to respond to the meta-crisis in today's global culture and our own specific local cultures within our socio-ecological niches. Henriques' (Henriques, 2003, 2011; Henriques et al., 2019) ToK system and the justification hypothesis within it helps to link cognition and culture together, within a larger cosmological framework that shares many similarities with the Big History framework (Henriques et al., 2019).

Originally the ToK system was devised with the intent to link psychology within a larger cosmological and scientific framework that could create consilience both within psychology (between seemingly disparate sub-disciplines) and between psychology and the other natural sciences (Henriques, 2003). With the ToK system Henriques sought to place psychology as a discipline within a context that can clarify its conceptual boundaries and lead to it becoming a post-paradigmatic science similar to physics and biology, rather than a disparate collection of competing and sometimes contradictory, sometimes unnecessarily repetitive theories and empirical studies Henriques argues is the case in psychology today. Though the two systems evolved independently, the ToK system has quite strong similarities to Big History, in that it situates itself within a cosmological narrative beginning with the Big Bang and involves emergent levels of complexity that are different to but arguably consilient with Christian's (2018) nine thresholds or Chaisson's (2005) eight levels of complexity. Indeed, Henriques has explicitly written on the link between the ToK system and Big History and posited that there is the potential for a fruitful synergy between the two, with the Big History narrative's

historical focus and the increased emphasis on psychology within the ToK system (Henriques et al., 2019).

In the ToK system, there are four levels of complexity or ontic levels: matter, life, mind, and culture (Henriques, 2003). Between each stage is what Henriques calls a theoretical joint-point, a framework that provides a causal explanation for the difference in complexity between levels as well as how the leap in complexity came about. The Big Bang is the first joint point, describing how energy transformed into matter. The joint point explaining the jump in complexity from matter to life, in the ToK system, was natural selection operating on early genetic material. The causal theoretical explanations in these first two joint points are obviously not new or unique to the ToK system, but as in Big History does provide a cosmological context within which to situate the next two joint points. The sciences associated with the first two levels of complexity are physics, corresponding with the study of matter, and biology, corresponding with the study of life. Between the third and fifth joint points lies the realm of psychology, according to the ToK system (Henriques, 2003).

The next two joint points are at the heart of the ToK system and help to provide the boundaries within which psychology as a science sits. These two joint points are associated with a revised, updated, and naturalised understanding of the insights of two giants of the field of psychology, Skinner and Freud. The third joint point, between life and mind, is associated with the animal nervous system and with neurobehavioural principles of conditioning and selection of behaviour that can be seen as a combination of Skinner's work and modern neuroscience (Henriques, 2003). The fourth joint point, between mind and culture, is associated with the evolution of symbolic complexity that emerged in humans and rests on the capacity for justificatory reasoning, which Henriques (2003) links with a critiqued and updated version of Freud's original insights. Psychology spans both the mind and cultural

optic categories, with culture also being the realm of other social sciences. This link between psychology and culture is reflected in the joining of the two in psycho-cultural metabolisation, discussed in Chapter 10.

Skinner and the Third Joint Point: Operant and Cognitive Neuroscientific Determinants of Animal Behaviour

Henriques (2003) identifies the central insight of Skinner as being that of behavioural selection via operant conditioning, which applies equally to animals and humans. He argues that there is nothing about this idea that stops it from being integrated with a cognitive neuroscience perspective, yet this has not been achieved, due largely to Skinner's equating of the behavioural selection insight with an epistemological programme that became, in his view, the proper and only position of psychological science itself. Henriques points out that Skinner's rejection of a neuro-information processing view of the nervous system was never properly justified and goes on to reconcile the two. Henriques (2003, pp. 159-160) defines behavioural science as taking an outside-in or third-person view of animal behaviour, which treats such behaviour as information and attempts to understand and describe functional relationships in changes between animal and environment. Cognitive neuroscience, far from being a competing and incompatible scientific programme, is simply the other side of the same coin. Cognitive neuroscience, in the ToK system, is seen as taking an inside out or first-person view of the brain as an information processor and attempts to understand and describe nervous system changes that correspond to changes between the animal and environment. In this way, both behavioural science and cognitive neuroscience can be seen to study the same behaviour, from different points of reference.

The Skinnerian joint point between life and mind is formalised as a causal explanatory model with Behavioural Investment Theory (BIT; Henriques, 2003). BIT posits the nervous

system as an information processing system that "computes and coordinates the behavioural expenditure of energy of the animal-as-a-whole" (Henriques, 2003, p. 160). The matrix that calculates investment of energy, in Behavioural Investment Theory, combines phylogenetic determination (distal causation) through biological natural selection as well as developmental determination in the individual life of the organism (proximal causation) through behavioural selection operating on neural combinations. That is, evolutionary mechanisms operate both phylogenetically and ontogenetically to select behaviour that tended to be associated with ancestral and current adaptive fitness. This level of evolutionary complexity is just as present in humans as it is in animals: we are subject to phylogenetic and ontogenetic selection pressures on our behaviour as all animals are. What is different about humans, according to Henriques' ToK system, is that we are also cultural-symbolic creatures and our behaviour can only be partially explained by behavioural and cognitive neuroscientific principles. Much of the rest of the explanatory power, according to the ToK system, can be found within the essential insights of Freud, if properly critiqued and updated to fit within a modern evolutionary framework.

Freud and the Fourth Joint Point: Cultural Justification Systems and Their Explanatory Power in Understanding Intrapersonal, Interpersonal, and Social Behaviour

If the central insight of Skinner was of behavioural selection via operant conditioning, what did Henriques view as the central insight of Freud? Henriques (2003) identified this central insight, as others had before him (E. Jones, 1955; Westen, 1999), as being that there are intelligible patterns behind the reasons people give for their behaviour. For Freud, this pattern was the dynamic unconscious. For Henriques, this pattern is an updated, evolutionary psychology consilient version of the relationship between Freud's terms of the id, ego, and superego, which compromised a system for justifying one's behaviour within

socio-linguistic contexts. Henriques argues that Freud, while often wrong in the details of his theory and unscientific and dogmatic in the constructions of such theories, can be understood in a more consilient light if properly updated to a naturalistic and evolutionary framework. Freud's id, which he posited as being about unconscious drives that were seeking discharge, a process akin to hydraulic forces seeking release from being pent up, can be recast as being about the biological component of the psyche. This biological rendering of the id fits within Henriques' (2003) BIT as the phylogenic or distal selection pressures on behaviour. As Henriques (2003, p. 165) puts it: "Freud's id provides the energy that drives behaviour. BIT is a proposal for a nonverbal behavioural system that guides and coordinates the expenditure of behavioural energy." We can see this biological neurobehavioural system as being consilient with theories to be discussed in the next chapter: Maturana & Varela's (1980) theory of autopoiesis, or Bateson's (1972) patterns of mind present within biological systems: systems within the body coming together to form behavioural impulses (e.g., eat, sleep, sex, and basic emotions).

In organisms of the cognitive complexity of humans, however, it is not enough to simply rely on the biological systems and Skinnerian behavioural selection. To do so would result in potentially dangerous or socially inappropriate and maladaptive behaviours being expressed. As human cognitive capacity increased, a threshold emerged whereby humans gained the capacity to begin to become aware of themselves, probably in quite a rudimentary way at first. This capacity, Henriques (2003) argues, would have been closely followed by a need to justify their actions to other humans. That is, given that there was a self to carry out actions, others would have wanted to know the reasons behind those actions, and this would have required a justificatory system to develop within the individual's cognition. This justificatory system would serve to justify one's actions to others (the ego function), justify one's actions

to oneself, and to regulate one's actions in relation to the culture's array of acceptable forms of behaviour (the superego function acting on ego and id). This justification hypothesis (e.g., Henriques, 2003; 2011) stems from this set of distinctions alongside the updated naturalistic evolutionary understanding of Freud's central insight.

The justification hypothesis, for Henriques (2003; 2011) not only explains the joint point between animal neurobehavioral Skinnerian principles and human psychology, but also is used to explain the emergence of human culture as a new level of organisational complexity in the (known) universe. The capacity to justify behaviour would have created a new kind of evolutionary rachet or set of selection pressures that were of a different level of emergent complexity than the previous, Skinnerian behavioural selection pressures. That is, the capacity to justify one's behaviour would have led to selective advantages for individuals in groups, and also between groups of people (Henriques, 2003). Those individuals and groups who could more effectively justify their actions, and whose justifications mapped onto the capacity for adaptive success, would tend to reproduce more.

This capacity for justification, and the closely related but distinct capacity for symbolic language, then set the scene and indeed made inevitable the creation, transmission, and development of new kinds of information: cultural knowledge. This cultural knowledge could be passed on and adapted from generation to generation, eventually spawning complex justification systems, which were defined by Henriques (2011, p. 113) as "the interlocking networks of language-based beliefs and values that function to legitimize a particular version of reality or worldview". These justification systems fed into culture, the essence of which Henriques (2003, p. 176) defined as "the presence of large-scale belief systems that function to coordinate and legitimise human behaviour." He uses the examples of laws, religions, sciences, myths, and institutional structures as being justification systems that make up

culture. The leap to justification and subsequent emergence of the cultural layer enabled a much faster evolutionary trajectory than either biological evolution or behavioural selection, which we saw in Christian's (2018) account of human history, how human cultural evolution occurred so much more quickly than the evolution of the cosmos and biosphere.

Implications of the ToK System

With the justification hypothesis and behavioural investment theory, we have an established psychological theory that links human cognition with culture, all within a broader cosmological framework that is continuous with that described by Christian (2018) and the wider Big History field. Crucially, both the behavioural investment theory and justification hypothesis point to contents of cognition that are available to mindfulness practice. Mindfulness can bring awareness to behaviour and its reinforcers, for example viewing interoceptive sensations as deep operant reinforcers of certain reappraisals as in the co-emergence model of reinforcement (Cayoun, 2011). Similarly, mindfulness can bring awareness to the cultural justifications that we use to explain reality to ourselves, other people, and to become aware that the justifications we learn from our culture are contingent rather than objectively true or historically necessary.

Mindfulness practice can make these contingent cultural justifications salient where they once were in the background (e.g., implicit bias; Stell & Farsides, 2015). As a practice, mindfulness affords another way of viewing cultural justifications: through the lens of wholesomeness/unwholesomeness. That is, individuals now have an extra source of information by which to discern the wholesomeness of an idea or pattern of conditioned behaviour. This allows individuals to gain awareness of blind spots where they might be perpetuating behaviour that is harmful to themselves, other beings, or more diffuse aspects of bigger-than-self reality (such as pollution of the environment). A pattern of habitually

thinking about oneself in a certain area of life might be revealed in meditation, and with this awareness could arise an awareness of an option to think about other people and their preferences. The former pattern might co-emerge with heavy, tight, constricted sensations, while the latter might be looser, more diffuse, and lighter. In this way, becoming aware of the former pattern and mindfully adopting the latter pattern reduces the experience of distress and increases both present moment subjective wellbeing (via a change in sensations) and potentially future wellbeing for you and the other people who are newly considered in this area of life. Crucially, from a systems lens, mindfulness practiced in this way would allow for individuals to become more self-correcting in their behaviour, without needing to force themselves or be forced by others. Mindfulness offers the potential to make the cognitive systems that make up our personalities and agent-arena relationships more self-correcting.

Conclusion

This marks the end of a chapter that had the ambitious task of broadening our view of human culture and cognition to a cosmological and biospheric view that began with the Big Bang. Throughout the chapter, I have reviewed narratives and frameworks that have synthesised huge swathes of historical scientific information and theory to create such broadened, naturalistic frameworks for understanding reality and our place in it. It should be obvious that a process of engaging in mindfulness meditation alone, without such accompanying narratives, will not lead individuals to broadened perspectives with anything like this level of precision or historical or scientific accuracy.

What mindfulness and other related embodied psychological practices can do is broaden an individual's perspectives and highlight the contingent nature of the narratives and understandings we have of not only ourselves but of bigger-than-self reality, the agent-arena relationship as Vervaeke (2019) puts it. Supplementing this naturally arising broadening of

one's worldview with such narratives as presented in the current chapter can help to provide a fruitful context for processing bigger-than-self distress within. It also points to a more central role for human cognition in understanding ourselves and in shaping collective human culture that is ultimately responsible for the kinds of bigger-than-self outcomes humanity has on the world. In the next chapter, the focus turns more squarely on human cognition, and an updated understanding of human cognition is presented that can inform our navigation of the territory of this new frontier of embodied embedded psychological responses to bigger-than-self distress.

Autoethnographic Interlude: Emerging Curiosity into Link Between Mindfulness and Bigger-than-Self Reality

The previous chapter provided a narrative that can inform potential reappraisals of default narratives regarding bigger-than-self reality that may be present within individual's cognitive systems and agent-arena relationship. This bigger-than-self narrative opens the door to the possibility of a more profound belonging to the planet and cosmos (Blundell, 2015). In this framing, there is room for individuals to exist within systems much larger and deeper in time than most of the narratives around them might indicate. They can continue to be individuals, with their own personal history, likes and dislikes, hopes, dreams, and values. But in another sense, there is a possibility to identify as continuous with the biosphere and cosmos. In this bigger-than-self narrative, which is entirely consistent with the best scientific theories currently known to humanity, our cognition, even our capacity for self-awareness, is an inherent part of the universe and has emerged out of the evolutionary complexity of the cosmos and biosphere. An individual can come to view themselves not just from the self but from the environment side of the self-environment axis. That individual can understand themselves, which is scientifically true, as the universe and biosphere enacting a capacity for self-awareness. This cognition gives individuals the capacity to see beyond the kinds of appraisals and lenses that they might have learned from their culture: the capacity for meta-cognition, to make object that which had been subject (e.g., Kegan, 1982, 1994). This opens the door for understanding ourselves in ways that are not so limited to our individual, separate selves, and to contribute to society and environment from this broader cosmological narrative, one that might beget not only deep feelings of belonging but also of wonder, awe, gratitude, and even love.

In my own journey, noticing that the culture that we have collectively been raised in and socialised into seems to be producing such devastating outcomes for particularly the natural world but also for much of humanity, I was curious about how the capacity for metacognitive awareness and reappraisal could be used to sense into and reappraise cultural narratives living within my cognition that were contributing to the meta-crisis. I had a hunch that many of these cultural narratives were potentially at the root of bigger-than-self distress: that in some way, the narratives and associated ways of being that led to bigger-than-self distress at the individual level were similar to the narrative assumptions and ways of being that were driving the meta-crisis at the collective level. The evidence reviewed in Chapter 1 about internalised oppression, white supremacy, affective polarisation, climate change psychology and climate trauma seemed to support this hunch.

What I wanted to focus on and highlight was the process by which an individual could participate in change in cultural cognition in the context of the meta-crisis, and how transforming this cultural cognition might transform the individual's experience of bigger-than-self distress. If part of the cognitive legacies we were receiving from our culture were causing internalised oppression, white supremacy, affective polarisation, and climate trauma, among other undesirable effects, then perhaps transforming relevant aspects of our cultural cognition within our own cognitive system would lead to reductions in distress and increases in wellbeing. What was it in our culture that was causing these outcomes, and could roots of these cultural burdens be identified within one's individual cognition? If these could indeed be identified, then what seemed to be a unique contribution that psychology could make was the process of healing and transforming the cultural cognitive roots of the meta-crisis, both within an individual's embodied cognitive system and from that place to contribute towards healing within the distributed collective cognitive systems of the culture at large.

This conversation was now starting to outgrow the confines of the mindfulness literature. Mindfulness, in contemporary conceptualisations, tended to focus on individual wellbeing and stress reduction (e.g., Kabat-Zinn, 1990; Segal et al., 2002). In traditional conceptualisations, mindfulness training tended to focus on ethical living and the reduction of suffering not just for the individual but for other beings, or even for all beings (e.g., Huxter, 2015). However, these traditional conceptualisations came from cultures quite different to the contemporary Western and global culture that mindfulness was now being practiced within. Narratives about the goals of mindfulness traditionally tended to be couched within frameworks of karmic death and reincarnation, escaping the cycle of endless rebirth that was commonly believed to make up the world in the historical Eastern cultures that mindfulness tended to be practiced within. These narratives do not necessarily easily translate into a contemporary secular humanist worldview. The narratives that mindfulness has been packaged in as it has emerged in contemporary settings has changed to fit the new context, as had arguably been done multiple times through the history of Buddhism as it had been exposed to new cultures (e.g., Lomas, 2017). However, the contexts of health, mental health, education, and workplace wellbeing programmes tended to favour narratives that emphasised the individual benefits and de-emphasised ethics, as has been discussed earlier in this thesis and critiqued in the literature (e.g., Monteiro et al., 2015).

What seemed to be needed is a new contemporary meta-narrative or set of narratives that could fit in contemporary times while at the same time link the individual to the world outside of his or her individual life and perhaps provide some guidance as to how to address ethical questions in contemporary times. This link between one's individual psychology and behaviour and its impact on other beings and the world outside the individual was traditionally provided by ethics, and often linked with religious practice, community, or

belief. In contemporary times, a science-based secular humanism has replaced religion for many, and now co-exists in a pluralistic way alongside world religions, philosophies, and cultural worldviews. What might be useful in helping to navigate and respond to bigger-than-self distress is some form of worldview that was at once scientific and pluralistic, allowing of multiple worldviews within it. At the same time, this worldview needed to afford the individual an ability to see herself in relationship with the world outside of herself in a way that leaves her with agency and a sense of ethics that could ground both individual and collective wellbeing - and crucially in the Anthropocene, a wellbeing that included both the human and more-than-human world. Big History (e.g., Christian, 2018) and the Systems View of Life (Capra & Luisi, 2014) seem to go quite a long way towards providing such a worldview.

The missing link, at this point in my personal journey, and at this point in the current thesis, was in being able to describe the kind of response to bigger-than-self distress that I was seeing as possible from my own embodied and literature-based explorations. I wanted to stay within empirical psychology, and yet the frameworks currently existing within empirical psychology seemed insufficient. It was at this point that I discovered the work of Vervaeke (2019), who discussed what he termed the meaning crisis using mostly philosophy and cognitive science references. In discussing this literature, he was explicitly trying to highlight relevant literature that could point his audience towards a new cognitive grammar that could lead to better ways of gripping the meaning crisis. This led to what for me was a new way of viewing cognition that afforded ways of discussing what to that point I had lacked adequate language to describe. The next chapter is the result of reading into these historically more recent advances in cognitive science, initially pointed towards by Vervaeke (2019) but supplemented with my own reading, which I present as an updated view of cognition that provides at least the beginnings of a cognitive scientific and psychological vocabulary for

discussing bigger-than-self reality distress and the kind of response to it that I was seeing as possible and desirable.

I view the theory presented in the next chapter as somewhat analogous to the relational frame theory underpinning ACT therapy (e.g., Hayes, 2004), in providing a sound conceptual basis for the more applied psychological interventions to come in following chapters. I suggest that what I propose in the current thesis as the nondual enactive wisdom development approach could be a future branch of the cognitive behavioural tradition. How the theory presented in the following chapter differs from, say, the relational frame theory of ACT (e.g., Hayes, 2004), the biosocial model of DBT (e.g. Linehan, 1993), or the co-emergent model of reinforcement underpinning MiCBT (e.g., Cayoun, 2011), is that this theory and the interventions that I suggest fit with it are already existing in the literature. What is novel is the combination of (cognitive science) theory and (parts-based psychological) applied interventions, and especially both in the context of a broader deeper scientific emergentist cosmology (presented in the preceding chapter) and their application to bigger-than-self distress.

Chapter 7: From Mindfulness to an Updated View of Cognition: Embodied Enactive Complex Self-Organising Systems Operating on Principles of Free Energy Minimisation, Predictive Processing, and Active Inference

Mindfulness, practiced skilfully and with dedication, leads to a capacity for decentering from one's habitual thoughts and the co-emerging interoceptive sensations that condition such thoughts (e.g., Garland et al., 2015). Such practice facilitates reappraisal (e.g., Garland et al., 2011; Hanley et al., 2014). In the context of responding to bigger-than-self distress, this reappraisal process may often be more complex and multifaceted than for individuals responding to more personal forms of distress. In discussing this complexity, it seems helpful if not essential to introduce new ideas from the cognitive science literature that can help to give language to aspects of cognitive change which would otherwise be more difficult to point to and which are not typically given much attention in earlier iterations of the cognitive behaviour tradition.

Specifically, this chapter discusses cognition as fundamentally embodied, enactive, and systemic, and of the idea to link back together the propositional understandings of our sciences of the mind with our phenomenological, everyday experience (e.g., Varela et al., 1991). This chapter presents a view of cognition that can facilitate such a linking back together. In this view, cognition can be understood as made up of autopoietic (e.g., Maturana & Varela, 1980), complex self-organising systems (e.g., Bruineberg & Rietveld, 2014; Hesse & Gross, 2014; Prigogine & Stengers, 1984). Cognition as embodied enactive complex self-organising systems can be understood as operating on principles of free energy minimisation (e.g., Friston, 2010) and predictive processing (e.g., Clark, 2013), and to update via some form of active inference (e.g., Friston et al., 2017), processes which take place

within embedded (e.g., Venter, 2021), cultural (e.g., Fabry, 2018; Ramstead et al., 2016) environments and which act upon them via processes known as niche construction (e.g., (Bruineberg et al., 2018; Fabry, 2021; Stotz, 2017).

This view of cognition is consilient with the notion of relevance realisation being a central process in the cognitive processes underlying intelligence, rationality, and wisdom (e.g., Vervaeke & Ferraro, 2013b, 2013a). This understanding of embodied enactive cognitive systems affords a richer, deeper phenomenology of knowing, which can be understood as involving four types: propositional, procedural, perspectival, and participatory (Vervaeke, 2019; Henriques, 2021). Together, this new vocabulary of cognitive science will provide a foundation for discussing a broader set of psychological practices that can assist in responding to bigger-than-self distress via a process that overall can be called nondual enactive wisdom development.

Cognition as Embodied and Enactive: Yoking Together Abstract Thought and Phenomenological Experience Through the Body

The view of cognition as embodied and enactive, first put forward by Varela et al. (1991), can help to tie strands together that have been so far left open at this point in the current thesis. The Big History narrative discussed in the previous chapter, in consilience with the Systems View of Life, presented cognition, or information processing, as one of the defining features of life. In this chapter I introduce Maturana and Varela's (1980) theory of autopoiesis as a defining feature of cognition: that living organisms are cognitive organisms are self-authoring systems. They create their own perceptions of their environments and change their structure in respond to changing perceptions of those autopoietically created environments. That living organisms undergo these changes in structure while still maintaining a continuity of organisation makes them autopoietic (Maturana & Varela, 1980).

The other thread running through the first half of the current thesis is mindfulness training and MBIs. Varela et al. discuss mindfulness at length in their discussion of embodied enactive cognition. In doing so, they provide an account of cognition that, if properly understood, can provide a philosophically and scientifically rigorous viewpoint for responding to bigger-than-self distress and for the development of cognitive and psychological science.

Central to Varela et al.'s (1991, p. xx) view of embodied cognition, and following on from Maturana and Varela's (1980) earlier work on autopoiesis, is a calling into question the notion that "cognition consists of the representation of a world that is independent of our perceptual and cognitive capacities by a cognitive system that exists independent of the world". Varela et al. (1991) draw on the work of Merleau-Ponty (1962), who points out a profound circularity between the double-embodiment of our bodies as both living physical, biological structures and lived experiential, phenomenological structures. They do this from a concern both for cognitive science, that it might benefit from integration of lived experience and the possibilities of transformation inherent in human experience; and for the everyday lived experience of ordinary people, that folk psychology might benefit from a tighter coupling between the sciences of the mind and lived experience.

Varela et al. (p. xviii) criticise the then current approach in cognitive science, which still predominates in mainstream cognitive science today despite the flourishing of mindfulness as an object of scientific study, that "there remains no direct, hands-on, pragmatic approach to experience with which to complement science. As a result, both the spontaneous and more reflective dimensions of human experience receive little more than a cursory, matter-of-fact treatment, one that is no match for the depth and sophistication of scientific analysis." They posit mindfulness, as understood within the Buddhist tradition, as a means of

studying the mind from the experiential viewpoint that has been lacking in the Western philosophical traditions.

Varela et al. (1991) introduce the concept of enactive cognition, which rejects the subject-object dualism of a self independent of the world and a world independent of the self. Instead, both the embodied brain and environment play a role in enacting our cognition and experience of the world. As an example, they discuss colour perception, and how our perception of colour does not at any stage appear to produce anything resembling a map of some externally existing outside world. Instead, quite a remarkable consistency of perception is maintained even at quite different levels of light being received by the environment: we perceive a red bag as red both in midday sun as well as in hazy dusk light. This is but one illustrative example of how even the act of perception is enacted by both brain and environment, rather than a passive receiving of some objectively real stimulus from the environment. This does not reduce us to solipsism, nor nihilism: there is still a world out there, and it plays a part in the experience of cognition that is enacted, but our experience of it cannot be seen to exist independently of the cognition that is enacting it forth. And, as Varela et al. suggest and as I argue in this thesis, when correctly apprehended it leads to something like the opposite of nihilism: even in our cognition, we are nonseparate from the world: there is no self to be found, through scientific nor experiential analysis. This point is a nuanced one, and so bears expanding on.

Varela et al. (1991) link nihilism with the grasping tendency of the mindless mind that splits experience into object and subject, self and world. They draw on the arguments of the Madhyamika or "middle way" school of the Buddhist tradition, which expand on the original Abhidharma or five aggregates teaching of the Buddha (discussed in Chapter 4 of the current thesis) to extend the arguments against an independently existing self to that of an

independently existing world. This is not an abstract philosophical proposition but one that is understood within the context of mindfulness practice: that the mind is actively participating in the formation of our experience of the world, and so, like the self, the world can be seen as having no independently arising existence. Everything is codependently arising, interdependent on everything else. As Varela et al. (1991) point out, this is understood as a precise argument within the five aggregates named in the Abhidharma teaching, not as a fuzzy hand-wavey gesture. In contemporary cognitive science terms, this argument is situated within an understanding of the mind or cognition within this double-embodiment notion of embodied cognition. To see the illusion of an independently existing self and world can be done in a purely abstract theoretical sense, even when based on empirical evidence, by the mind that has not realised experientially the co-dependent arising nature of the same phenomena.

The gap between the fruits of abstract thought and the experiential realisation of such fruits is, according to Varela et al. (1991) and echoing arguments from Nishitani (1982) is the basis for the kind of nihilism that is so common to the Western mind. Nietzsche (Nietzsche, 1968, p. 9) summed up this form of nihilism in his quote: “Radical nihilism is the conviction of an absolute untenability of existence when it comes to the highest values that one recognizes”. This quote points to the inability to live in accordance with what our best science and philosophy (domains of abstract thought) tells us to be true and good. For Varela et al., this nihilism comes from our inability to live without a dualism of self and world, despite our scientific knowledge suggesting the nonexistence of such a boundary. This inability to live in accordance with scientific knowledge is not entirely dissimilar to the predicament we face when facing the empirical evidence of the reality of climate change and other biospheric facts and reputable critiques of societal ills discussed in Chapter 1: despite

knowing what is going wrong, we have so far largely failed to translate this abstract knowledge into phenomenological experience and embodied action in the world. Understanding and being able to perceive and close this gap through, as has been done within Indian philosophy (Varela et al., 1991) yoking abstract thought to lived experience in the world - and vice versa - is central to the contribution this thesis is hoping to make in the realm of bigger-than-self distress. I share Varela et al.'s (p. 22) contention that this points to the possibility of a "second renaissance in the cultural history of the West, with the potential to be equally important as the rediscovery of Greek thought in the European renaissance". A possible second renaissance along these lines could have important implications for our capacity to respond to the meta-crisis, is one which clinical psychology can contribute to, and which it already arguably is beginning to contribute to with its empirical study and inclusion of mindfulness and other Buddhist-origin techniques and philosophical insights).

Before ending our discussion of Varela et al.'s seminal (1991) work, there are some important insights into the practice of mindfulness itself that can be added here, and better understood now that the discussion of their notion of embodied enactive cognition has been introduced. Varela et al. note that mindfulness can be taught in two ways. One is as the development of skills and mental habits: this is present in analogies of training the mind like a muscle that are quite often used in contemporary mindfulness teaching. Another way, which Varela et al. (p. 26) focus more on and which is more concordant with the approach to enactive wisdom development that I advocate for in this thesis, is that "mindfulness / awareness is considered part of the basic nature of the mind; it is the natural state of mind that has been temporarily obscured by habitual patterns of grasping and delusion." As these habitual patterns are seen through, experientially (for example via neutralisation of the deep operant conditioning of the sensations co-emerging with narrative appraisals as in MiCBT;

Cayoun, 2011), this natural state of mind can shine forth. This naturally arising experience is discussed as the beginning of prajna, or wisdom, and is not a knowing about anything but rather the coming together of the abstract attitude and knowing with mindfulness of one's moment to moment experience (Varela et al.). It is this coming together of abstract thought and moment to moment embodied experience in the context of bigger-than-self distress that is the aim of enactive wisdom development approach advocated for in this thesis.

Furthermore, the development of mindfulness is conceptualised in this view as a letting go, and a discovery of what was always already there (Varela et al., 1991). Although there are undoubtedly skills to learn as part of the process, mindfulness is often presented as primarily an unlearning rather than a learning. This may require a lot of training and effort, sustained over time, but it is a different kind of effort than what might typically be understood by the term. If the mind approaches the task with a great deal of striving, ambition, and stress, or to develop some sort of special skills and become some sort of meditation expert, then the practice will not tend to work, or at best it will lead to a kind of self-deception that takes one away from the actual practice of mindfulness. Instead, the kind of effort required is that of noticing and eventually seeing through these patterns of striving or desire for specialness and letting them go so that what is underneath can naturally arise. This natural arising reveals the already existing unity and coordination of body and mind. In this way, Varela et al. (p. 31) describe how the committed mindfulness meditator will naturally "discover" the assertions of Buddhism, much as a committed scientist will be able to independently verify solid scientific findings by repeating the same experiments.

It is this stability of the common assertions of Buddhism that differentiates it from introspectionism (e.g., Costall, 2006), for example, where individuals reflect on the contents of their thoughts, which obviously differ widely from person to person and yield no

consistent results. What I tried to focus on in the journey that this thesis describes is practices that have a similar quality to this in that they yield repeatable findings if practiced within one's phenomenological experience. Internal Family Systems (IFS; Schwartz & Sweezy, 2020) and Wider Embraces (Deurell, 2022), which will be discussed in Chapter 9 of the current thesis, while almost incomparably more recent and more nascent when compared with Buddhism, seem to have this quality of leading to similar and reproducible results amongst diverse participants. This quality also informs the methodology of the current thesis and differentiates it from more standard autoethnographic forms of research. That is, because of the nature of the reflection and inquiry used in the journey of this thesis, there is a more general claim to knowledge than in a standard autoethnography, which is more aesthetic in nature and seeks to mostly convey, in an appealing and evocative fashion, what it was like to go through the experience the author went through and what it says about the culture that they were a part of. These methodological points will be discussed in more detail later in the thesis.

Hopefully this section has helped to start linking together somewhat disparate strands of the thesis so far. As the second half of the thesis progresses, the argument that the duality between the self and world is illusory will be developed further in the context of bigger-than-self reality. That is, the abstract scientific and systems understanding of reality and how human culture and cognition has emerged in a way that is continuous with the emergent complexity of the cosmos and biosphere described in Christian (2018) and Capra and Luisi (2014) will be yoked to an experiential realisation of the same, which in turn can provide a groundless ground that is deep and broad enough for metabolising bigger-than-self distress. In this way, a more skilfully self-aware cognition can participate in the creation of culture that can be responsive to the realities of the biosphere and civilisation that we exist within, and

the symptoms of the meta-crisis described in Chapter 1. Individuals within this can participate in this via the transformation of their own cognition, which both leads to reductions in bigger-than-self distress and an increased capacity to contribute to human cultures that are responsive to the sources of collective suffering represented within the meta-crisis. Psychologists can play a leading role in making these sorts of path available to individuals and communities.

Relevance Realisation as Scale-Invariant Organising Feature of (Self-Organising, Embodied, Embedded) Cognition

Armed with this understanding of enactive cognition, we are one step closer to being able to articulate the approach to cognitive change advocated for in this thesis: nondual enactive wisdom development. Another central piece of nondual enactive wisdom development, which helps to bridge the gap between our abstract knowing of bigger-than-self issues and an experiential processing of them and coherent response to them, is wisdom-oriented relevance realisation. Relevance realisation, a concept put forward by Vervaeke et al. (2012) and expanded on by Vervaeke and Ferraro (2013a; 2013b) and Vervaeke (2019), is a cognitive process by which a cognitive agent is able to hone in on the important information in a given context and, crucially, ignore irrelevant information for that particular context.

Vervaeke and Ferraro (2013b) argue that relevance realisation is at the core of what it means to be a cognitive agent, and that it underlies the capacity for general intelligence that is measured by IQ tests. They (Vervaeke & Ferraro, 2013a) also argue that relevance realisation is central to the capacity of cognitive agents to apply their intelligence more effectively in contexts, which is the capacity for rationality; and that it is central to the capacity to improve upon their capacity for rational action in general, which they define as wisdom. In the context of Big History's narrative about life and the centrality of cognition to

life, relevance realisation can be seen as an important concept to cognition as a whole and to our ability to respond wisely to bigger-than-self reality. Vervaeke and colleagues spend considerable time discussing the concept of relevance realisation and arguing for its centrality as a concept in cognitive science in Vervaeke et al. (2012), Vervaeke & Ferraro (2013a, 2013b), and Vervaeke (2019). The next two sections will discuss relevance realisation, first defining it and discussing its centrality in understanding cognition, then building on this discussion to show how understanding it can bring us closer to an updated conceptualisation of cognition that better fits the purpose of responding to bigger-than-self distress.

Relevance realisation can be considered a multi-scalar process within cognition that happens in some form in all cognitive agents. As Christian (2018) and Maturana & Varela (1980) pointed out, cognition is central to life and seemingly has been since its very beginning and most simple forms. Even single-celled prokaryotes were responding to their environments in a rudimentary way, taking in nutrients that could be used to sustain itself and changing direction in response to bumping into hard objects. This can be considered a rudimentary form of relevance realisation: realising important details about the environment. Significantly, the criteria for "important details" here are phenomena that relate to the organism itself: what will be adaptive towards it. This closely ties relevance realisation with what it is to be a living organism, and with care: it is not affectively neutral but predisposed to care about certain features that are relevant to, for example, its survival and adaptability. As life evolved and become more cognitively complex, cells within multi-cellular organisms, as well as groups of cells forming tissues and organs, were presumably using relevance realisation-like processes to selectively orient in response to stimuli that were important to their functioning. This is what is meant by the term multi-scalar: relevance realisation is

taking place within cells, and at every scale of complexity in organisation in biological organisms up to self-awareness within human beings. Seeing this pattern is informative in understanding some core features of cognition, and the following section will explore this claim further in how it is likely involved in complex cognitive processes.

Relevance Realisation as Central to Range of Important Cognitive Processes

To understand the significance of the relevance realisation construct, it is helpful to map out some of the convergences in cognitive science that point towards its centrality as a self-organising process within the brain. Vervaeke et al. (2012) discuss relevance realisation as an emerging framework in cognitive science and argue that the capacity for realising relevance is central to a cognitive agent's (a) problem solving, (b) interactions with environment, (c) categorisation, (d) rationality, and (e) communication. Vervaeke (2019) repeats and updates these arguments that give convergent validity to the importance of the process of relevance realisation. With regards to problem-solving, Vervaeke et al. (2012) point to the difficulty that Artificial Intelligence (AI) and Machine Learning engineers have in programming AI learning programs to solve ill-defined problems. That is, they can solve well-defined problems quite well: they can be trained to play chess and compute the best possible moves as it is a well-defined problem space with a limited (albeit still large) range of possible moves in any given situation. Ill-defined problems, such as taking good notes in a lecture, or interviewing well in a job interview, are more difficult to train an AI to do. Human beings, however, are relatively good at working with ill-defined problems, at least in comparison to current computer and AI programs.

Solving ill-defined problems, according to Vervaeke (2019) and mirroring arguments by Cherniak (1986), cannot be solved using computational rationality alone (i.e., by computing using mathematical equations). It requires a good problem formulation or framing. This

requires a narrowing down of the possible solution sets, which in ill-defined problems are combinatorially explosive: the number of possible ways of taking good notes in a lecture requires computing what is meant by “good”, “notes”, and “lecture”, which for a computer requires computing an impossibly high number of variables to try and define these terms. This points to relevance realisation being a process that cannot be completed with computational rationality: some other cognitive process is required to parse out what is relevant (e.g., the lecturer’s words and presentation slides) from what is irrelevant in a given situation or context (e.g., the temperature of the room, philosophical definitions of the good).

The failure of computational rationality is also apparent in the process of calculating potential side effects when acting in the environment: to program a robot to do so would again result in combinatorial explosiveness, whereby the number of potential side effects of any given action is to all intents and purposes infinite. The same thing is found in the process of categorisation. Vervaeke (2019) points out that when humans make categories we are searching not for logical but for psychological similarity. This is about finding relevant comparisons. A bison and a lawnmower share many similar characteristics, purely logically: they weigh within one unit on a logarithmic scale of one another, they both have relationships to grass, they are both physical objects, and so on. However, most humans would not usually categorise them in the same group, as they are psychologically and culturally normally considered quite different from one another. Whether or not two or more items are in a similar category is not necessarily stable but may change with context. The following terms - “works of art”, “your children”, “your spouse”, “gasoline”, “explosive material” - do not initially appear to fit together. However, add in the words “your house is on fire” and suddenly they have a shared context that links them together (Vervaeke, 2019).

Vervaeke et al. (2012; Vervaeke, 2019) make similar arguments for the centrality of relevance realisation to rationality, communication, and more basic cognitive processes of selective attention, working memory, combinatorial explosion in the problem space, proliferation of side effects, and long-term memory organisation and access. Vervaeke et al. (2012) aim to make a convergence argument for relevance realisation as being central to and underlying all these diverse processes in cognition. Vervaeke et al. then refute arguments for how these processes might be accounted for, finding that each ultimately relies on the process of realising relevance. For example, they cite Grice's (1989) theory of communication as a continual working out between individuals breaks down the task of this cooperative dance as involving four key maxims: (i) quantity of information shared, (ii) quality of information shared, (iii) manner of sharing, and (iv) relevance to the context. Vervaeke et al. (2012) then cite Sperber and Wilson's (1995) critique of Grice's theory, in which they argue that the first three of these maxims can ultimately be collapsed into the fourth, relevance, because in each case the communicator must decide the relevant characteristic in question (quantity, quality, and manner). Vervaeke et al. then ultimately both build on and critique other aspects of Sperber and Wilson's theory. What they move towards is an argument that relevance realisation can be understood as a dynamic, self-organising process, like the self-organising processes we have discussed with Darwinian natural selection and Skinnerian behavioural selection (e.g., Henriques, 2003).

Relevance Realisation, Self-Organising Systems, and Self-Organising Criticality

A key distinguishing feature of the updated understanding of cognition being presented in this chapter and this thesis is its focus on cognition as being made up of self-organising systems. Vervaeke et al. (2012, 2013a) propose that relevance realisation is best understood as a self-organising system. Self-organising systems are self-regulating, like the autonomic

nervous system or natural selection. The example of Darwin's theory of natural selection is presented as one of the first theories of self-organising systems. In natural selection, there is variation conferred by genetic variation and random mutation that produces variability, and reduction in variation conferred by (mostly) environmental variables that cause death or failure of the organism to reproduce. Often self-organising systems function in terms of opponent processing, whereby one feature of the system is optimised in one direction (e.g., arousal or genetic variation) and another opposing feature of the system is optimised in the other (e.g., calm or selective pressures on survival and reproduction). Where natural selection is a theory of self-organising systems within ecosystems of organisms and species, relevance realisation is a theory of self-organising systems within cognitive systems of embodied embedded information processing.

Vervaeke et al. (2012) and Vervaeke (2019) put forward several potential candidates for opponent processes that could lead to the capacity for relevance realisation, such as efficiency versus resilience, explore versus exploit, and compression versus particularisation. Vervaeke (2019) emphasises that autopoietic systems are self-organising systems, because they are highly interested in preserving their own organisation. They carry out this task in environments and as organisms that have limited resources such as time, energy, nutrition, and so relevance realisation can be seen as a bio-economical system. It is bio-economical because it is a biological system that involves the distribution and use of resources. Relevance realisation is a bio-economical system by which a cognitive agent is constantly adjusting its fittedness to its environment. This follows quite naturally from Maturana and Varela's (1980) theory of autopoiesis, where biological organisms enact structural changes in response to the environment while maintaining their organisation. The feedback loop here is a sensory-motor feedback loop: the cognitive agent is sensing, but also acting, and both the

sensing and acting feed back into each other, interpenetrate and influence each other in vitally important ways (Vervaeke, 2019).

An important related concept to self-organisation is self-organising criticality (e.g., Bak et al., 1988; Dunkelmann & Radons, 1994). Originally a concept imported from statistical physics (e.g., Hesse & Gross, 2014), criticality was first hypothesised to apply to neural dynamics by Dunkelman and Radons (1994). Criticality refers to the transition between ordered and disordered states, or the threshold that marks a phase shift between one state and another (e.g., Hesse & Gross, 2014). A classic example to illustrate this visually is that of a sand pile that forms from steadily adding an additional grain of sand to a given point on a flat surface (Bak et al., 1988). Initially as sand is added to the pile, it will spread out and then start to form a cone or pyramid-like structure, and the angle of the slope of this structure increases with each additional grain of sand. Eventually, as more and more sand is added, the slope reaches a maximum steepness whereby any additional sand that is added will tend to fall down, in either small or large clumps.

This state of maximum steepness, known as the "angle of repose" is the system in a state of criticality, an edge state where the previous phase of increasing steepness gives way to a phase of disorder, where the old phase dynamics no longer hold sway and change can happen (Bak et al., 1988, p. 365). In states of criticality, the change that happens next is often unpredictable: in the sand pile example, Bak et al. (p. 367) note that "a given perturbation can lead to anything from a shift of a single unit to an avalanche." The structure of the system might collapse under its own weight: equally, this collapse might then result in a broader base from which to build up again, thus being seen to precipitate a phase shift from stable to critical to a new stable phase. Criticality is considered to be a self-organising phenomenon in certain complex systems as they naturally evolve into critical states given

time: if they did not, they would either not be complex or they would not be stable and self-organising systems (Bak et al., 1988).

Dunkelman and Radons (1994) put forward what has come to be known as the neural criticality hypothesis, which posited that critical states should be evident and evolutionarily selected for in the brain because they are associated with more optimal computational abilities. This generated a large amount of research and some theoretical advances in the years since (e.g., Wilting & Priesemann, 2019; Zimmern, 2020). It should be noted that the hypothesis itself is still controversial, with evidence seemingly mixed as to whether and in what conditions brains exhibit criticality and whether this state is correlated with more optimal functioning (Hesse & Gross, 2014; Wilting & Priesemann, 2019). Wilting and Priesemann (2019) argue that this controversy can be successfully resolved, however, by a more nuanced understanding of criticality in neuronal systems. They suggest that criticality is not always optimal. They point to evidence suggesting that criticality maximises certain properties such as the number of metastable states attained (Haldeman & Beggs, 2005), the dynamic range of networks (Gautam et al., 2015; Kinouchi & Copelli, 2006), information retention (Tanaka et al., 2009), information processing (Boedecker et al., 2012; Maass et al., 2002; Shriki et al., 2013), information representation (Shriki & Yellin, 2016), and complexity of information processing (Bertschinger & Natschläger, 2004). These findings tend to lend support to the neural criticality hypothesis. However, maximising criticality also has been shown to lead to undesirable neural outcomes, such as reduced efficiency (Gollo, 2017), reliability (Wilting et al., 2018), and a slowing down of processing leading to longer wait times for being ready for new stimuli (Scheffer et al., 2012).

These seemingly contradictory empirical findings in regard to the neural criticality hypothesis led Wilting and Preisemann (2019) to suggest that maximising certain neural

properties is not what comprises optimal neural functioning. That instead of all brain regions tending towards criticality all at the same time, what is optimal is a balance between critical and non-critical states, which allow, for example, for a dynamic ability to balance between quality of representation and processing time, sensitivity and specificity, or stimulus detection and discrimination (Wilting & Preisemann, 2019). They advocate that a reverberating regime, which balances between different phase states, rather than a critical one, is optimal for neural systems and resolves the apparent discrepancy in the evidence on the neural criticality hypothesis (Wilting & Preisemann, 2019). This reverberating regime bears substantial resemblance to the self-organising system of relevance realisation described by Vervaeke (2019; Vervaeke et al., 2012), which dynamically fits itself to the environmental context it is embedded within, often making use of opponent processing to achieve such aims. Such empirical findings lend support to the idea that scale-invariant self-organising relevance realisation processes are used throughout the brain at different levels of organisation, and that a dynamic switching between critical and non-critical phase states is involved in optimal such functioning.

Participatory Knowing, Embodied Embedded Cognition, Salience Landscapes, and 4P Prior Updating

At this point I have hopefully started to develop a picture of the centrality and scale invariance of relevance realisation type processes in cognitive systems. Their self-organising and self-updating (under optimal circumstances) nature is significant as it paves the way for understanding psychological interventions that involve letting go of executive control, which will be important to enacting nondual wisdom development (e.g., Nave, 2021; Nave et al., 2021). This is part of a broader argument within this chapter for an updated understanding of cognition within the cognitive behavioural tradition, which can lead to updated cognitive

behavioural interventions for distress involving bigger-than-self themes. These themes, I argue, involve both a deepening and broadening of the possible exploration space within phenomenological experience than has traditionally been typical of the cognitive behavioural tradition. These deeper and broader realms of the human psyche are difficult to point to with the traditional language of cognitive behavioural therapy, and so it has been necessary to bring in this new vocabulary of autopoiesis (Maturana & Varela, 1970/1980), enactivism (Varela et al., 1991), embodied embedded cognition (e.g., Newell et al., 2018), relevance realisation (Vervaeke et al., 2012; Vervaeke & Ferraro, 2013a, 2013b), self-organising systems (e.g., Prigogine & Stengers, 1984), and self-organising criticality (Dunkelman & Radons, 1994; Wilting & Preisemann, 2019).

An important feature of relevance realisation is that it provides a way of linking many of these new terms together: to see that many of these features are scale-invariant in cognition, occurring at the level of individual cells as well as networks of neurons, all the way up to the brain-environment interactions (and potentially even beyond individual brains to interpersonal neurobiology and distributed cognition). This understanding paves the way for the second half of this chapter and a discussion of how structural changes can be enacted in cognition that make it more optimally fitted with its environment (e.g., Bruineberg et al., 2018; Vervaeke, 2019), which coincides with the constructs of both wisdom (e.g., Vervaeke & Ferraro, 2013a; Grossmann et al., 2020) and wellbeing (e.g., Miller et al., 2022; Santos & Grossmann, 2021). The following section adds further terms to our lexicon, discussing Vervaeke's (2019) 4P model of knowing, the Free Energy Principle and active inference (FEP; Friston, 2010) predictive processing (e.g., Clark, 2013), and synthesise them together with already discussed concepts into an account of enactive embodied embedded cognitive prior

updating that will be central to the still-developing account of enactive wisdom development put forward in this thesis.

Propositional, Procedural, Perspectival, and Participatory Knowing: Vervaeke's 4P Model of Knowing

Vervaeke (2019; Henriques, 2021) distinguishes between four kinds of knowing, which are arranged in a hierarchical stack, with what we might call more shallow forms of knowing being functionally dependent on the deeper forms. Propositional knowing, or what we know, consists of the kind of knowing that can be reduced to propositions, constructs, facts: that the Earth is round, or that the nitrogen and carbon cycles exist (Henriques, 2021). Propositional knowing can be reasoned with: one can use syllogistic logic to argue a point, such as whether there is a link between two known constructs, such as childhood adverse experiences and adult mental health symptoms. Procedural knowing, or know-how, consists of the kind of knowing that allows us to enact skilful behaviour, such as how to ride a bike, post a letter, or cook a meal (Henriques, 2021). These two shallower domains of knowing are arguably well understood in common parlance, as well as within the cognitive behavioural tradition. Traditional cognitive restructuring focuses at the level of propositional knowing to elicit beliefs about oneself or the world, and reason as to whether these are true or useful beliefs to hold or whether they should in fact be challenged. Behavioural therapies often focus at the level of procedural knowing, for example to build mastery through learning skills in a certain area. Third wave approaches such as DBT focus on skill learning in relation to different forms of self-regulation, while MBIs arguably focus on skill learning of mindfulness meditation and related practices. Propositional and procedural knowing can impact on the deeper levels of knowing, too - for example, engaging in cognitive restructuring or learning self-regulation skills often results in important shifts in the individual's perspectival or

participatory knowing. However, perspectival and participatory knowing are meaningfully distinct from these first two forms of knowing in Vervaeke's (2019) model.

Perspectival and participatory knowing are more difficult to define, and more important to the expanded realm of phenomenological experience that this thesis is attempting to point towards. Perspectival knowing refers to the ability to take different perspectives. This involves learning to see through other people's eyes, but also come to better know our own perspective. It also might involve metacognitive abilities in being able to see a given situation from multiple perspectives, or a kind of intellectual humility whereby an individual is able to recognise the limits of their current knowledge (e.g., Grossman et al., 2020). Perspectival knowing is an embodied, embedded psychological process: it is usually not reasoned through propositionally but known through a kind of embodied embedded situated awareness (Vervaeke, 2019). A well-attuned mother or father will usually not have to reason through logically which of their children is feeling hungry, upset, or contented midway through a birthday party. Likely all it will take is one cursory look, or the mother or father may even be tracking the emotional state internally through a kind of felt sense. This links perspectival knowing with a high-level form of dynamical embodied-embedded process of relevance realisation (Vervake, 2019). It requires situational awareness and continual monitoring and updating: just because the child is happy in this moment does not preclude them from falling over, grazing their leg, and crying in the next moment. All this monitoring and updating will happen relatively automatically for such a parent, although other aspects of perspectival knowing will require more conscious effort at times (such as seeing through one's confusion or reactivity in an interpersonal conflict).

Participatory knowing is deeper still, and grounds all the other forms of knowing. It is associated with the level of being-in-the-world, of a kind of dynamic gripping involved in what

Vervaeke (2019) calls the agent-arena relationship. Participatory knowing has to do with the structure of our cognition: to know something in a participatory way is to in some sense become it - not metaphysically but to enactively structure one's whole cognition in such a way as to become one with it. This rare state, often involving an experience of flow (e.g., Csikszentmihalyi, 1990), might occur when a particularly attuned and skilled practitioner comes into deep participatory attunement with his or her craft: a jazz musician picking up on a riff, a Palaeolithic hunter tracking his prey; two dancers entering a complete resonant attunement with each other, the music, and the form of the dance.

Vervaeke invokes Plato and his discourse of resolving inner conflicts, embodied in his famous allegory of the cave (Plato & Bloom, 1968). To interpret this allegory through the lens of participatory knowing, the shadows on the wall of the cave represent the illusionary perceptions of the mind, while the light that shines from behind the prisoners' heads represents wisdom, the seeing through of self-deception. To see through the illusory perception cannot be done by propositional knowing alone but requires a deep transformation in the structure in one's being, one's cognition, which itself affords greater capacity to know reality, in a participatory rather than propositional way (Vervaeke, 2019). One can see how this change in the structure of one's being in participatory knowing mirrors and builds on the calls by Varela et al. (1991) to yoke together scientific and experiential knowing. A salient example of this for many individuals in contemporary times might be the kind of deep transformation in being that people often undergo when becoming parents: it is a deep shift in the agent-arena relationship that can have profound impacts on how one sees themselves in the world, causing effects that ripple up through one's perspectival, procedural, and propositional knowing, and the kinds of knowing that one sees as salient and relevant.

It is this participatory level of knowing that seems particularly relevant to focus on in the realm of the deeper, more existential aspects of bigger-than-self distress, especially in the context of the agent-arena relationship. The agent-arena relationship concerns the relationship between an individual and their environment, and how the two dynamically fit together. The agent-arena relationship, as Vervaeke (2019) positions it, particularly concerns the kind of pre-propositional, enactive gripping relationship between self and world characteristic of participatory knowing. It is this level of knowing that my own (and others' I have encountered) experience of bigger-than-self distress seems to have been grounded, and it is at this level that I have found ways of transforming this distress. To link back into the earlier discussion of climate trauma and bigger-than-self distress, and to a subject centrally within the realm of clinical psychology and the cognitive behavioural tradition, it has been a kind of trauma or triggering at this level of being / knowing / gripping of self and reality that has seemed to characterise my own experience of bigger-than-self distress. This trauma is not only encoded in my embodied cognition but in my relationship with "objective" external reality: my embedded cognition in cognitive scientific terms, or the fit between my experience of self and world.

To put this trauma in autoethnographic terms, I experienced the world, in a deep participatory sense, as being in crisis that was coming at me from all angles, which was (not immediately but within my lifetime) existentially threatening to me and all those who I love, and from which there was no escape. This was highly salient to me, and there was seemingly no way out. My rational mind found evidence that seemed to confirm this, in the form of climate science and many of the other symptoms of the meta-crisis reviewed in Chapter 1. This was obviously very distressing, at an existential level, to live with, especially given the structures and culture of the social world I lived in did not seem to hold or be responding to

such a perception of reality, at least not in a wise and adaptive way. I felt that not only were there a plethora of undesirable outcomes headed towards me/humanity/the biosphere, but that I was relatively alone in my perception of this, deep in my being. Hopefully this also explains why standard cognitive behavioural therapy nor MBIs were ultimately able to resolve this form of distress. What was needed was a transformation of deep structures of my cognitive system which enacted my participatory knowing relationship with self and world. As a result of engaging in the practices I discuss later in the current thesis, these deep structures have transformed and I no longer feel so alone or unable to respond, but this required more than propositional changes in belief: it required getting to the parts of my cognition that were holding such deep participatory knowing, and rooting out the self-deceptive priors at that level. The following subsections map out the final pieces of the updated map of cognition needed to give a scientific account of these structures of cognitive systems and how they might be transformed.

Embodied Embedded Cognition, Salience/Relevance/Meaning Landscapes, and Niche Construction

In previous sections of this chapter, I outlined Vervaeke's (2019) argument that relevance realisation-like processes are operative in both neural dynamics within the brain as well as in enacting a dynamic fittedness within the brain-body-environment system. This argument is consonant with, and informed by, work in the field of embodied and embedded cognition (e.g., Bruineberg & Rietveld, 2014; Rietveld et al., 2018; Venter, 2021). Bruineberg and Rietveld's (2014) work on self-organising cognitive systems interacting with their environment to produce a field of relevant affordances is a prime example of this. Bruineberg and Rietveld build on Gibson's (1979) idea that the environment offers up to the cognitive agent a field of affordances for action: for example, a builder might look around a building

site and see various jobs that need doing: floorboards to be laid, drywall to be installed, cuts of wood to be measured, and so on. The environment affords him or her various possibilities for action, or affordances. Bruineberg and Rietveld (2014) update this understanding with a more developed role for the agent in determining which affordances offer themselves from the environment. What a builder will see in a building site will be different to what a plumber or electrician sees, which will be different again from the affordance landscape that presents itself to someone without relevant training, such as a medical doctor or English teacher. The skill of the agent, for Bruineberg and Rietveld (2014, p. 2), plays an important role in the dynamic gripping involved in the "selective affordance-responsiveness" involved in the "skilled agent-environment" system. This system together solicits the agent to engage in a gripping of the environment that tends towards optimality.

This optimal gripping involves the skilled agent perceiving herself to be in a landscape of affordances, out of which a field of affordances emerges (Bruineberg & Rietveld, 2014). The landscape of affordances refers to the whole realm of possibilities afforded by a certain socio-cultural context, such as a library, or restaurant, while the field of affordances refers to those specific affordances that stand out as relevant to a particular individual in a particular affordance landscape (Bruineberg & Rietveld, 2014). Affordances within landscapes are typically nested together: sending emails, making photocopies, attending meetings, and working on documents or presentations are all nested together within a typical office setting, while eating popcorn and watching a movie on a big screen, for example, is not within this nested environment (Bruineberg & Rietveld, 2014). Due to the nested nature of affordances within a field, the skilled agent can maintain optimal grip on a whole field of affordances simultaneously: because the affordances are relevance to one another, the whole field of affordances is revealed to the skilled agent, rather than each alone and separately to one

another (Bruineberg & Rietveld, 2014). The skilled essay writer will, upon sitting down to their computer, have a field of affordances co-emerge together: the ability to type, to navigate the word processing document, to read and understand the relevant literature, to organise arguments in one's mind or with the aid of relevant tools for planning. Crucially, this whole process of the skilled agent-environment system enacting such a field of affordances is self-organising and oriented towards relevance – it involves an enacting of relevance realisation by the agent-environment system.

The skilled agent is not merely a passive recipient of a field of affordances. Rather, her actions in the environment can shape the environment, which then shapes her, and so on. This process of co-shaping of agent and environment is generally known as niche construction (e.g., Laland et al., 2000). There are different forms of niche construction, however, and we are interested more in one type for the purposes of the current thesis. Selective niche construction pertains to the way that populations of organisms construct their niche and genotype over generational timescales through selective evolutionary pressures (Stotz, 2017). Developmental niche construction pertains to the way populations of organisms shape their developmental niche (e.g., the behaviour of their parents or local social environment) and phenotype within at least two generations (Stotz, 2017). Developmental niche construction is typically characterised by changes within cultural forms, such as information, cognitive resources, technologies, and other cultural artefacts. An example of developmental niche construction, for instance, is known as information epistemic engineering, whereby the physical environment is organised in such a way as to improve our cognitive processing capacities (Sterelny, 2012). Fabry (2021) distinguishes a third type of organism-environment interaction she calls organism-niche coordination dynamics. These dynamics concern the relationship between an individual organism and its

environment over the course of its lifespan and typically involve learning and enactment of culturally evolved knowledge and capacities (Fabry, 2021).

Bruineberg et al. (2018) and Fabry (2021) focus on developmental niche construction, although appear to understand it in terms of an individual agent's interaction with the environment that is more closely aligned with Fabry's (2021) conceptualisation of organism-niche coordination dynamics. They build on the work of Bruineberg & Rietveld (2014) on optimal grip in the agent-environment system. For Bruineberg et al. (2018), the grip or fit can be made more optimal on the agent side by the agent coming to learn the structure of the environment and on the environment side by the environment changing its structure to better fit the agent. They map out a niche construction simulation that illustrates how niche construction scenarios play out with different agent and environment characteristics. A key variable is the malleability of each. In the case of a rigid agent and malleable environment, the agent conforms its environment to its expectations. In the case of somewhat malleable agents and somewhat malleable environments, both agent and environment influence each other. In the case of malleable agents and rigid environments, the agent learns - or changes its structure in response to the environment (Bruineberg et al., 2018). This simulation gives hints as to the kind of cognitive change that might be helpful in the context of bigger-than-self issues discussed in this thesis. That is, a highly non-malleable situation (from an individual's perspective) such as climate change might be interpreted as requiring learning, structural change in one's embodied embedded cognition, in response to such a reality. Such a changed individual can then contribute to developmental niche construction by, in conjunction with others, helping to create cultural change that affords other humans and future generations greater capacity to respond to such a reality, via changes in the technological and cultural inheritance that future generations will receive from the current

one. This is consistent with wisdom from indigenous cultures, for example, many of whom emphasise a much longer-term view of human action, such as the seven generations view (e.g., Da Costa, Farias, Wasieleski, & Annett, 2021).

The Free Energy Principle, Predictive Processing, and 4P Prior Updating

An important aspect of the emerging view in cognitive science presented in this thesis that has yet to be discussed is that of the free energy principle (FEP; Friston, 2010), its corollary in active inference (e.g., Friston, 2013; Friston et al., 2017), the Bayesian brain and predictive processing (e.g., 2013). These theories can trace at least some of their roots to cyberneticists (Clark, 2013), the work of Maturana and Varela (1980) on autopoiesis and are heavily discussed in the works of Bruineberg and Rietveld (2014), Bruineberg et al. (2018), and Fabry (2021) discussed above. Since Friston (Friston et al., 2006) originally put forward the hypothesis of a free energy principle, there has been an avalanche of theoretical and applied literature making use of these interrelated principles. This section will only touch on this extensive literature, but points to it as an important part of the emerging paradigm in cognitive science that can inform an updated embodied embedded cognitive behavioural therapy tradition. Specifically, the principal contribution of the FEP, active inference, and predictive processing orientations is the idea that the brain (and cognition more broadly) is a predictive engine (e.g., Clark, 2013), and as such is continuously updating itself when functioning optimally (e.g., Carhart-Harris & Friston, 2019). Similar to the concepts of relevance realisation and self-organising criticality, this process is thought to be scale-invariant (Vervaeke, 2019; Bak et al., 1988), or happening at multiple scales in the brain at once, including aspects of cognition accessible to self-conscious awareness. An implication of the idea that updating cognitive priors is central to optimal functioning is that doing this in an

embodied and embedded way can help to link together the theory discussed so far with praxis of an updated version of cognitive behavioural therapy.

The FEP (e.g., Friston, 2010) proposes that living systems can be understood as agents seeking to minimise free energy both internally and between them and their environment. Free energy is understood here as consisting of prediction error, or surprise (Friston, 2010). Biological organisms are understood as creating generative models of self and environment, which help the organism to make predictions about the same (Friston, 2010). The difference between these generative models, which can be understood as cognitive priors or prior beliefs (e.g., Carhart-Harris & Friston, 2019), and recognition models, which are posterior beliefs or best guess estimates of what has happened in reality (e.g., Ramstead et al., 2020), constitutes surprise or free energy. The FEP is closely linked with the Bayesian brain hypothesis (e.g., Knill & Pouget, 2004), which posits that the brain uses probabilistic (Bayesian) models to map sensory information. In optimal cognitive functioning, according to this hypothesis, the brain (or brain-body-environment system, depending on one's theoretical orientation) approximates Bayesian inference. In Bayesian inference, which applies in environments where uncertainty is present and a cognitive agent has to update beliefs in relation to new evidence, prior updating takes into account both the recognition model (the system's best guess as to what actually happened based on sensory data) and the generative model (the prior expectations of the system), and in so doing helps to navigate between extremes of over- and under-accommodation to the new observed data (McKay & Dennett, 2009).

In biological organisms, Bayesian inference is posited to be approximated, as fully computational Bayesian inference would run into combinatorially explosive problems as discussed in the above section on relevance realisation. Therefore, the abstract ideal of

computational Bayesian inference, when situated in embodied embedded cognitive agents is typically understood through some form of predictive error minimisation framework (PEM; e.g., Clark, 2013; Clark, 2016; Hohwy, 2016). There is still conceptual debate around how predictive error minimisation is enacted in cognitive agents. Representationalists such as Hohwy (2013; 2016) posit a much more restricted role for the body and environment in how cognition comes to be, and emphasise the role of the brain in creating representations of the world. This contrasts with theorists such as Clark (2013; 2016), Kirchoff and Kiverstein (2019), who emphasise embodied, embedded, extended, and enactive approaches to understanding cognition known as 4E cognition (e.g., Newell et al., 2018). This debate is ongoing and not centrally relevant to the purposes of this thesis, and so will not be covered in detail here. However, it is important to say for the purposes of the current thesis that I believe the answer lies between the two extremes of the radical enactivism of Hutto et al. (Hutto et al., 2020), who argue that inner models and updating of predictive estimates can be eschewed entirely in favour of a kind of cultural permeation of the environment into one's embodied cognition, and Howhy (2016), who argues that PEM implies that cognition is mostly skull-bound, that the brain is almost entirely representational and self-evidencing, and any influence the culture and environment has on the brain is through cognitive penetration via inferential updating of priors.

The view I take in this thesis is that the truth is more dialectical (i.e. a paradoxical both-and) than either of these two extreme representationalist or anti-representationalist views (Hutto et al., 2020; Howhy, 2016), and that cultural permeation is potentially pervasive but can be interrupted by subcritical prior updating processes, whereby certain cognitive priors become ossified and resistant to updating. This view is closer to Clark's (2013, 2016), who argues for a conservative enactivism that retains predictive processing capacities but

understands it as taking place within a brain-body-environment system that is fundamentally concerned with acting in the world. Clark (2016) likens his view to that of Varela et al. (1991) in that this brain-body-environment system together enacts a world. Clark's (2016, p. 291) view is also consistent with that of Bruineberg and Rietveld (2014) in saying that "the role of that generative model is to deliver an efficient, context-sensitive grip upon a world of multiple competing affordances for action." Venter (2021) builds on Clark (2016) and others' work to put forward an embodied, embedded predictive processing account of cognition. In this account, which operates according to the FEP, "the agent and environment enter into a bidirectional relation through influencing and modelling the structure of the other" (Venter, 2021, p. 1).

Practically speaking, what the FEP, Bayesian brain, and PEM frameworks, and the embodied embedded predictive processing account of Venter (2021) allow us to do is have a theory for understanding how a cognitive agent, situated within a particular time, place, and socio-ecological / cultural niche or collection of niches might update itself and engage in niche construction. The agent's salience landscape and field of relevant affordances (Bruineberg & Rietveld, 2014; Bruineberg et al., 2018; Fabry, 2021) can be understood as co-determined by embodied embedded cognitive priors and the affordances for action that are scaffolded by the extended physical and cultural environment of the socio-ecological niche that agent is situated within. This framework scaffolds further insight into bigger-than-self distress: such distress can be understood as the gap between our understanding of the civilisational-biospheric realities existing in the world and the predicted path of where the cultural-cognitive patterns in our socio-ecological niches are leading us. The individual experiencing bigger-than-self distress is confronted with knowledge of what can feel like impending climate-, biosphere-, or civilisation-related doom, simultaneous to being

presented with a globally dominant human culture that can seem at best conflicted about what to do and at worst actively avoidant or holding beliefs and engaging in behaviours that make things worse or inhibit effective change in response to the individual's perception of what their generative model suggests is actually occurring.

Furthermore, particularly perceptive individuals might realise that the same cultural patterns that are contributing to these biospheric-civilisational crises are embodied and embedded within their own cognitive systems. Each of us, at least in the developed world, lives in a state of hypocrisy regarding most biospheric aspects and many civilisational aspects of the meta-crisis. Most of us do not want the outcomes for the biosphere that we are collectively enacting, and yet we continue to drive our cars, participate in the global industrial complex that supplies our food and material supplies that we live with. To perceive this is to begin to reckon with the depth and scale of the problem that the meta-crisis confronts us with. It is not something that can be defeated through a war mentality of defeating some external enemy 'out there' (e.g., Eisenstein, 2018). Indeed, I posit that this war mentality is part of the cultural landscape of affordances that is offered to us by our culture which only serves to exacerbate the problems we are facing in this newly globally interconnected era, whose effects can be seen in the cycle of increasing affective polarisation throughout society as it grapples with bigger-than-self issues relevant to the meta-crisis (e.g., Iyengar et al., 2019). This war mentality in response to threat is but one aspect of a wider set of cultural norms that exists both in the culture and in the embodied psychologies of individuals: individually experienced affective polarisation can be seen as an internal corollary to external violence enacted in the collective space.

At this point we are drawing closer to the kind of understanding of cognition that affords an understanding of the meta-crisis that can in turn afford us with greater capacities for

adaptive responses to our own and our clients' experience of bigger-than-self distress. The argument that can be made so far is to first become receptive to the world, and to invest time in accurately perceiving what is happening. Many individuals experiencing bigger-than-self distress will already be engaged in some form of this, to varying levels of depth or rigour. The second step, which we can perceive more accurately with the updated understanding of cognition espoused in this chapter, is to enact structural change in our own cognition in response to what we perceive as happening in bigger-than-self reality. This allows us to start to update our own embodied cognitive priors or expectations of what is happening, and to decouple our own priors at least partially from aspects of the wider culture that are not accurately perceiving or responding rationally or adaptively to the meta-crisis.

This second step of decoupling our own priors from unhealthy aspects of the distributed cognition of the wider culture would have the result of us, in our own lives, starting to embody a more adaptive response to the meta-crisis, and does not depend on any external change happening. However, because we live within a globally interconnected society which collectively, though not evenly, is responsible for the meta-crisis, we do need external change to happen. So a third step seems necessary, which looks like enacting a life that contributes towards shaping one's own external niche (via organism-niche coordination dynamics; Fabry, 2021) in ways that themselves contribute to a developmental niche construction pathway (e.g., Stotz, 2017) that is more adaptively responsive to the biospheric and civilisational conditions we find ourselves in. In this way, individuals can contribute to wider cultural change that helps society find adaptive ways of responding to the meta-crisis. These three steps are discussed and unpacked in more detail in Chapter 10's discussion of metabolising bigger-than-self distress.

Spelled out this way, the process of responding to bigger-than-self distress laid out here may look daunting and seem overly abstract, difficult to imagine how it is operationalised in the world. But the current thesis does not end here, the argument is still in the process of being constructed. It will be argued that what is needed for this second step of enacting change in the structure of one's own cognition in response to the meta-crisis is essentially a process of 4P prior updating. Starting from the foundations of a mindfulness-based pedagogy, it is possible to cycle through the layers of knowing that make up our cognitive system, from propositional down to participatory, and encounter embodied embedded cognitive priors that are aligned with either bigger-than-self distress or relief from it. In so doing, individuals can update the field of relevant affordances that reveal themselves, a process which may or may not involve actual change in one's socio-ecological niche (such as being exposed to new people, ideas, or making lifestyle or vocational changes in one's life). This may look like a kind of change analogous to fact-free learning (Aragones et al., 2005), whereby insights and cognitive change can be had without the addition of any new information or external inputs.

So, at this point we have an outline of the cognitive scientific architecture of the kind of change that is being proposed to meet the deeper, more existential forms of bigger-than-self distress that are the focus of the current thesis. But what this looks like, the directionality of this change, has yet to be discussed. The next chapter will discuss the directionality of the change in more detail, namely in the direction of nondual enactive wisdom development. What is meant by the terms nondual, wisdom, and wisdom development will be discussed, both from a contemporary cognitive scientific formulation as well as historically in Western, Eastern, and Indigenous traditions. It will be argued that what is needed to meet this global set of crises is a dynamic enactive synthesis of wisdom and perspectival knowing from

traditions from around the globe, set in a modern scientific, technologically advanced, secular/pluralistic framework that enables individuals to enact change in the contemporary, real-world settings where they live, work, and play.

Chapter 8: Understandings of Wisdom in Western, Eastern, and Indigenous Traditions

This chapter focuses on wisdom, both in contemporary conceptualisations as well as within traditions from three distinct cultural legacies that make up significant portions of the global human culture today: the Western, Eastern, and Indigenous cultures and their respective (philosophical, religious, and cultural) wisdom traditions. In the overall structure of the argument of the current thesis, the reason for the focus on wisdom is twofold. First, this thesis is pointing to an already emerged understanding of cognition that could represent a future direction within the cognitive behavioural tradition. Drawing on wisdom traditions has been fruitful within the cognitive behavioural tradition to date. The philosophical roots of cognitive therapy can be drawn back to the Stoic philosophers of Ancient Greece and their focus on reconciling one's thoughts with a rational view of the world. The philosophical roots of the third wave mindfulness and acceptance-based additions to the cognitive behavioural tradition can be drawn to Eastern philosophies and psychologies, primarily Buddhism. From this perspective it makes sense that further developments in the cognitive behavioural tradition would benefit from integration of wisdom traditions that are part of the cultural inheritance of humanity from times past. There is a lot to be gained from tapping into wisdom traditions, arguably this is already being done in the broader realm of therapeutic interventions in general, and this thesis attempts to contribute towards existing trends in this direction and tie it into possible next iterations of the cognitive behavioural tradition.

Second, the worldview underlying traditional cognitive behavioural therapy, in many ways mirroring the larger Cartesian, mechanistic culture in which it arose (e.g., Capra & Luisi, 2014), emphasises a kind of computational, disembodied rationality (e.g., Hohwy, 2013). In

this disembodied computationally rational model of traditional cognitive therapy, the individual analyses rationally certain beliefs, and challenges them against evidence, then is expected to use their executive functioning to continue to challenge this thought or schema whenever it arises in the future. Enacting a view of cognition consistent with the systems view of life and that presented within this thesis, for reasons that have been and will continue to be discussed, is not able to be done with computational rationality alone, especially in the context of the deeper aspects of bigger-than-self distress that are the subject of the current thesis.

To enact such a worldview in an optimal way requires a dynamic, systemic, embodied embedded cognition that is able to switch between different perspectives and confer itself optimal grip over a field of relevant affordances (Bruineberg & Rietveld, 2014; Bruineberg et al., 2018). It requires an ability to self-reflect (e.g., Grossmann et al., 2021), to see through one's own self-deceptive lenses (e.g., McKee & Barber, 1999) and behavioural conditioning, and complexify one's cognition in response to an uncertain and changing world and socio-ecological niche (Vervaeke, 2019). It requires an ability to know one's own mind, and enact wise responses in line with the world, while at the same time being able to fit into interpersonal situations and cultures that allows one to connect, collaborate, and coordinate action in the world (e.g., Lewis et al., 2020). It requires an ability to see through one's illusory perception of a separate self (e.g., Loy, 2019, Albahari, 2014) and respond in ways that are non-reactive (e.g., Cayoun, 2015), and which locate the self as existing within larger socio-cultural-ecological-physical systems (e.g., Henriques, 2003; Capra & Luisi, 2014; Christian, 2018). It requires the ability to toggle between zoomed in near-time perspectives and zoomed out deep-time perspectives and to bring these into a kind of dynamic dialectical attunement with each other (e.g., Lewis et al., 2020). It is the move from computational

rationality to embodied embedded wisdom development that enables these abilities and which is core to the argument being made in this thesis (mirroring arguments from Vervaeke, 2019, Vervaeke & Ferraro, 2013a) for one way forward within the cognitive behavioural tradition in years to come.

All this entails a much more ambitious and whole of life approach to working with cognition than has previously been the case in cognitive behavioural therapy. The institutions that have traditionally provided that in human cultures are our wisdom traditions and practices (alongside religions, which are not within the scope of this thesis). This more ambitious whole of life expansion of the possibilities of working with cognition is a natural by-product of the understanding of the meta-crisis as analogous to climate trauma: it is a psycho-cultural crisis before it is a technological and economic one as the psycho-cultural assumptions and ways of being are upstream of the technological and macro-economic responses we might enact (Woodbury, 2019). With this understanding of the meta-crisis, it would not make sense to continue to give such little emphasis on psychological change, especially the kind of psychological change that is connected to the larger cultural patterns within the socio-ecological niches we exist as part of. In this understanding the remit of psychology is much expanded relative to our culturally embedded expectations of the role of psychology in society and our response to climate change and other bigger-than-self issues.

Contemporary Cognitive Scientific Approaches to Wisdom: Relevance Realisation, Metastable Attunement, Intellectual Humility and Perspectival Knowing

This section will help to bridge between the last chapter's discussion of cognitive scientific theory and this chapter's discussion of wisdom. The two are interconnected: while the cognitive scientific theory gives us an updated intellectual understanding of cognition, it does not in itself allow for a moral and ethical grounding in the world or include examples of

practices that can be used to cultivate an embodied phenomenological experience that corresponds to this intellectual understanding. An intellectual understanding alone is not sufficient to relieve bigger-than-self distress: intellectual understanding must be coupled with structural changes in cognition as Varela et al. (1991) argued for. This section will begin to link the cognitive science discussed in the last chapter with wisdom by first discussing how the process of relevance realisation is involved in the processes of insight, self-transcendence, and complexification of cognition that is arguably characteristic of, or at least underpinning the capacity for, wisdom. I will then discuss how relevance realisation links the constructs of intelligence, rationality, and wisdom, and allows us to distinguish these constructs from one another. This will lead into a discussion on contemporary cognitive scientific conceptualisations of wisdom, with a focus on morally grounded excellence in metacognitive abilities within socio-ecological contexts.

Relevance Realisation, Insight, Self-Transcendence, the Development and Complexification of Cognition, and Wisdom

To return to our discussion of relevance realisation, we can now begin to link it to processes related to wisdom, beginning with insight. Typically, insight, or insight problem solving, is conceived as a sudden and clear seeing through of a previously stuck problem (Bowden et al., 2005). In insight problem-solving, where the problem is one that cannot be solved in an incremental series of steps, the solution appears through a restructuring of the problem (e.g., Ohlsson, 2008), often resulting in the prototypical “aha!” moment. Insight is related to fact-free learning, where learning happens via restructuring of facts and knowledge currently known to the system rather than by the addition of new facts or knowledge (Aragones et al., 2005). This can be seen as a change in the field of relevant affordances revealed to the individual in relation to the problem space. The presence of

"relevant" indicates that relevance realisation is likely to be involved in some way in this change in the field of affordances. Vervaeke (2019) suggests that this change in an individual's fields of relevant affordances occurs through self-organising criticality. He points to research of Stephen and Dixon (2009; Stephen et al., 2009) providing support for the idea that insight can be understood as a phase transition in self-organising systems. Vervaeke (2019) points to literature on graph or network theory, which suggests that insight-related learning is associated with a change from regular networks (with many undifferentiated connections between nodes) to small world networks (with fewer but more refined connections between nodes), resulting in connections that are more optimal and efficient than those existing prior to the insight (Schilling, 2005). Both these lines of evidence point to structural changes in cognition related to insight, and to a reorganisation of the internal relevance landscape: what is perceived as relevant is different between pre- and post-insight time points. Furthermore, research suggests this moment of insight likely to co-emerge with reward signal processing in the brain (Oh et al., 2020).

Insight applied to one's own cognition, or metacognitive insight, can lead to self-transcendence, self-transformation, and ultimately to self-complexification of one's cognition. This mirrors the mindfulness-to-meaning theory (Garland et al., 2015) and its extension that applies the theory to self-transcendence (Garland & Fredrickson, 2019). Mindfulness has been shown to predict improved insight problem-solving (Ostafin & Kassman, 2012) and has traditionally been linked with insight of the sort that Varela et al. (1991) discussed, which confers the kind of experiential realisation (or participatory knowing) that can complement a more intellectual (propositional) understanding of cognition as a system. This second (metacognitive) form of insight, while sharing some commonalities with insight problem-solving, has more to do with insight into the nature of one's own cognition,

and is more pertinent to our discussion of self-transcendence, self-transformation, self-complexification, and ultimately, wisdom.

McKee and Barber (1999), in their discussion of theoretical and empirical definitions of wisdom, argue for a definition of wisdom as seeing through illusion. They discuss several theoretical and empirical accounts of wisdom and argue that most can be seen to include an aspect at its core that is about seeing through illusion (McKee & Barber, 1999). This can also be seen in models of mindfulness training, including notably in contemporary mental health settings in helping to see through and overcome addictive patterns (e.g., Brewer, 2019; Garland, 2016) and in more traditional settings in seeing through the illusion of a fixed, permanent, and separate self existing independently of the world, body, and psychological processes that it is comprised of (e.g., (Van Gordon et al., 2016; Van Gordon et al., 2018; Shonin et al., 2015). The seeing through of illusory processes within one's own cognition is what is meant by self-transcendence: one transcends one's own self-deceptive parasitic processing (e.g., Perkins, 2002). This transcendence of parasitic processing is similar to cognitive models of the treatment of depressive disorders, where self-defeating self-deceptive maladaptive appraisals of self and world are brought into focus and challenged (Perkins, 2002).

As an individual engages in practices (such as mindfulness) that confer insight and self-transcendence, their cognition can also be seen to increase in complexity (Vervaeke, 2019). This increase in complexity of cognition can be understood as happening within the neural architecture of the brain-body-environment system, as well as being able to be perceived in behavioural terms. Within the neural architecture of the brain-body-environmental system, self-organising mechanisms self-organise into periods of criticality, creating phase transitions and a rearranging of the structure of the architecture or its connections, for example from

regular to small-world networks (e.g., Schilling, 2005). This phase transition might be related to insight that confers a seeing into a problem space that was not previously existing - but it could also lead to a restructuring of cognition that results in an increase of self-deception. This point - that the same cognitive machinery that leads to insight and wisdom can equally lead to self-deception and maladaptive processing - is made repeatedly by Vervaeke (2019; Vervaeke & Ferraro, 2013a).

Arguably the same mechanism of complexification of cognition is at work in the development of complex yet maladaptive protective mechanisms involved in severe mental health conditions such as complex PTSD and dissociative disorders (e.g., O'Neill et al., 2018; Resick et al., 2012). The point is that cognition is not static: it is continually developing and changing, across the lifespan; and moreover, this affects our ability to confer optimal grip on our environment and is something that we can influence through conscious co-participation with it as a developmental process. Cognition can become more complex, in multifaceted ways, for example through traumatic events, or through practices such as mindfulness which confer insight and the possibility of self-transcendence of maladaptive parasitic processing.

Wisdom in Contemporary Cognitive Science

Contemplating the idea of the complexification of cognition in behavioural terms leads us to contemporary cognitive scientific conceptualisations of wisdom and skilled behaviour, which seems to point to the capacity for seeing through self-deception (McKee & Barber, 1999), complex cognitive capacities in the metacognitive and moral domains (Grossmann et al., 2020) and for dynamic and well-attuned task switching between competing action possibilities within the environment (Bruineberg et al., 2021; Miller et al., 2022). As I have argued above, metacognitive insight or the capacity to see through one's own self-limiting self-deceptive processes (McKee & Barber, 1999), for example to see through the duality of

self-control and desire at the core of addictive patterns (Brewer, 2019), is core to self-transcendence.

Grossman et al. (2020) add to the growing contemporary literature on wisdom by synthesising the views of a variety of experts in the cognitive science of wisdom. The three most common themes they found were: (1) moral groundedness, made up by items such as pro-sociality, moral disposition, sympathy, and common humanity; (2) metacognitive capacities, made up by items such as perspectivism, balance or dialectics, appreciation of broader context, and intellectual or epistemic humility; and (3) self-transcendence, made up by items such as reflection and deep insights. Grossman et al. point to the importance, in real-life contexts, of the integration of these capacities: a moral groundedness without the metacognitive abilities to weigh up decisions and act on them in real time is not effective. This points towards the importance of relevance realisation in wisdom, in that the authors suggest that propositional logic (i.e., computational rationality) alone is insufficient for meeting these real-world tasks. What is needed is a sufficiently complex cognition to be able to weigh up these competing demands and make wise choices consistently. This capacity would seem to depend on self-transcendence, the third factor Grossman et al. identified, and the kind of optimal self-complexification of cognition that affords.

Bruineberg et al. (2021) point to a feature of complex cognition that they argue is key to skilled performance, and which I posit is equally key to wisdom. This feature is what they call metastable attunement. Metastability is a feature of complex systems whereby there are multiple attractor states that the system switches between without any active input from outside the system (Kelso, 2012). Like in dialectics, metastable systems oscillate between states flexibly and eschew extremes (Kelso, 2012). Phase transitions do not imply a breakdown in functioning but are instead integrated into the flow of the organism's self-

organising functional grip with its environment (Kelso, 2012). This results in parts of metastable systems being able to flexibly switch between segregating and expressing their own intrinsic dynamics and integrating and coordinating with other parts to create new emergent properties (Bruineberg et al., 2021).

Evidence suggests that metastability confers a more optimal psychological flexibility to an individual and may be disrupted via physical trauma to the brain (Hellyer et al., 2015). It is just this kind of metastable attunement to the environment that seems to be a good candidate for the kind of metacognitive perspectival skills that Grossman et al. (2020) identify as being key to enacting wisdom in the environment. Miller et al. (2022) argue for metastable attunement being a key feature in their predictive processing account of wellbeing. A cognition structured in terms of metastable attunement allows for a flexible tuning between 'external' action in the world and 'internal' structural change via insight practices into one's own cognition that this thesis is arguing as being characteristic of an optimal response to bigger-than-self distress. As will be discussed in the next chapter, metastable attunement appears to describe the outcomes of several practices that I suggest lend themselves towards wisdom development for bigger-than-self distress.

To bring back the thread of relevance realisation being a central and scale-invariant process by which we can understand many of these other cognitive processes, Vervaeke (2019) and Ferraro (2013a) discuss how relevance realisation is central to wisdom. Building on arguments now that implicate processes of relevance realisation in intelligence, insight, self-transcendence, optimal gripping of environment, updating and complexification of cognition, it seems a natural extension that relevance realisation would be important for wisdom. Vervaeke and Ferraro place intelligence, rationality, and wisdom on a kind of continuum. Intelligence, for them, refers to the capacity for adaptive behaviour in the

environment. Rationality refers to the use of that intelligence in ways that are adaptive. Wisdom refers to the process of improving one's rationality, one's capacity to bring one's intelligence to bear on adaptive behaviour in a range of environments. This definition of wisdom, as rationality self-transcending rationality, is fully consistent with everything that has been discussed so far, though of course leaves much detail to be filled in in any definition of wisdom, which has been supplied in part by our broader discussion of wisdom so far. Vervaeke and Ferraro (2013a) make several suggestions for how wisdom might be cultivated and developed, which stem from their seeing wisdom as relying on cognitive capacities that are fundamentally self-organising.

The notion of self-organising wisdom development practices can now link us back briefly with where we left off the discussion of mindfulness training and MBIs. In Chapter 5 I suggested some combination of MiCBT and McCown's relational mindfulness pedagogy could be a basis for responding to bigger-than-self distress, but it was not enough on its own. What was needed was a substantial broadening of the scope to allow it to integrate a broader understanding of an individual's bigger-than-self context and updated understanding of cognition. Chapters 6 and 7 delivered these, with a vital link being provided by Varela et al.'s (1991) work arguing for a re-coupling of the link between our intellectual understanding and embodied experiential understanding of being in the world, and that mindfulness practices were a prime candidate for this by virtue of their capacity to see through the content of any introspective content to the underlying process and structure of cognition. Chapter 7 then followed up with an updated understanding of cognition as enactive, self-organising, grounded in scale-invariant relevance realisation, which allows for an embodied embedded optimal gripping of a field of affordances within the environment, according to the FEP and Bayesian PEM, and updating of cognitive priors that underly one's relevance landscape. All

this was unfolding within the contexts described in Chapters 1 and 6, where bigger-than-self reality could be understood in a scientific Big History cosmology, in a systems view of life conceptualisation that had an analogue in the ToK system that linked this broader narrative to the field of psychology. Within that scientific cosmological narrative, I posited the existence of a human-caused meta-crisis affecting our biosphere and civilisation that has to do with our culture that is ultimately grounded in our embodied and distributed cognition. Now that all this context and understanding has been laid out, we can begin to explore what wise responses to bigger-than-self distress might be, and draw from the wisdom traditions of the West, East, and Indigenous traditions. This will lead into the next chapter which explores the kind of psychological interventions that can help individuals enact such wisdom.

The Western View of Wisdom: Philosophia - Theory and Praxis

The literature on wisdom traditions and practices, in the broad sense of the term, is enormous: it includes much of Ancient Greek philosophy, 2500 years of Buddhist thought, insights from Taoist, Confucian, Vedantic, Shaivite, Hindu, Islamic, Judaist, and Christian traditions, as well as those of the thousands of indigenous cultures still existing in the world today. Obviously, this chapter cannot hope to distil the collective insights of such a broad range of traditions and practices. What I am proposing more generally in this thesis is that psychology, and the cognitive behavioural tradition in psychology in particular, has expansive new (old) areas to explore in the wisdom traditions. In the spirit of intellectual humility, facing this plethora of wisdom traditions might remind us of our relative lack of knowledge, propositional and participatory, while remaining cognisant of what we do know and do well (for example, the practice of psychological formulation seems more unique to contemporary times). This approach of intellectual humility, if done skilfully and insightfully, is in line with wisdom: it is wise to know what we know and what we don't know, and to seek to become

wiser, to develop in our propositional, procedural, perspectival and participatory knowledge and the capacities to assist clients that such knowledge confers.

This first section focuses on wisdom traditions within the West, specifically Ancient Greek philosophy, which is still foundational to our modern worldview today in important ways. While there is a huge amount to say on the views of these ancient philosophers on wisdom, I focus not on that specifically but on the praxis of philosophy as they practiced it then. I discuss Hadot's (2004) work in distinguishing the praxis of philosophia, as distinct from our modern understanding of philosophy, to highlight that the historical philosophical foundations of Western culture placed a strong emphasis on embodied, participatory knowing as well as syllogistic logic and empiricism.

Philosophia in Ancient Greece: Yoking Propositional, Procedural, Perspectival, and Participatory Knowing Together

While there is evidence of what would later be recognised as philosophical activity, which applied rational theory in attempting to understand the world rather than religious or mythological, from the seventh century BC (Hadot, 2004), I begin this much-abridged discussion of Ancient Greek philosophy with the life of Socrates. Socrates was a towering figure in Ancient Greek philosophy and Axial age thought, comparable to other philosophical and religious figures of this time (who each contributed much to the wisdom traditions that have survived to this day), such as Jesus of Nazareth, Gautama Siddharta, Confucius, and Lao Tzu (Jaspers & Bullock, 1953). In the context of Ancient Greek philosophy Socrates played a pivotal role: as will be discussed below, each of the major schools of philosophy in the ensuing period can be drawn ultimately back to the life of Socrates. Much of what is known of Socrates comes from recordings of his dialogues with the fellow citizens of Athens, in which he nearly always played the role of the questioner, rather than the defender of a

certain idea or doctrine. That he was almost always the questioner was no accident and points to a defining characteristic of Socrates, a characteristic illustrated by a story involving the oracle of Delphi. It had apparently been told by the oracle that no one was wiser than Socrates. Socrates, wondering what was meant by this, went on a quest to find someone wiser than him, questioning experts in different areas of society, and finding that they each believed themselves to know everything, and that this knowledge could be found to rest on faulty premises when probed. He concluded that if he was wiser, it was because he knew how much he did not know (Hadot, 2004).

Socrates then took on the mission of exposing the routine lack of knowledge in other people, assuming the role of the questioner and an attitude of naivety (Hadot, 2004). He often denigrated himself, an act that had roots not in self-hatred but in a kind of playful nonseriousness in which he recognised the folly of taking oneself or one's supposed knowledge too seriously. This refutation of knowledge was revolutionary in its time. Rather than treating knowledge and wisdom as something to be held and disseminated, he entered into dialogue and questioning of his interlocutors. This questioning often initially exposed the flaws of the interlocutor's current position, but also pointed deeper towards a more profound truth, a truth that for Socrates and Plato was contained within the person's soul waiting to be tapped. Plato expressed this mythically, with the equating of knowledge with the soul's remembrance of a vision that it had some point already known. In taking this stance, Socrates was not merely pointing towards flaws in propositional knowing: he was embodying a way of being, a participatory way of being, that enacted this knowing of the fragility and limited nature of what one thinks one knows. He emphasises the importance of love, both for the person he was talking to, and for the good and rational, but he does so through his actions rather than through some theoretical defence of the same. This is

encapsulated at times in his words, for example in his admonishing of a Sophist who criticises him for never putting forward an argument for what justice is, remarking that while he might not have made an argument for it, he never stops showing it by his actions (Hadot, 2004).

For Socrates, what was true was not as important as one's commitment to do what was good, and he engaged both in philosophical dialogue but also was an engaged member of society and participated actively in the life of the city (Hadot, 2004). While he clearly engaged in dialogue and meditation on such philosophical topics as truth, virtue, and justice, and famously claimed the unexamined life to be not worth living while on trial to be put to death, he also was described as a husband, father, and brave, tough soldier. He was reported to talk to everyone and often drank as much as anyone else, without ever getting drunk. He eschewed material possessions or other mortal pleasures often coveted by others, was resistant to cold, hunger, and fear, and was often depicted as being barefoot, unwashed, and wearing an old worn cloak. He was an enigmatic figure, neither fully in society due to his reflexive, meditative qualities, yet neither fully outside it due to his full-hearted participation in it and concern for people and everyday living (notice the similarity here with Bruineberg et al.'s (2021) notion of metastable attunement). In the final analysis, though, he was committed fully to increasing goodness, in himself and others, and was willing to die for his principles: he could have attempted to argue his way out of his sentence or taken up an offer to escape the city while waiting for his execution. He did neither, reasoning that it would be inconsistent with what was good as he understood it to be, and that to betray one's sense of the good was a fate worse than death (Hadot, 2004).

In the period following the life of Socrates, the practice of philosophia truly flourished through Athens and Greece, most immediately in his most famous student, Plato (Hadot, 2004). Plato was concerned with politics, and this motivated his philosophy: he aimed to train

the leaders of the polis in philosophy, and in so doing guide the direction of politics in wise and just ways. However, to do so, Plato would have to take an enormous detour, which involved setting up a community that could train people in a new way of being human, spiritually and intellectually. This changed the setting of philosophy, relative to Socrates: Plato brought it into a philosophical community, within the framework of a school, a continual dialogue between masters and students who shared in common a way of life. This way of life was committed to dialogue, a love of the good, and ultimately, to commit one's entire life and soul to the pursuit of philosophy. Importantly, this philosophy was not detached from the world: to be sure it involved discourses, and propositional logic, but this was secondary to committing one's life, and renewing and practicing this commitment constantly, to that which is most good in one's actions. As Vervaeke (2019) points out, this involved a self-transcendence of inner tendencies that led one away from the good. All this was carried out in a school setting, the famous Academy, which took place in a literal physical building, a gymnasium on the outskirts of the city (Hadot, 2004).

Plato's Academy was the first, but not the only such philosophical school in Ancient Greece (Hadot, 2004). Plato's most famous student Aristotle founded, after 20 years as student and teacher in Plato's Academy, the Lyceum. Zeno, the founder of Stoicism, set up the Stoa, while Epicureus set up The Garden. These schools all had coherent philosophical ways of being associated with them: some relied more on discourse, others less, and each had different aims or conceptions of the good. Two schools, the Skeptics and the Cynics, did not even have physical premises, emphasising Socrates' position that education should take place in the world, the real life bustle and tumble of city living. Each of these schools, and others besides which were either not as popular or not as well preserved in writing, shared the focus on living and practicing a way of life. In every school but Cynicism, discourse was

used in some form to engage in rational dialogue and so get closer to the truth of the matter, but the focus was more on the lived community and shared commitment to a way of living (Hadot, 2004).

This focus on philosophy as a way of living shifted over the centuries and with the ending of the Hellenistic period of Antiquity (Hadot, 2004). The discourses came to be seen more as philosophy itself, and to learn what the historic masters had said on the matter took on more importance in schools that followed, though an emphasis on practice remained, it slowly faded and was eventually lost entirely with the ending of Antiquity (Hadot, 2004). When the study of philosophy was revived in later centuries, especially towards the beginning of the modern period, what tended to be focused on was the discourse alone, no longer embedded within a community of practitioners or embodied through one's daily life (Hadot, 2004). It is this disconnection between the propositional knowing of our Western philosophy, empirical sciences, and other forms of academic study, and the participatory embodiment of such knowing that I believe Varela et al. (1991) are lamenting and calling for a reweaving of in contemporary times.

Notably, one of the chief methods Varela et al. (1991) present that might give us the capacity to begin to do so is to turn towards mindfulness and the Buddhist lineage out of which it has come. This section suggests that we might also draw from Western lineages in doing so, and that this is entirely consistent with historical foundations of Western thought, which originally integrated much more tightly participatory and perspectival knowing with the propositional and procedural knowing of philosophical discourse and education that often (but not always) accompanied it. In contemporary times, the world is much more profoundly interconnected and not divided quite as neatly into West and East, especially when taking into consideration the biospheric-civilisational issues discussed in this thesis, and

I argue that a synthesis of wisdom traditions from different cultures is going to be stronger and more appropriate than a purely Western-centric approach. For this reason, we now turn to the conceptualisations and practices of wisdom within Eastern cultures.

The Eastern View: Wisdom as Seeing Through Duality Into Emptiness, Impermanence, and Compassion

If Western wisdom traditions can be characterised as inquiry into the nature of the world, especially of truth, justice, and moral goodness, and bringing one's way of living into integrity with that ongoing inquiry, then Eastern traditions can be characterised as inquiry into the nature of the mind, and an experiential realisation of the true nature of the mind. The nature of mind in Eastern traditions such as Buddhism, Shaivism, and Taoism is seen as being empty of a separate self, and ultimately not separate from the world, as has been discussed earlier in the current thesis.

In these traditions the study of nature of mind is not separate from the study of the world, but the methods of investigation means it is approached profoundly differently than in Western traditions that tend to reify dualistic constructs and treat them as real and having an ultimate existence. However, this very same process of reification, from a Buddhist point of view, leads to a profound experience of lack, which Loy (2002) argues is core to Western civilisation and aspects of it that have evolved to meet different forms of lack over the centuries. The nondual view of reality that does not reify concepts can hold within it the more common-sense dualistic perception of the world, but the same is not true in reverse. Western philosophy, which in the post-Ancient period has reified forms and the subject-object dualism, starts from a premise that makes it difficult to include the possibility of the nondual (e.g., Loy, 2019). Therefore, realising the nondual nature of experience and reality has something potentially profound to offer the Western mind, and this need not contradict

Western philosophy and the scientific and technological advances that have sprung from its dualistic understandings of the world.

This section will mostly discuss Loy's (2002; 2019) work in looking at the intersection of Eastern wisdom and nondual traditions with Western culture. The reason for keeping the focus on Loy's work is that it is itself a synthesis of many original texts, which we would not have time to discuss in this condensed summary of Eastern wisdom traditions and what they have to offer. Additionally, the nature of his argument is such that it finds unity in different nondual traditions in the East that might otherwise be obscured but does so in a rigorous and intellectually respectable way that neither oversimplifies or misrepresents the territory. The first subsection will focus on summarising his work on nonduality in the Eastern traditions of Buddhism, Vedanta, and Taoism, while the second section focuses on diagnosing the social history of Western culture from a Buddhist/nondual perspective, in terms of lack and its implications for how Western civilisation has developed.

Wisdom as Realising Nonduality in Buddhism, Vedanta, and Taoism

Eastern wisdom traditions start from a different place altogether than most Western philosophies (Loy, 2019). This place is best summarised as nondual experience, in which the notion of discrete, independently existing objects interacting in space and time are purportedly seen through as illusory percepts of the dualistic mind. This is not the same thing as denying the ordinary, everyday perception of reality, or its usefulness, which none of the major Eastern traditions do. Instead, the claim is that there exists another way of perceiving the world, and further that this nondual way of perceiving is more deeply true and superior to that everyday dualistic mode of perceiving reality. Most Eastern traditions are therefore concerned with attaining an experiential and ongoing, naturally arising realisation of this

truer way of perceiving, rather than arguing from the illusory perceptual foundations of duality that forms the basis for much Western philosophy and science.

The claims of nonduality are not grounded in empirical (objective) or propositional logic, as are most claims in Western philosophy. They are not even grounded in experience available to more than a select few, who have undergone years of training and meditative preparation to be able to verify for themselves the truth of the claims. This is quite diametrically opposed, then, to the way knowledge is justified within ontologies and epistemologies familiar to Western minds. But more than this, as Loy (2019, p. 4) points out, because nondual perception precedes dualistic, conceptual thought, this implies "the nondual experience, if genuine, must transcend philosophy itself and all its ontological claims". Any philosophical or metaphysical claims that are made, in Eastern traditions, are done so from the perspective of what is revealed by the nondual experience (Loy, 2019).

To begin to understand the nature of nonduality, consider the three following types of nonduality: the negation of dualistic thinking; the non-plurality of the world, and the lack of subject-object distinction (Loy, 2019). In the negation of dualistic thinking, the folly of reifying one construct is pointed to: when we create a judgment of one thing as good, we cannot help but creating its contrast of bad, or evil; when we aim for purity, we are immediately captured by the idea of impurity and how it might be avoided. How such dualities are avoided is through negating the dualism, and in so doing transcending it: only a mind that thinks not about purity or impurity can be said to be pure. Opposites are given up: this might be familiar to readers trained in DBT, in which a nonjudgmental stance towards thoughts is used to move beyond judgmental thoughts altogether. The second kind of nonduality is that spoken of above, that the world is not separated into discrete and independent objects. Loy (2019) notes passages from four different Eastern wisdom traditions pointing to how this

type of nonduality follows naturally from the dualistic conceptual thinking characteristic of the first kind outlined above. The third kind of nonduality, subject-object nondualism, the most important of the three for Loy (2019), can be seen as underlying the first two. That is, even if the world is seen as an undifferentiated whole by a perceiver, as in the second type of nonduality, this only points to the separation that exists between the world and its perceiver and so points towards the need to negate the duality of subject and object to retain a truly nondual perspective.

Subject-object nondualism is conceptualised differently between the Vedanta, Buddhist, and Taoist traditions (Loy, 2019). In Vedanta there is an underlying reality that is able to be perceived when one abandons seeing the world as something other than the self. In Buddhism, such positive claims are largely eschewed in favour of negation of duality, such as the existence of a self, or where such positive claims are offered, this is done in more nuanced and pluralistic ways. In Taoism, there is evidence of the valuing of the dissolution of subject-object dualism, which for Taoists is to be found in the unbroken flux of experience where there is nothing but the whole, no subject and no object. For each of these traditions, the value is on the transformation of an individual's experience of self and reality from dual to nondual. In the cognitive scientific language of the thesis developed so far, readers should recognise this as being similar to the agent-arena relationship that is formed at the deepest, participatory level of knowing.

Inherent in this transformation of one's participatory relationship with self and environment is the transformation of suffering and the realisation of one's unity with the world in a direct, nonconceptual way. In this mode of being there is an experience of being at home in the world, for the world and self are one and the same. Loy (2019) goes on to describe how nonduality can be found in perception, action, and thought. From this, of

particular significance is the notion that duality of each of these three arises from the essential nondual nature of each and that this misperception of duality disrupts and distorts that true nature. When these forms of nondualism are transformed, the true forms are revealed as something that has been present and the case the whole time. Broken from chains of past causality, nondual thought arises spontaneously. This spontaneous arising comes from the nothingness that exists when dualities are let go of, which is revealed to be the source of creativity itself. Nondual intellect is thus seen to be not the negation of thought but the negation of dualistic thought: thinking that arises spontaneously is valued rather than thinking that occurs as a reaction to some previous chain of thoughts or sensations.

The possibility of nondual realisation has ethical implications. Loy (2019) discusses Nietzsche's claim that, since God - and more importantly, the stable social structure and meaning system that went with the Christian God and underpinned European culture for centuries - has been functionally killed, there was a nihilistic lack of moral grounding for society. When God was the source of good, there was a religious struggle to impose his moral code upon the self and others via systems of control that ultimately had their emotional roots in fear. While we can see now how this was grounded in dualistic thinking, it did nonetheless provide a moral glue for society that has arguably left a hole that may be related to the meta-crisis (e.g., Vervaeke, 2019). However, now that Western cultures have been exposed to the Eastern traditions and the notion of the nondual experience, the duality of self and God, and self and world, can be negated and transcended. When the self is understood as being nonseparate from, and not other than, the world, treating others as competitors, enemies, or objects to be manipulated falls away. Importantly, this change does not come about by forcing, controlling, or manipulating oneself to be good, but is the naturally arising product of realisation of nonduality. A naturalistic ethics can arise not out of

an is-ought dualism, but from the seeing through of such dualistic illusions. This echoes Socrates' focus on seeing through illusions and its link with seeing and doing moral good of being of utmost importance - not as some disembodied propositional argument but as a practice of a way of living. As Loy (2019, p. 282) puts it: "Not Good & Evil, but Truth & Error! If God is anything, he is Understanding."

Lack and Western (Global) Civilisation: Nonduality as Cure for Lack

Loy (2002) offers a Buddhist perspective on Western civilisation as arising from a fundamental lack. This lack can be understood, given our discussion, as a lack of realisation of nonduality. This results in a lack of feeling felt, feeling real. Not feeling real, we look for our realness in all manner of external objects, whether physical or conceptual. This kind of process will be familiar to therapists: it is essentially a projection of our unconscious sense of lack onto (objects in) the world, something that of course cannot resolve the sense of lack and so can be seen as shadow which comes out sideways in less-than-conscious ways.

Loy (2002) outlines how attempts to resolve this sense of lack has been expressed collectively in Western civilisation in different ways throughout the centuries. One of the earliest forms is in the individualistic sense of self that has been a feature of Western civilisation since the Ancient Greeks, and which itself is associated with the value of freedom. For the individual to be free, there must be something for him to be free from: this necessitates the construction of a duality of which one half is the individual. This duality then focuses attention on the individual, and forces the reification of the ego, which is the dualistic process-based error in thinking that creates the basis for lack itself. The ego can now no longer let go into the world, for to do so would be to admit its own nonexistence. The ego and the lack go together. In nondual experience, this lack is realised as emptiness, which is really a fullness: being empty of a self also implies being full of all that there is - but this is not

how the dualistic, conditioned ego experiences it. Loy argues that the Hellenistic religions of self, or the post-Socratic schools of philosophy visited in the previous section - experimented with freedom of self, subjugated by reason alone, and found it to be untenable and self-destructing, paving the way for the lack to be addressed in a new way: progress.

Loy (2002) marks the 11th Century Papal Reformation as the beginning of the notion of progress in Western civilisation. Here, sin was reformulated in legalistic terms that the Church could then commodify as the bankers of salvation. Individuals could progress towards salvation by acts of redemption. This idea of progress, initiated within Christianity, would continue, as freedom has continued to be an important idea within Western society, but be joined by Renaissance era methods of dealing with lack: through questing for fame, money, and romantic love. These are at once more individualistic and secular than the notions of religious salvation but are equally incapable of fulfilling such lack. They bear the extra risk, too, of spilling over into what Loy terms demonic action: out of control desire for what the realisation of does not fulfil, spurring ever more craving behaviour, which may bring harm to self and others. The next lack, that of Modernity, supplements these individually focused quests with collective quests and institutions to match: the nation-state, corporate capitalism, and mechanistic science (Loy, 2002). We can see this embodied in our economic system that systematises our lack through the pursuit of endless economic growth, that raises living standards assumed to be the root of our unhappiness. While this may have had more validity as a balm to our lack 100 years ago or more, the link between GDP growth and both living standards and human happiness has been spurious for the past half-century (refs) and it has come at increasing, devastating cost to the biosphere.

These earlier quests to resolve lack are joined by what Loy (2002) terms the Lack of Civil Society, Waiting For Something That Never Happens, and The Religion of the Market. The

Lack of Civil Society was originally conceived as a means to bring a Holy Commonwealth to America, and as a response to the lack perceived in the individualistic and secular society that had emerged in the wake of the collapse of the church's dominance (Loy, 2002). Waiting For Something That Never Happens is Loy's way of pointing towards a phenomenon of contemporary culture's preoccupation with means rather than ends: as the ends never come, the two have inverted and for many then means have become the ends. Money becomes valuable not as a means to purchase other things but as a thing in itself. Purpose and goals become valuable but when achieved and the lack remains, still larger, more far-off goals and more transcendent purposes are created and aimed for. With the Religion of the Market, Loy presents market capitalism as the most successful religion of all time, in terms of the number of people it has converted in such a short timeframe. From a Buddhist perspective, however, market capitalism is rooted in lack, greed, and delusion, which it cannot satiate. From a bigger-than-self distress perspective, this understanding of Lack provides a good candidate for understanding an important psychological root cause of the biospheric-civilisational meta-crisis. The nondual experience obviously has a role to play in meeting and actually resolving this lack, but a discussion of how this might be enacted will have to wait until next chapter.

Indigenous Perspectives: Living in Harmony with Nature, Valuing Relationality, Land, and Spirituality

Indigenous perspectives on wisdom share much in common with Eastern traditions (e.g., Lange, 2018). Similar to the way nondual experience is often described within the Eastern traditions, Indigenous cultures tend to see the world holistically, as a constant flux of relationality and interdependence. This section will outline some core features of indigenous worldviews, with a particular focus on the worldview of the Māori people of Aotearoa New

Zealand. It will also cite calls from the global indigenous community for a shift in values in response to the climate and planetary crises and how indigenous worldviews, knowledge, and practices have been argued to contribute towards a global response to these bigger-than-self issues. Finally, I will pay some attention as to how such worldviews, or insights and ways of being inspired by them, might be enacted from the perspective of an individual navigating through the world.

Indigenous Worldviews as Seen Through the Lens of the Māori of Aotearoa New Zealand

There are over 5000 indigenous cultures existing globally today, representing about 5% of the world's population and 370 million people (Amnesty International, 2022). It would be impossible here to give even a cursory account of these thousands of diverse cultures from around the globe. In lieu of that, I will focus instead mostly on the indigenous people of the land where my family and I have lived for the previous five generations: Aotearoa New Zealand. However, there is reason to believe that there are important similarities between indigenous cultures (Cheung, 2008), despite the diversity, and especially between indigenous cultures when compared to the global, western-centric culture that is so dominant within our civilisation. Cheung (2008) describes the Māori worldview as a holistic worldview, which puts it broadly in line with other indigenous cultures around the world.

At the core of the Māori worldview is a relational understanding of the cosmos, understood through genealogy (whakapapa) and familial relations (whanau) (Cheung, 2008). In this cosmology, humans are seen as younger descendants of the natural bodies, such as mountains, lakes, rivers, and oceans, and forces, such as wind, rain, sun, creativity, and life force (Cheung, 2008). These natural bodies and forces of the universe (atua) are seen as sacred and understood spiritually, and the connection of humanity to them via ancestry bestows spiritual power within humanity and the entire world with a spiritual dimension

teeming through it (Cheung, 2008). This cosmology is remembered and enacted continuously through rituals and practices, such as returning the placenta to the land after childbirth, and the pepeha or formal introduction, which is given at the beginning of any formal and some informal gatherings (Cheung, 2008). In the pepeha, one will name the natural bodies that they are spiritually and physically anchored to, as well as the human ancestral lineages they are from and part of. This serves not only to inform the listener of these histories and connections but also to empower the speaker through linking them with the tapu (sacredness) and mana (dignity) of their mountain, river, tribe, and ancestors (Cheung, 2008).

Out of this cosmological worldview springs a set of values that are foundational to Māori culture and which help to maintain and reinforce this sense of holism and the sacredness of relationships between humans and nature, between humans and other humans, and that individual humans have with themselves (Cheung, 2008). Among these values are kaitiakitanga (stewardship, often of land), wairuatanga (spirituality, as a principle pervading all of life), whanaungatanga (kinship, emphasising the extended familial relations of all life and existence), kotahitanga (wholeness or unity), tapu (sacredness, enacted via restrictions and contrast with noa, or the profane aspects of life), and manaakitanga (generosity, respect, hospitality). Relationship with land is central to Māori culture, as it is to perhaps the vast majority if not all indigenous cultures. This stems again from the principle of relatedness (whanaungatanga) and ancestry (whakapapa), but also implies a responsibility to look after it, and a sense of shared health between people and land.

Because Māori see themselves and their identities as so intertwined with the land, the health of the land is equated with the health of the people, as reflected in the popular whakatauki (proverbs): “Ko au te awa, ko te awa ko au” (“I am the river, the river is me”; e.g., National Library of New Zealand, 2022); “Kā ora te whenua, kā ora te wai, kā ora te tangata”

("If the land is well, and the water is well, the people will thrive"; e.g., Murray, 2021). The values outlined here help to maintain the health of both the people and the land: in Te Āo Māori (the Māori world), as in many indigenous cultures, sustainability is built into the way the entire culture is oriented (Tom et al., 2019). This extends to the way that people are cared for and chances for their development into contributing members of the whanau (family), hapu (sub-tribe), iwi (tribe), and in contemporary times, society as a whole. Wisdom is understood within this broader collective framework and intricate web of relationships that stretch back to the ancestors and forward into thoughts about the future several generations or hundreds of years from the present.

Indigenous Contributions to Sustainability and Planetary Health in Contemporary Times

Mazzocchi (2020) discusses how indigenous cultural understandings, knowledge systems, and practices can contribute to a broader, polycentric field of sustainability science and application. He points to not only the empirical usefulness of the cultural practices of indigenous knowledge systems, which are the product of a multi-generational co-evolution of humans and land in the particular place, but also of the deeper philosophical assumptions in which these practices are grounded (Mazzocchi, 2020). These deeper assumptions, which include an attitude of interdependence and reciprocity with nature, point towards the root cause of the problem of why our current behaviour at the collective level is not sustainable (Mazzocchi, 2020). Mazzocchi highlights a deep contrast between Western notions of sustainability, which still seek to maintain the possibility of exploitation of land as natural resource, and indigenous notions, which emphasise giving to the land, and taking with respect and in balance with one's responsibilities to take care of the health of the land. This giving and reciprocity is founded in a lack of separation between humanity and nature, in viewing nature as relatives rather than resources, and a felt experience of spiritual

connection to all creation out of which spontaneous caring and desire to act reciprocally arises (Mazzocchi, 2020). This spontaneous arising, Mazzocchi points out, is not reliant on rational argument or empirical evidence, which supports an argument I make later in the current thesis that this spontaneous caring and nonseparation from nature is a natural result of metabolising our psycho-culturally reinforced experience of separation from it.

Charles and Cajete (2020) outline how indigenous wisdom can contribute towards the creation of pathways towards responsible action in the face of biospheric crises. They (p. 2) discuss the importance of the "metaphoric mind" in indigenous science, which I would argue can be seen as a kind of nonseparate or nondual science, one that does not reify the subject-object dualism inherent to Western mechanistic science but instead has the human as completely embedded within deeply participatory relationships with the environment around them. The metaphoric mind is an integrative one, "applying the deep levels of human perception and intuition to the task of living. Connected to the creative centre of nature, the metaphoric mind has none of the limiting conditioning of the cultural order. Its processing is natural and instinctive. It is inclusive and expansive in its processing of experience and knowledge. It invented the rational mind" (Charles & Cajete, 2020, p. 2). The metaphorical mind often expresses through abstract symbols, visual/spatial reasoning, sound, kinaesthetic expression: it is not represented propositionally except through metaphor, and even then, in profoundly image- and body-based ways (Charles & Cajete, 2020). This is not science as the Western-centric mind has come to recognise it, where links are laid out logically and linearly, and experimental trials are carried out in controlled ways where the experimenter is careful to eliminate himself and his opinions from the study or its results in any way.

The relationships with nature in indigenous cultures are profoundly imbued with spirituality, a quality Charles and Cajete (2020, p. 2) refer to as "ensoulment". Matter and

spirit are one and the same in the indigenous mind (Charles & Cajete, 2020). The human psyche and its archetypes were projected into the natural world, which reflected back to them a nature ensouled with earth spirits, a sense of sacredness, and in which they profoundly and unquestionably belonged (Charles & Cajete, 2020). This ensoulment went beyond belonging, even: from one perspective, it represented a deep and enduring involvement with the land to which they were a part of, and from another the land represented a map of their soul itself (Charles & Cajete, 2020). The Earth was a living soul in which they were a part and participated within.

This relationship was maintained with what Charles and Cajete refer to as a sacred covenant, which involves a pact to live in harmonious and sustainable relationship with the land. This pact in indigenous societies requires a whole culture of practices and educational experiences to support it (Charles & Cajete, 2020). It was the job of wisdom keepers in indigenous cultures to immerse themselves in these practices and educational experiences and lead the way in maintaining such sacred and important relationships (Charles & Cajete, 2020), a job that required the full extent of their embodied, embedded intelligence in relation to the environment around them. Charles and Cajete (2020) suggest that it is now time for all people to reclaim something of this relationship with the land, this sacred covenant and ecological intelligence. A similar call for a shift in values and ways of being inspired by indigenous culture and knowledge has been echoed by indigenous groups and leaders around the world in response to the climate and biodiversity crises (Cameron et al., 2021; Redvers et al., 2022; Tu'itahi et al., 2021).

Weaving Together an Integrative, Embodied, Embedded Synthesis: Enactive Wisdom as Feeling with the Whole Mind-Body-World

Having reviewed something of an essential understanding of wisdom in the Western, Eastern and Indigenous cultures that represent important and distinct component parts of a now connected and interconnected global humanity, we can begin to wonder at what we might draw and learn from such diverse approaches to being human and views on what constitutes wisdom. As this thesis has been building towards, the argument is that cognition is much more embodied and embedded than the Western mind and dualistic (cognitive) scientific paradigm that has predominated assumes. With these understandings of wisdom in different cultures, we can now begin to add some flesh to the cognitive scientific bones outlined in the preceding chapter.

In light of the Eastern and Indigenous modes of understanding and being in the world, we can begin to see both the usefulness and value of the Western-centric way of viewing the world as well as its limitations, particularly in light of the biospheric and civilisational crises facing global humanity today. Specifically, the Western mind is rooted in a form of dualistic knowing that separates subject from object (Loy, 2019) and which results in a profound and generally unseen sense of existential lack, which in the history of Western culture has been attempted to be solved in a multitude of different ways (Loy, 2002). While Eastern wisdom traditions have enabled trained individuals to see through this lack deeply and experientially, Indigenous cultures arguably never left it, and meet it through their profound spiritual and ancestral connection with land that permeates their whole culture and wisdom traditions. Yet, at the same time, Western dualistic thinking has led to enormous gains in scientific and technological knowing that should not be abandoned (and probably could not even if we wanted to).

What, then, is the way forward? The answer is twofold: at the individual level, it involves embodying and enacting a way of being that connects us to a deeper, less dualistic, more participatory knowing of ourselves and the world (e.g., Shepherd, 2017). At the collective level, it involves resolving confusion between science and scientism, and grounding our dualistic scientific knowing in a more holistic, sacred, and expansive conception of knowledge that draws on the wisdom of nondual experience and indigenous ways of knowing (e.g., (Coope, 2020) while integrating it in contemporary times with modern scientific understandings of the world. The following section will outline approaches to both the individual and collective levels. At the collective level, I will review Coope's (2020) call for revival of holistic integration and how it might be augmented by Henriques' (2003; 2011) justification hypothesis and the updated understanding of cognitive science discussed in this thesis (e.g., Vervaeke, 2019). At the individual level, I will give a description of Shepherd's (2017) account of radical wholeness and holosapience, which could be considered an exemplary (but by no means exhaustive) demonstration of a way of being that integrates a nondual and indigenous way of being in ways that can be accessible to contemporary Western minds. This will set up the next chapter, which will focus on how we might recover such a way of being through addressing lack in therapeutic contexts.

Individually Enacted Synthesis: Embodying Radical Wholeness Through Holosapience

Shepherd (2017) draws on the work of Geurts (2003) ethnographic work on the Anlo-Ewe culture and their embodied perception and sense of being in the world in putting forward his notion of radical wholeness and holosapience. He contrasts the mostly head- and thought-based ways of knowing and being in the world characteristic of Western modernity with the embodied, interoceptive sensing that is given priority in the Anlo-Ewe culture. This interoceptive sensing has no ready equivalent in English and is known as seselalame, or "feel-

feel-at-flesh-inside". Through this interoceptive sense, the whole world can be perceived: the Anglo-Ewe do not differentiate between interoception, exteroception, and proprioception. This is not because they do not have these senses, but because everything is perceived through the body, felt, including sights seen and sounds heard. Not separating the senses into interoceptive, exteroceptive, and proprioceptive means that the Anlo-Ewe avoid the creation of a boundary around the individual self. This understanding of seselalame is in contrast to the dominant view of having five exteroceptive senses which are then re-laid to the brain for processing that is taken for granted as being normal in Western culture (and which is challenged by the enactive view of cognition). The view of five exteroceptive senses serves to reinforce the idea of subject-object duality and reifies (rational) thought above the possibility of an integrated bodily knowing that our way of being cuts us off from.

Shepherd (2017) recounts stories by Jung (1995) and Suzuki (Fromm et al., 1970) illustrating the difference between head- and body-based ways of knowing in Western and indigenous cultures. Jung's account recalls a conversation with a Pueblo chief who (mirroring themes discussed by Loy (2002) and the current thesis) was wondering about the lack of ease in Western people. The chief observed them always wanting something and considered this a form of madness. When Jung asked him what he thought the root of this madness was, the chief replied that it was because they thought with their heads: they thought with their hearts. Suzuki recalls a similar tale of an American scientist's conversation with an aboriginal tribe in Australia. When the scientist revealed that Westerners think with their heads, the aborigine tribespeople replied that this was a sign of madness and that they thought with their abdomens. Shephard also discusses research on interoceptive awareness in Wall St traders, which supported the notion that there existed preconceptual, embodied awareness that was presumably picking up on subtle cues that the traders' rational minds were not.

These accounts, taken together with this chapter's discussion of nonduality, indigenous ways of being, and lack in Western culture, are suggestive of a kind of disconnection that is characteristic of that lack (Shepherd refers to "our primary wound", p. 39) and point to a way out of such an experience, which is in the direction of moving down out of only residing in the head and into the body: that is, the direction of embodied cognition.

Body awareness, for the Anlo-Ewe people (Geurts, 2003) and for Shepherd (2017), is not disconnected from an awareness of the environment but instead a kind of incredibly sensitive register for picking up signals from and knowing the environment one is surrounded by. Reclaiming this sensitivity for attuned, holistic awareness is something Shepherd (2017) refers to as holosapience. Inherent in this term is the idea that "the whole of your intelligence is more astute than any partitioned portion of it could be" (Shepherd, 2017, p. 37). Holosapience is made up of 'holo', meaning whole, and 'sapience', meaning sensory, taste: so holosapience is 'to taste wholeness'. Shepherd (2017) refers to this as humanity's primary sense (albeit one that we are habitually cut off from in the dualistic Western mind). It is not simply one more sense to add to one's toolkit, because it refers to our whole experience of being in the world.

It is this holosapience, which integrates information from the pelvic floor, gut, heart, and head, but which tells us not only of internal phenomena but of important, rich, and subtle details of the world, that offers an exemplar of the possibilities referred to by the emerging embodied embedded understanding of cognition. Recovering our holosapience beckons towards a transformation of our experience of lack and disconnection from the world in ways that can give us abilities to attune to it, other people, and ourselves at a time where our biosphere and civilisation may depend on it. But how might such an embodied, embedded awareness reassert itself in contemporary times, when most non-Indigenous peoples have

long lost their connection and practices to a more land-based way of life, and where the nondual traditions of the East can seem far-off and esoteric? In many ways the rest of the thesis is oriented towards an attempt at answering this question.

Collectively Enacted Synthesis: Hierarchical Integration, Justificatory Systems, and the Nondual Ground of Knowing

Coope (2020) discusses the integration of indigenous knowledge and western science, drawing on the concept of hierarchical integration initially proposed by Maslow (Maslow, 1966) and expanded on by Roszak (1975). Maslow (1966) distinguished between abstract and experiential knowledge, and judged that abstract knowledge removed from experiential knowledge is false and dangerous. What he proposed instead was an abstract knowledge that built on and was hierarchically integrated with experiential knowledge and suggested that this was essential for human life. Roszak (1975, p. 792) distinguished between augmentative and reductive knowing, and repeated the call for a hierarchical integration ‘‘that honors and invites the aesthetic, sensuous, compassionate, and visionary possibilities of experience as well as the rational and technical’’.

What should be noted was that both Maslow and Roszak were not opposed to scientific knowledge, but rather to scientism, the notion that science is the only legitimate way of knowing which is often used to justify the silencing and domination of other ways of knowing and being in the world (Coope, 2020). Coope (2020) goes on to discuss Maslow’s contention that objectification or intellectualisation can often be used as a form of psychological defence against certain strong emotions, and Roszak’s (1999) extension of this to find this objectification can often be analogous with the same sort of violence that is evident in the objectification of women that gives rise to rape. Interestingly for our discussion of lack in Western culture, Roszak (1999) then goes on to analyse the psychology of objectification as

stemming from a sensed inadequacy that is then transmuted into fear, anger, and the need to punish or subjugate. It may seem extreme to equate our relationship to the natural world to the same relationship dynamics that lead to rape, but when we look at the consequences playing out in the biosphere today this appraisal might well justify revision.

The question of our relationship to knowledge, and to reality itself, is in Henriques' (2003; 2011) analysis an issue of justification, a process he sees as central to culture and human psychology. But consider the notion, now, that for much of the history of the West, our culture has been making sense of reality and creating justification systems born from lack and a dualistic separation from ourselves, each other, nature, and reality itself (Loy, 2002; Rozsack, 1999). This separation, from what we have discussed thus far, would seem to be encoded underneath our propositional knowing, which is the realm of science, law, and academic thought: the same level of knowing our institutions and systems are to a large degree governed by. However, what this thesis has discussed about cognition, and the updated understanding of cognition brought about by an understanding of relevance realisation and the 4E perspective, has an important implication: this dualistic propositional knowing itself has come to understand cognition as profoundly embodied, embedded, and enactive. That is, the very dualistic and propositional knowing on which our lack is based is itself enacted by a cognition that is embodied and embedded within the world in profound and inescapable ways.

Conclusion

Seen in the light of this contemporary cognitive scientific view, there is not so much a need for a hierarchical integration of science with other ways of knowing (though this does, of course, remain) as there is for a need for science to integrate with its own findings, a task that turns us as scientific practitioners back on ourselves: towards our own experience of

inhabiting and being a body, inhabiting and being (in) a world. To do this is to realise a similar truth to that expressed by the Māori and common to many indigenous cultures, that what we do to the world, we do to ourselves. To begin heal the world requires we heal our relationship with ourselves, and our experience of lack which maintains this dualistic separation from our bodies and the world. This is the same path that Varela et al. (1991) laid out in their calling for a re-coupling of embodied experience and scientific knowing. Now, more than 30 years later, we are still some ways from enacting such a vision, though we might be closer than we think. Certain therapeutic branches of psychology have been helping individuals to enact a more systemic, embodied understanding of the psyche for decades, a trend that has only increased in popularity and rigour in recent years. It is to these branches that I now turn, to point towards a possibility of healing our experience of lack that psychologically and culturally can be seen to maintain the unhealthy aspects of our collective culture and systems that have led to such civilisational and biospheric crises and the experience in individuals of bigger-than-self distress.

Chapter 9: Psychological Interventions Towards Enacting Bigger-than-Self Wisdom Development

This chapter will point towards psychological interventions that can be used in individual and group settings to enact what I am referring to as bigger-than-self embodied embedded wisdom development. Inherent in this discussion is the context that has been built up through the course of the thesis, from the understanding of the meta-crisis that we are collectively facing and the way it shows up in individuals as bigger-than-self distress, through to the understanding of nondual awareness and indigenous ways of being and how these can be integrated with Western (cognitive) scientific knowledge, to the possibility that these can be used to come to awareness of and heal from the lack that is posited to be so pervasive throughout the history of Western culture. The middle chapters on the systems view of life (Big History, the ToK system, and the emergentist scientific cosmology that they point to) and an updated view of cognition (embodied, embedded, enacting scale invariance relevance realisation, and operating via predictive processing and prior updating) are central to what is presented here, as the idea is that naive experiential inquiry into the nature of self and reality will arrive at similar conclusions to that which scientific consensus has settled on (i.e., that the emergence of humans are continuous with the history of life and the cosmos itself, and that cognition, understood as embodied and embedded, is grounded in the emergent complexity it evolved within).

The notion that experiential inquiry can lead us to a participatory knowing that converges on the same truths our dualistic science suggests is highly significant, as it enables us to engage in practices that sincerely question, in an open-ended way, the nature of our experience, and can find consistent answers - not at the propositional level of knowing, but

at the participatory level. At the participatory level of knowing, this is of course what is referred to as the nondual experience. To yoke it to our scientific knowing, as Varela et al. (1991) argued for, is to bring this participatory knowing, which has been interpreted in various ways through different cultures in human history, into relationship with our dualistic scientific propositional knowing. To do so is not to deny spiritual, cultural, or metaphysical claims to reality, for science deals with the tangible and does not offer any ultimate answers or certainty on such questions.

What this yoking of nondual participatory experience with dualistic scientific knowing does is enable us to come into participatory relationship with the world as it is, in a way that can provide a common ground for humanity that at the same time need not deny, suppress, or dominate diverse cultural understandings. For there is truth in the notion that scientific knowledge is unlike other knowledge, in that it is subjected to empirical evaluation. This means that it is potentially an ideal candidate for a common language across cultures, if the issues of scientism and its devaluing of participatory, perspectival, and cultural knowing can be dealt with as was discussed last chapter. The great benefit of scientific knowledge in contemporary times is that it grounds us to physical and biological reality and can be used (as has been done this thesis) to point to humanity's continuity with nature. Combined with a nondual participatory knowing of this continuity, humanity can re-indigenise itself, come back into deeper relationship with the systems of nature, and from this place find ways to collectively heal the biosphere which we have so scarred in our dualistic, lack-derived frenzy of the past several hundred years.

The psychological interventions outlined in this chapter have an inquiry-oriented quality to them that generally begins and works with present moment embodied experience. Practiced in the right way, these interventions can lead towards contact with the

participatory level of knowing, and the capacity to enact changes in cognitive priors at this level, as well as shallower levels that are grounded in such participatory knowing (perspectival, procedural, and propositional). I say that they are inquiry-oriented because, with some revisions to their methods discussed in this chapter, they involve working with the embodied psychological system that do not presuppose an answer from propositional knowing ahead of time.

Each of the psychological interventions discussed below can be understood as sharing much in common with MBIs and being mindfulness-based in that they work with embodied present moment awareness, but they cannot claim to be MBIs themselves as their core frameworks and praxis involve more than just mindfulness practice. Internal Family Systems (IFS; Schwartz & Sweezy, 2020, p. 46) looks at the embodied psychological system in terms of parts, and involves methods of working with such parts of the system from "trailheads": emotional or interoceptive reactivity that indicates psychological content that can be worked with. The Aletheia Coaching methodology (March, 2021) extends the working with parts down levels of psychological depth, ultimately to what March terms the nondual level. From this nondual level, I discuss how the scientific narratives of Big History and the ToK system can be woven in to yoke this nondual participatory knowing with propositional scientific knowing and connect individuals to humanity, the biosphere, and bigger-than-self reality as a whole. An example of a psychological intervention that does something close to this yoking of nondual knowing with scientific knowing, Wider Embraces (Deurell, 2022), is discussed and critiqued. Finally, I share some further practices that build on these which I have found personally effective in my own experiential inquiry process and which I theorise help to transform one's cognitive structure to reflect a nondual bigger-than-self identity from which

one can form a more optimal metastable grip on bigger-than-self reality and one's socio-ecological niche(s).

Internal Family Systems: Parts, Self, Cognitive Priors and Predictive Processing

The Protective System in IFS

IFS views the psyche as a system of parts, the interactions among which can lead to emotional suffering and which can be tapped to lead to psychological healing and internal harmonisation (Schwartz & Sweezy, 2020). IFS draws its philosophical roots from family systems therapy (which in turn traces its roots back to the systems theories of the early cyberneticists) but applies a systems lens primarily to intra-personal rather than inter-personal factors (Schwartz & Sweezy, 2020). The three main types of parts of the system in IFS are divided into protectors, exiles, and Self (Schwartz & Sweezy, 2020). Protector parts, which are further subdivided into managers and firefighters, have the role of protecting the system from harm (Schwartz & Sweezy, 2020). Manager parts attempt to protect the system by continually managing its behaviour in ways that will avoid physical or emotional harm, which shows up in a multitude of different presentations, including: intellectualising thinkers, rational controllers, hardworking performers, harsh self-critics, passive pessimists, self-sacrificing caretakers, entitled self-servers, hypervigilant worriers, or dependent victims (Schwartz & Sweezy, 2020). In contrast to managers who are proactive, firefighters are reactive protectors. Firefighters tend to get set off when the manager defences are breached, triggering an emergency response, such as comfort eating or binging, use of drugs, alcohol, sex, self-cutting, or stealing. Firefighter responses tend to look more extreme than manager behaviours, which serve to immediately numb or dissociate the system from the source of pain. This can present in self-absorbed, narcissistic behaviour, rage, unlawful or antisocial behaviour, or suicidal thoughts and self-harm attempts (Schwartz & Sweezy, 2020).

Understood as protective parts, much behaviour that is pathologised in other models can be understood non-pathologically in IFS (Schwartz & Sweezy, 2020).

Why, then, do managers and firefighters and firefighters put in so much effort? From an IFS perspective, it is to protect the most vulnerable, young, and sensitive parts of the system, known as exiles (Schwartz & Sweezy, 2020). Exiles generally become exiled when the person is still a child or teenager, initially through some negative experience in interacting with the environment or other people, such as being bullied, exploited, rejected, neglected, abused, or abandoned (Schwartz & Sweezy, 2020). Exiles need not be created through a traumatic event: they may be created through social learning, where a child learns to react to their own emotional pain or terror in the way that adults around them do, by shutting it down, shaming it, distracting from it, or criticising the self for experiencing it (Schwartz & Sweezy, 2020). In IFS, these kinds of events are theorised to lead to the creation of protector and exile parts. From that point, the divisions are seen to be maintained by relations between parts of the internal system, who will generally apply the same sort of behaviour - or a reaction against it - as they experienced in the external environment (Schwartz & Sweezy, 2020). This leads to the creation of managers and firefighters, who serve to protect the affected parts the system from change. Managers and firefighters, when one talks to them (as is done in IFS), tend to report not enjoying their jobs and wanting to stop, but at the same time see no option to stop as this would mean exposing the exile underneath them to what in their view is a certainty of experiencing such emotional pain all over again (Schwartz & Sweezy, 2020). From the perspective of the cognitive science literature discussed in this thesis, the protective system seems to share a lot in common with the notion of cognitive priors (e.g., Carhart-Harris & Friston, 2019) that are enacting a kind of high level predictive processing (e.g., Clark, 2013) according to something like the FEP (Friston, 2010). When the individual's embodied

cognitive system is exposed to some unexpected traumatic stressor or pain (a particularly salient form of surprise), it reorganises and restructures itself in a self-organising manner to minimise potential future surprise or predictive error.

The 6 Fs of IFS, the Self, Direct Access and Insight

Work with parts in IFS sessions often begins by identifying and bringing attention towards what is called a trailhead, and then moving through a process known as the 6 Fs. Trailheads are emotions, images, inner voices, thoughts, physical sensations, or impulses that, when followed, will lead the way towards a part. Another way in is for an IFS therapist to track what a client is saying when describing different reactions or feelings that they have towards a certain situation. Finding the part in this way is the first of the 6 Fs of IFS. In the second F, Focusing on, the therapist invites the client to focus on the part and notice how the part feels to have attention on it. In the third F, Fleshing out, the therapist and client spend more time learning about the part, its thoughts, beliefs, feelings, sensations, images, what it is experiencing in the present moment. In the fourth F, Feeling toward, the therapist asks a key IFS question to the client, how they are feeling toward the part. This question aims to help the therapist to discern how much Self is present in the client at that particular moment. If the client answers with some sort of reactivity or judgment-tinged feeling, such as frustration, shame, loathing, fear, or wanting to fix, then it is most likely that there is another part present that is having such a reaction to the target part. If the response is one characterised by care, compassion, curiosity, or one of the other so-called 8 Cs of IFS, then it is likely that the client is orienting from their Self in their relationship to the target part. If there is a sufficient degree of Self present, then the therapist will continue with what is called Insight, where the therapist guides the client's Self to come into relationship with the target part. If there is not sufficient Self present, then the therapist will switch to what is called

Direct Access (Schwartz & Sweezy, 2020). Before we continue our description of the 6 Fs, it will be worthwhile to explain more of what is meant by the terms Self, Insight, and Direct Access.

The Self is called thus because this is what clients tend to refer to it as (Schwartz & Falconer, 2017). When Schwartz was initially exploring the internal family systems of clients, he would ask clients about their different parts, to describe them and what their characteristics were. As is commonly done in IFS, Schwartz would ask parts to step aside so that the system could focus on the target part. When enough parts had gone through this process of negotiating and consenting to step back, what would be left over was a kind of presence that have come to be known as being characterised by the 5 Ps and 8 Cs - perspective, presence, patience, playfulness, persistence, curiosity, creativity, calm, clarity, caring, connectedness, confidence, and compassion. Schwartz would ask the clients what part this was, and they would typically reply that this was not a part, but them, their self. Schwartz and Falconer (2017) detailed how something similar to Self is a feature of a wide range of global religions and philosophical or psychological systems, with the notable exception of Buddhism. The feeling of connectedness of Self, however, places it adjacent to nondual experience: there is much less grasping of a self-concept when coming from the Self, ironically, and it is parts that tend to see the world in much more dualistic terms.

The Self is a crucial concept in IFS, although is typically not introduced as a concept until after the client has had an experience of it for themselves, and even then the client's language for this experiential phenomenon is generally used rather than the Self necessarily (Schwartz & Sweezy, 2020). In IFS, all healing comes from parts coming into contact with the Self: the Self is the healing agent, which differs from many therapeutic models where the therapist or therapeutic relationship is the main agent of healing. The terms direct access and

insight reflect the centrality of Self in the IFS model of how emotional healing occurs. In both modes, the Self is the healing agent, but in direct access it is the Self of the therapist that is reaching across the divide to make direct access with the client's parts, while in insight the therapist facilitates a developing relationship between the client's Self and their parts (Schwartz & Sweezy, 2020).

From the perspective of the cognitive science reviewed in this thesis, parts can be viewed as self-organising aspects of the embodied cognitive system (priors) that have ossified in a certain pattern of emotional, narrative, and behavioural patterning in order to minimise surprise. What is referred to as the Self might be viewed as a less distorted version of the same process: the embodied embedded cognitive system's natural capacity to function optimally, unaffected by maladaptive distortions in its relevance realisation processes. This cognitive scientific view of the Self is and can only be speculative at this stage, but it does align with views of the self in IFS, for example in seeing it as the metaphorical Sun that is always existing but which might be completely covered by clouds - the Sun here being the naturally optimal self-organising relevance realisation enacting, surprise minimising embodied embedded cognitive system, with the clouds being distorted self-organising self-maintaining versions of the same that are cut off to some extent from the rest of the system. Note that this view can apply without pathologising parts, which in IFS are held to be natural and not the result of trauma, by understanding that in more advanced IFS theory parts are understood as having their own version of Self energy. In this view, parts are more like specialised subsystems of cognition, whereas the burdens are what creates the distortion. Burdened parts create distorted relevance realisation within the system, but healthy parts need not. This can be equated, in cognitive scientific terms, to: self-deceptive cognitive priors

enact relevance realisation sub-optimally, but wisely aligned cognitive priors enact an optimal grip autopoietically, in a self-organising fashion.

Once the therapist has determined, with the fourth F, whether the client is orienting from Self or a part in relating to the target part, they decide to continue with either direct access or insight strategies in helping the client to relate to the target part (Schwartz & Sweezy, 2020). The fifth F, beFriending the part, involves getting to know and building trust with the target part. The target part of the client's system may need to know (from the client's Self in insight or therapist's Self in direct access) that it is not being judged, that its fears have been heard, or simply to spend more time with the Self to get used to itself (if the part has only recently become conscious of itself) and the safety of the new relationship. The sixth F, exploring Fears, involves exploring the protector's fears in what might happen if they step back from their extreme (burdened) role (Schwartz & Sweezy, 2020). It can also involve questioning around what role the part would like to take if they did not have to maintain this extreme role.

Once the therapist has gone through the 6 Fs with the client, the protector may feel trusting enough to step aside and grant access to the exiled part of the system underneath. The therapist and client might then choose to engage in an unburdening process, where they work with the part to process and let go of the maladaptive beliefs and associated affective and interoceptive conditioning. As therapy progresses, more protector parts come to form trusting relationships with the Self, more exiles can go through the unburdening process, and there is more Self energy available to the system - more light from the Sun becomes visible as the clouds release their tensions and disperse. It should be noted that in IFS the aim is not to get rid of the parts but to increase harmony in the system, a process-oriented goal that is achieved through the Self taking on more of a leadership role within the system so that parts,

who are ill-equipped to take such responsibility, can free themselves from such extreme roles that occur as a result of taking on such burdens (Schwartz & Sweezy, 2020).

Aletheia Coaching: Unfolding into Depth, Naturally

While IFS might appear to propose quite a radically different and novel view of the human psyche, the idea of multiplicity in human cognition is far from new (Schwartz & Falconer, 2017). For example, Plato proposed a model of the psyche as being comprised of man (representing rationality), monster (representing animal instincts), and lion (representing a socially motivated instinct that could moderate between man and the monster). We have already discussed Freud's famous tripartite distinction of id, ego, and superego. Schwartz and Falconer (2017) point to these and many more historical examples from religion, philosophy, and psychology. A contemporary system that works with multiplicity in a broadly similar way to IFS but which diverges from it in interesting ways that are relevant to our purposes is Aletheia Coaching (March, 2021).

Aletheia Coaching makes use of four levels of depth (parts, process, presence, and nonduality), which came about from an attempt to integrate experiential observations that different coaching techniques tended to work or not work depending on the match of the depth of experience that the client was experiencing and the level of depth the technique was suited for (March, 2021). The depth of parts corresponds quite closely with how parts are understood in IFS, and March (2021) explicitly references Schwartz and Sweezy (2020) as an exemplar of work at the depth of parts as practiced in Aletheia Coaching. The depth of process corresponds to interoceptive sensations and imaginal felt images which flow in a sense of continuous felt meaning that are experienced in the moment and give information about the subtleties of lived present moment experience (March, 2021). The depth of presence corresponds to what is referred to as the Self in IFS, referred to as a field of

awareness that manifests as various virtuous or wholesome qualities accessed in the present moment, and often corresponds to the level of self-concept in terms of the changes that can spring from working at this depth (March, 2021).

The depth of nonduality is accessed more rarely than the first three, and tends to be reached more frequently by those who have engaged in such methods for at least several months and often years (March, 2021). This depth is experienced as nonseparate and unconditioned awareness (Fenner, 2007), where the subject-object dualism of normal everyday awareness is dissolved (Loy, 2019). At each level of depth in Aletheia Coaching, the aim is to create experiences of experiential mismatch between the memory consolidation of parts of the system and a new experience of the present moment that can result in treasure of the conditioned emotional response and new learning reflecting a different emotional reality (March, 2021). For each method at each depth, the essential structure is threefold: inquiring, unfolding, and enacting. This reflects the focus in Aletheia Coaching on self-unfoldment rather than self-improvement: this starts with the assumption that nothing is missing from the client, and that what is needed is to give the parts of the system the presence and corrective experiential mismatches to unfold naturally. The self then unfolds quite naturally and effortlessly (reflecting the principle of Wu Wei in Taoism), presence unfolding presence (March, 2021). Corrective experiences unfold at increasing levels of vertical depth as the coaching process unfolds. Throughout the process, the focus is never on fixing the self but on loving truth, beauty, and goodness for its own sake: to inquire into what the truth of the moment is, and to appreciate the beauty and goodness of existence for its own sake, rather than for its instrumental value. This reflects an integration within Aletheia Coaching of the paradox of change (Beisser, 2006): that an agenda to fix will tend to create

resistance, while an intention to be present with acceptance of the part exactly as it is will help it to relax and allow for a process of often profound change to unfold (March, 2021).

Unfoldment, Complexity, and Cognitive Science

The unfoldment process that is described as emerging from engaging in Aletheia Coaching can prepare and greatly help individuals to navigate highly complex, changeable, and entangled environments (March, 2021). This is highly relevant to the current thesis and its view of life and reality being understandable as networks of highly complex interacting systems (e.g., Capra & Luisi, 2014) including our cognition, families, communities, organisations, bioregions, and the civilisation and biosphere itself. As Snowden (2021) notes, navigating complexity requires a sensitivity to context and dynamic responsiveness that formulaic approaches are not well suited to provide. Parts tend to stick to formulaic responses to situations that have worked for them in the past, often because change is threatening to them and their role as protectors of some deeper vulnerability in the system. This mirrors the FEP's (Friston, 2010) prediction that priors will seek to minimise error prediction, and the notion that self-deceptive priors will do so in less rational, wise ways, for example motivated by protection and defensiveness towards change rather than wisdom within one's socio-ecological niche. It is only when engaged in the ongoing flow of the moment that occurs at the depths of process, presence, and the nondual that this rigidity can be loosened and a more dynamic responsiveness can unfold. To use cognitive scientific terminology, the process of unfoldment that March (2021) describes applies not only to intra-psychic processes but to the whole brain-body-environment system, where the environment and agent mutually unfold one another.

An understanding of cognition as essentially self-organising, embodied, embedded, and operating via principles of relevance realisation and free energy minimisation aligns with

what is observed in the Aletheia Coaching methodology. The experiential mismatching seen in Aletheia Coaching (and IFS) can be seen as a way of accessing the embodied embedded cognitive priors that have ossified in a maladaptive and inflexible way and giving them contact with the more optimal self-organising relevance realisation processes that correspond to the depths of process, presence, and nonduality. The notion of natural unfoldment is in alignment with the understanding of cognition as self-organising and with understandings of nonduality discussed in this thesis, as there is no self or executive function required to control this process, other than to link ossified parts with more natural self-organising processes in cognition.

What is afforded by being able to navigate from an awareness of process, presence, or nonduality and not just parts is, I would argue, a more optimal grip and capacity for metastable attunement with the field of affordances in both one's cognitive system and one's environment. Navigating from process, presence, and nonduality is a move towards using the whole of our cognition, our capacity for embodied embedded relevance realisation to enact wise in-context responses, rather than computational rationality of the kind traditionally emphasised by cognitive therapy. What is more is that, as March (2021) points out, the whole process of unfoldment occurs as a kind of effortless effort. For these reasons, and its effectiveness in effecting sustained transformation, March (2021) suggests that such unfoldment practices will play a significant role in the future of coaching. I suggest the same is possible for a future strand of the cognitive behavioural therapy tradition within psychology. The science and practices are both there, and the meta-crisis can become a catalyst for integration of environmental attunement and bigger-than-self factors into the therapeutic process, which I put forward will necessitate such self-organising unfolding ways

of working, as it would be too much effort to try and manage it from a computational rationality perspective on cognition.

Yoking Nondual Participatory Knowing to Dualistic Scientific Knowing: Big History, Tok System, and Wider Embraces

While Aletheia Coaching (and to an extent IFS) allows for a participatory realisation of modes of being that lie beneath propositional knowing (March, 2022), including nondual experience, and this on its own is hugely helpful in addressing the context of the current thesis, these interventions alone do not yet fully integrate all the pieces that I have found to be useful in responding to bigger-than-self distress. What is needed is an evolution of both science at the level of propositional knowing and everyday experience at the level of participatory knowing whereby both come into closer relationship with one another, similar to what was envisioned by Varela et al. (1991), and Merleu-Ponty (1962) before them. Moreover, both need to unfold in a context of a person's development and an awareness of the meta-crisis or relevant parts of it, where there is a significant updating of priors to come into greater attunement with the situation as it is now. What we have found with IFS and Aletheia Coaching are methods for updating priors at deep levels that seem to align with Vervaeke's (2019) concept of participatory knowing. To truly make these a coherent response to the meta-crisis, however, this newly refreshed and updated participatory knowing must be complemented by aligned and attuned perspectival knowing: the kind of situational knowing that affords the capacity to skilfully navigate real-world environments and relationships. This requires a step up from the purer pre-conceptual experience often described in association with nonduality at the level of participatory knowing to the inclusion of a more interpretative slant that is included at the level of perspectival knowing.

Traditionally, as Loy (2019) discussed extensively, different cultures and schools of thought and practice have differed significantly in their interpretations of the nondual experience. It has sometimes been interpreted theistically or nontheistically (Loy, 2019). Loy (2019) contrasts the Vedanta and Buddhist traditions, finding polarities in interpretations in the areas of self, substance, time, causation, and the Path. Loy (2019) eventually resolves these polarities by finding the middle path among extremes of each dialectic, concluding that each is describing the same nondual quality that is so resistant to capturing with words. What is significant about Varela et al.'s (1991) work and subsequent work that has been done in the field of cognitive science and 4E cognition since then has been sincere attempts to interpret cognition, including nondual cognition, in a scientifically rigorous way.

As has been detailed in earlier chapters of the current thesis, there is a deep continuity between cognition and life (e.g., Maturana & Varela, 1980; Thompson, 2007), and between life and the origins of the cosmos (e.g., Henriques, 2003; Christian, 2018). This being the case, the stage is set for a pairing between nondual experience and a scientific cosmology to ground it within. Importantly, such a cosmology allows room for a range of metaphysical interpretations and spiritual orientations alongside it but focuses on the tangible workings of the physical universe and especially of the biosphere and culture of humanity that is observable in behavioural terms. This allows for a focus to be brought to what is of utmost relevance: the biospheric and civilisational crises facing all humanity, rather than getting lost in arguments of religious or spiritual difference or in putting attention on transcendence of the physical, material world. Such a cosmology implies a transcending of self and separation-related conditioning, but into the world, rather than away from it into some heaven or supernatural reality.

Knowing Ourselves as the Physical Universe, Biosphere, and Human Culture: Wider Embraces and Big History Transformative Education

Wider Embraces or the Wheel of WE (Deurell, 2022) comprises a set of practices designed to evoke certain perspectives and experiences within the practitioner. The perspectives that they are designed to evoke are bigger than the individual self perspective that is the culturally normative way of perceiving identity in Western culture. Primarily among the perspectives that Wider Embraces are designed to evoke are that of the physical universe, the biosphere, and humanity or human culture (Deurell, 2022). The practices, usually carried out in a group setting, consist of evocative phrases that highlight relevant truths about our identity not as the individual self but as one of the chosen wider embraces or aspects of bigger-than-self reality. For example, the embrace of the physical universe begins with: "I am a physical, material body. I consist of particles, forming atoms, forming molecules. From this perspective, this is what I am, pure matter. The atoms that are me today, have been part of planet Earth since it formed, around 4.5 billion years ago. They have been everywhere; in all the oceans, high up in the air, deep down in the Earth's interior, and all over the surface" (Deurell, 2022). The Wider Embraces highlight aspects of human identity that are scientifically true and yet not the usual perspective that most individuals within Western culture are used to inhabiting.

When inhabiting an embraced perspective, it is possible to relate to bigger-than-self issues such as climate change, international conflict, or global pandemics from a radically different, expanded perspective. From the perspective of an individual, such phenomena are almost impossibly large and any one individual, save perhaps political leaders or CEOs of major multinational companies, is unlikely to be able to have much of an influence on their trajectory or outcome. From the point of view of these more holistic embraces, however,

these processes can be held within a larger and more all-embracing presence, much like a child's distress can be held and soothed within its mother's arms. Wider Embraces has been used within the Deep Adaptation community for processing climate-related emotions and distress, and initial anecdotal evidence suggests that it is worthy of potential future empirical research into its efficacy in reducing bigger-than-self distress syndromes.

Supplementing the Wider Embraces practices, Blundell (2015) presented the results of transformative learning experience in Big History education. He found that a number of participants had transformative learning experiences - i.e. they answered yes to two out of three questions about whether they applied the learnings outside the course environment, whether the learning experience elicited new ways of seeing and understanding the world, and whether it was useful in everyday immediate experience. The most commonly endorsed category of transformation was narrative awareness and disruption, which encompassed such responses as "I definitely feel like I see the big picture. I've often found myself thinking about our modern world very differently... I'm questioning our modern lifeway more, instead of taking it for granted" (Blundell, 2015, p. 82). Other commonly endorsed changes were urgency and amelioration (of the planetary crises we are in), personal identity (e.g., "caused me to question all of the stories upon which I base my identity as a human"; Blundell, 2015, p. 82), undefined or holistic, cultural or societal, and planetary. These changes share significant similarities to the content of the perspective-taking exercises within Wider Embraces. This indicates that it may be useful to have psycho-educational content regarding Big History narratives alongside perspectival practices like Wider Embraces for individuals processing bigger-than-self distress. These narratives and perspectives represent enacted practices in the vein anticipated by the broaden aspect of the Mindfulness-to-Meaning

theory (Garland et al., 2015) described earlier in the current thesis, in that they provide a much-broadened perspective from which to engage with bigger-than-self distress.

Enacting Nondual Embodied Embedded Wisdom Development: Becoming Bigger-than-Self Reality

Garland and Fredrickson, in their (2019) extension of the mindfulness-to-meaning theory, discussed the nondual experience opening up at the far end of their arc of positive emotional states to self-transcendence. A very similar pattern to that described by them can be seen to unfold in the interventions discussed in the current chapter, but in a potentially more powerful and naturally unfolding fashion than seen in approaches that are centred on mindfulness practice alone. That is, as the person participates in these interventions, and their embodied cognitive system experiences more positive states, a reappraisal process also unfolds concurrently which results over time in alterations in both affective, interoceptive, and appraisal-based aspects of the person's system. What IFS, Aletheia Coaching, Wider Embraces, and Transformative Learning experiences reviewed so far help to do is add techniques for working more precisely with maladaptive conditioning, or out-of-date and self-restricting cognitive priors, that is encountered through the kind of present-moment awareness that is characteristic of mindfulness practice. In this section, I add another practice that I have found helpful in working with the participatory level of knowing or self-concept level of being, "I am" practices, and elaborate on how this can unfold into practices for metabolisation of physical, biological, and cultural realities in one's socio-ecological niche.

"I Am" Practices for Creating Experiential Mismatches with Separation-Maintaining Priors

It is common in many esoteric wisdom traditions to use phrases that centre around the phrase "I am" (Fenner, 2007), or similar inquiries into the nature of self, such as "who am I?" (Dahl et al., 2015). In the context of the current inquiry into bigger-than-self distress, I have

found it personally helpful to use phrases and questions related to the nature of self to update deep cognitive priors at the level of participatory knowing and self-concept (although this is something of a misnomer as I have found much of cognition at this level is pre-conceptual, embodied, or imaginal). The idea here is that questioning the self, or parts, as to their identity can open up deep cognitive priors into a state of not-knowing, curiosity, and wonder. These deep cognitive priors can then be brought into contact with propositional knowing, for example, that in important ways humans are nonseparate from the physical universe, the biosphere and all life on this planet, and from the human species and its capacity for social and cultural knowing. In this way, these deep cognitive priors can shift not only the self-concept but the very experience of being to be radically broadened, bringing with it profound connectedness, belonging, and purpose shifts. The self-concept (and self-feeling, phenomenologically speaking) can be radically broadened and deepened. Instead of being just an individual, with a name and personal history, preferences, and personality, we can realise that in important ways we are not separate from the universe, the planet, the biosphere, humanity. Of course this is far from an exhaustive list of possible bigger-than-self identities, but these are relevant identities to begin with that tend to fall out quite naturally from an understanding of the kind of cosmological scientific understanding that is characteristic of Big History and the ToK system.

These “I am” practices might begin when the unfolding of cognitive system has developed sufficiently for curiosity and wonder to begin to emerge as to the nature of self, which might emerge several months or years into IFS, Aletheia Coaching work, or similar. Alternatively, and probably more commonly in the context of bigger-than-self distress, they might be experienced as relevant when the self tries to process bigger-than-self distress. When a person’s self-system is functioning sub-optimally (in terms of being dominated by parts that

are not in experiential contact with presence or Self), as is the norm in our society where this kind of training tends not to be a normal part of our education, organisational cultures, or spiritual/religious practices, attempting to process bigger-than-self distress is likely to be experienced as highly aversive. In IFS terms, without this kind of training, bigger-than-self distress would tend to be something that a manager part (unconsciously) tries to take on – something it is not well-suited to process, either emotionally, physiologically, or intellectually.

A manager part cannot manage society-wide systemic racism, reverse tipping points in Antarctic ice sheets, or enact the changes to our economic structures that are necessary for a sustainable economy suitable for the planet we have. Yet this is often how manager parts see the world: as a series of problems to be solved, tasks to be completed, conditions to be controlled or managed (Schwartz & Sweezy, 2020). In coming into contact with presence, or Self, there is more capacity to be with the enormity of these tasks: to realise paradoxically one's agency, interconnectedness, and limitedness in relation to these bigger-than-self realities (March, 2021). But without properly realising the nature of self through the integration of propositional knowing about our nonseparation from these bigger-than-self backgrounds that we have evolved with and out of, the presence or Self is still stranded in an individualistic, or at best tribal (i.e., ingroup versus outgroup), understanding of itself.

When cognitive priors that correspond to the perspectival knowing of presence or Self can be updated, the boundaries of such presence or Self can be expanded to include bigger-than-self aspects of reality such as the physical universe, planet, biosphere, or common humanity. These bigger-than-self aspects of reality are no longer separate from the self: in a deep way, individuals might realise themselves as nonseparate from these bigger-than-self aspects of reality. That they are them. This might look like a realisation such as "I am reality", "I am the planet", "I am humanity". Of course, this does not mean that people need give up a

conventional understanding of themselves as individuals: they still have a bank account, are responsible for paying their own taxes, and all the other trappings of individual identity and the web of relationships they exist within continue to exist. But the way the person sees themself is no longer limited to only these individual aspects of identity. A new, more dialectical understanding of identity can emerge, where the person recognises themselves as neither fully individual nor fully bigger-than-self aspects, but instead fully each. This is a nondual way of understanding identity. From this nondual self / bigger-than-self identity, or set of identities, there is a much-expanded possibility for relating to bigger-than-self distress.

The understanding of the boundaries of identity as fluid (e.g., Berkovich-Ohana et al., 2020; Martial et al., 2021; Nave et al., 2021) and non-dually both individual and collective, self and bigger-than-self, agent and environment leads to a possibility of realising one's nonseparation from other individual beings, human and non-human. That is, a realisation of one's nondual identity at all the levels of knowing identified by Vervaeke (2019) implies one's nonseparation from all other individual beings: they, too, are inarguably an inseparable part of the physical universe, biosphere, and (if human) humanity. This leads to a whole new set of possibilities for experiential mismatches: every cognitive prior that identifies oneself as separate from others, whether superior, inferior, or falsely equivalent, to use a distinction from Buddhism (e.g., Cayoun, 2015).

The implications of this understanding of nonseparation are highly relevant in the context of bigger-than-self distress: many of the societal issues characteristic of bigger-than-self distress has to do with separation: racism, sexism, homo- and trans-phobia, affective polarisation between tribal identities, economic inequality, and loneliness, isolation, and individualism. Many of the environmental issues characteristic of bigger-than-self distress, too, can be linked with the perception of separation, and a preferencing of individual and

collective human desires and economic interests over the health of ecosystems that has its roots in a deep-rooted separation of man (gender specification intended) from nature. For those of us raised in or embedded within the now globally dominant Western culture, these instances of separation cannot help but exist in each of our embodied cognitive systems, as well as being distributed throughout our culture and embedded within our institutions. This separation can be seen as a kind of distributed trauma, akin to climate trauma (Woodbury, 2019), white supremacy (Ansley, 1997), somatic abolitionism (Menakem, 2017), the pathologically normal objectification of reality within scientism (Rozsack, 1999), or Loy's (2002) concept of the pervasive lack that characterises Western culture. These concepts can be seen as different presentation or instances of a category of this distributed separation from ourselves, other beings, and the world.

Conclusion

The practices outlined in this chapter draw us ever-nearer to the ultimate answer given in this thesis to how psychologists can assist clients in addressing bigger-than-self distress. Working in this way with bigger-than-self distress is an open-ended process, rather than aiming a-priori towards some known end state or remission of symptoms as in the disease model of (mental) health. This is consistent with the self-organising systems view of life and cognition that has been presented in the current thesis. This open-ended process involves transformation of an individual's own cognition, but sees this cognition as continuous with and nonseparate from bigger-than-self reality and the individual's socio-ecological niche. In line with Varela et al. (1991), the attempt here is to try and bridge the (at times very large) gap between our propositional scientific understanding of the world and our moment to moment experiential participatory knowing of ourselves as part of it. The practices reviewed here, even more than the earlier MBIs, help to move from propositional to participatory

knowing, and are ideal building blocks towards processing and reducing this gap and in doing so living more closely in harmony with our propositional understanding of how living systems function and flourish. This process of processing and reducing the gap is continued in the next chapter, with the introduction of a new term to describe it: metabolisation.

Chapter 10 Metabolisation of Bigger-than-Self Distress: Personal, Psycho-Cultural, and Socio-Ecological

At various points in this thesis, I have cited authors who have discussed the possibility of transcendence of an individual's conditioning or self-deceptive processing (e.g., McKee & Barber, 1999; Garland & Fredrickson, 2019; Vervaeke, 2019). What I would like to suggest in this chapter is a different term for understanding a process that has some similarities to self-transcendence but also important differences. This term is metabolisation. Cambridge Dictionary (n.d., 1995) defines "metabolise" as to use chemical processes in the body to turn food into energy, new growth, and waste products. The Miller-Keane Encyclopedia of Medicine, Nursing, and Allied Health (n.d., 2003) elaborates on this, providing two definitions: 1. "Biotransformation", and 2. "the sum of the physical and chemical processes by which living organised substance is built up and maintained (anabolism), and by which large molecules are broken down into smaller molecules to make energy available to the organism (catabolism)." In the way I am proposing the term, it is a psychological rather than chemical process, and acts not on food but on cognitive-cultural content existing both in the body and in the socio-ecological context(s) that the individual is embedded within. This form of metabolisation refers to a breaking down of psychological structures into a kind of pre-conceptual energy that can then be used by the organism to create new organisational patterns of cognitive psycho-cultural structures that the organism can then use to update its grip within its socio-ecological context. The result is a kind of personal and psycho-cultural, rather than biological, transformation, one which begins in one's own being and can then be enacted out through contributions to the wider culture via one's socio-ecological niche(s).

The kind of distributed separation from other beings, human and non-human, discussed above, provides ideal raw content for undergoing personal, psycho-cultural, and socio-ecological metabolisation. The process for doing so can unfold through such psychological interventions as discussed in the previous chapter, the essential characteristic of which can be understood as the systematic application of Self/presence to socio-ecological issues that are experienced as distressing within one's embodied cognitive system. A first important step that enables such metabolisation to occur is seeing oneself as part of the bigger-than-self systems of the physical universe, biosphere, and human civilisation. A second important step, to borrow a term from Intimacy From the Inside Out, an application of IFS to couples therapy, is known as the radical U-turn (Schwartz, 2008; Herbine-Blank et al., 2015). In this turn, the individual turns to face their own behaviour rather than looking at the behaviour of the external object (in couple therapy, the partner; in the context of bigger-than-self distress, the socio-ecological phenomenon associated with the distress).

A third step that I have found to be useful is what I call "finding the equivalent". This step, which encompasses an entire practice all its own, came from work with a coach in my own personal practice, the same coach who introduced me to the term metabolism in its application to psycho-cultural content (Feenstra, 2019), although I have since encountered the term in other places. Finding the equivalent involves finding some form of similar difficulty in one's own system that one is perceiving externally. For example, in perceiving distress what seems to be unconscious racist attitudes in another person, one would enact the U-turn and look at what might be equivalent difficulty in oneself: this might be one's difficulty in accepting the existence of different and harmful views in other people, or guilt at the self-perception of one's own racist attitudes that an individual would rather not think about. As is implied by the term, the equivalent need not be the exact same thing, but should

be equivalently difficult for the individual to accept or change in themselves as the behaviour or pattern is in the person that they are perceiving. In this way, the finding the equivalent practice directs attention away from judgment and externalisation of affect and towards metabolisation of one's own conditioned sense of separation from the former target of the judgment. Over time this can lead to an increase in compassion and decrease in feelings of separation: there is no superiority or inferiority, but an understanding that each of us are limited in our ability to be with reality without reacting, or to see through our own self-deception and change our behaviour.

Succinctly put, metabolisation is a self-organising, self-unfolding process for breaking down self-deceptive cognitive priors that are relevant to bigger-than-self distress. Metabolisation unfolds by creating experiential mismatches between self-deceptive cognitive priors and the participatory knowing of Self/presence/nonduality. This change at the depth of participatory knowing is complemented by reappraisals at the propositional level of knowing that align with scientifically or culturally informed views of bigger-than-self reality (e.g., that we are nonseparate from the cosmos and biosphere and can understand our identity in a nondual way as being both an individual and these and other aspects of bigger-than-self reality; e.g., Christian, 2018; Loy, 2019). Creating these experiential mismatches, which are theorised to put the cognitive processes underlying the target prior into a state of criticality (e.g., Carhart-Harris & Friston, 2019), sets off an avalanche of change whereby the prior updates in a self-organising way to break itself down and be open to new information and ways of being.

I identify three distinct forms of metabolisation: personal, psycho-cultural, and socio-ecological, and discuss these in turn below before drawing out some common threads and discussing in more detail the metabolisation process as a whole. These three aspects of

metabolisation have been part of my own process of metabolising bigger-than-self distress and have unfolded as a result of applying the practices discussed in the last chapter to bigger-than-self distress as it has showed up in my own system. In reality, the three aspects do not unfold in such a linear, independent fashion, but instead are interlinked with one another, being processed as they come up as relevant. However, they are presented in this order because capacity to access personal resources seems like an important prerequisite to be able to sustainably engage in the other two aspects, while metabolising psycho-cultural aspects of the meta-crisis seems important to be able to have clarity in being able to engage in socio-ecological niche development effectively and in a non-self-deceptive, non-self-defeating manner.

Personal Metabolisation: Processing Personal Lack and Adapting Sufficiently Within the System as It Is

Personal metabolisation refers to aspects of one's personality and individual life such as issues to do with attachment (e.g., Cassidy & Shaver, 2008), family of origin (e.g., Cepukiene, 2020), self-concept (e.g., Kuhar & Zager Kocjan, 2021; Wong et al., 2019), Axis I and II mental disorders (American Psychiatric Association, 2013), cultural, gender and sexual identity issues (e.g., Churcher Clarke & Spiliadis, 2019; Ibrahim & Heuer, 2016), relationship with food and/or consumption habits (e.g., El Ansari et al., 2014; Hunecke & Richter, 2019), career and vocation (e.g., Shackell, 2022), and with life and existence within the current system, such as earning an income, participating in family and social life, and fulfilling important commitments to family, society, and one's culture. The need for personal metabolisation stems in large part due to biological predispositions and deep psycho-cultural norms to be strongly and unconsciously identified with our personal individual identity and, from an IFS perspective, our parts.

Engaging in IFS (Schwartz & Sweezy, 2020) and Aletheia Coaching (March, 2021) style work with sources of distress can be seen to unfold from this kind of automatic unconscious identification with parts and individual personality to an awareness and more stable experiential contact with what in IFS is referred to as Self (Schwartz & Sweezy, 2020) and in Aletheia Coaching is referred to as presence (March, 2021). From the perspective of IFS and Aletheia Coaching, Self/presence is more able to navigate the world than are fixed identifications with parts, who tend to attempt to manage or firefight reality in ways that suit them. Bringing awareness to this process creates experiential mismatches (March, 2021) that act to release constraints on the system (Schwartz & Sweezy, 2020) and free the aspects of the system to function more optimally, led increasingly by Self or presence.

An important aspect of personal metabolisation is in processing how the core lack that Loy (2002) discusses as permeating Western culture shows up in the individual's personal system. In my experience, attempting to address the meta-crisis in external ways threw me back on my own personal limitations and maladaptive coping strategies. For example, my system was set up as being dominated by a controlling manager part that while externally kind and compassionate, internally related to the aspects of my system much as a tyrant would. In attempting to enact my values of caring for the environment and the direction of society, this controlling manager part would force me / my system to work hard and took it on himself to be the arbiter of what was good and right and what should be done. In hindsight, I can reflect on how this was based in a dualistic, non-systemic understanding of the world, which involved judgment of both self and others and which maintained a sense of separation that existed between me and the world, between me and the people I was trying to change, and between the different aspects of my own embodied cognitive system. While it enabled me to achieve some things in the short term, this progress came at a cost and was

unsustainable as it led to repeated rounds of burnout. In my observations of other people attempting to enact change in bigger-than-self systems, burnout is a very common pattern, and there are other more harmful drawbacks (e.g., to other people, their own change efforts, or to perceived outgroups) that can be seen to come from parts attempting to manage or firefight in service of bigger-than-self change.

In line with March's (2021) notion of horizontal threads (patterns of recurring challenges woven through the individual's life) and vertical threads (patterns formed and maintained through the four levels of depth that overcompensates for the assumed absence of a particular quality of presence or nonduality), these recurring horizontal challenges can be seen to correspond to deeper experiences of lack at the level of presence or nonduality. This controlling manager part in me resulted in patterns of over-work and subsequent exhaustion and burnout, among other things, and turned out to be maintained by feelings of not being good enough and feeling disconnected at the levels of presence and nonduality. Metabolising this horizontal thread required going down the stack of vertical depth to find the experiential mismatch at the level of depth it was occurring. This corresponds quite closely with Loy's notion of lack, and how it is maintained at the individual embodied cognitive level. Working with parts in this way helps to metabolise such lack as it shows up in one's individual system and enables the individual to participate in the wider culture and socio-ecological niche(s) they exist within in a way that is less limited or distorted by such lack.

Another significant aspect of personal metabolisation that seems worthy of mentioning here is that of existing within the constraints of the current system, culture, and society as it currently is, even as one works to enact change within it. The current system demands a lot of the individual, in terms of education, work, and financial demands, and depending on the individual there may be significant demands on them from family life, cultural or religious

communities, society, or relationship with one's ancestral lands. These demands, of course, do not stop for individuals who are attempting to respond to or metabolise bigger-than-self distress. However, they can be navigated with more skill, personal resource, and wisdom, through a process of metabolising priors that have to do with such tasks. Metabolising such priors, I argue, is likely to be linked with a significantly more easeful and effective experience than from an identification with burdened parts and the often self-deceptive coping strategies they employ.

Finding ways to exist and be sufficiently adapted within the current system might mean doing what is required (being effective in DBT terms; Linehan, 1993) in terms of getting an education, finding stable employment or means of earning an income, and creating a stable enough base from which to put energy into bigger-than-self concerns. The concept of exaptation, where a certain phylogenic characteristic is adapted for use other than it had evolved to serve, can be useful here. Exaptation can be illustrated through an analogy with the first amphibians that started to live on land rather than in the sea, and this might serve some clients. These animals retained their ability to live underwater while their gills were developing a prototypical form of ability to breathe air. In a similar way, it can be useful to have a reliable means of existing in the system as it is while investing in adapting to bigger-than-self reality and a way of living that is more in line with the realities implied by the meta-crisis. Personal metabolisation can help in transforming one's system such that this is easier than it might otherwise be, due to contact with Self/presence in one's system and the metabolisation of related self-deceptive cognitive priors that contact affords.

Psycho-Cultural Metabolisation: Pervasive Separation at the Core of Bigger-than-Self Distress

While it is useful and probably necessary to have a reliable base from which to process bigger-than-self distress and contribute to bigger-than-self reality, this is unlikely to be sufficient to satisfy or relieve bigger-than-self distress on its own. Making progress in metabolising one's personal issues and experience of lack is likely to lead to an awareness of the ways in which culture has influenced one's own cognition. Psycho-cultural factors are likely to be particularly evident for individuals aware of bigger-than-self issues and experiencing bigger-than-self distress, as an awareness of environmental and social issues is likely for many to point to issues within the dominant culture of the (historically Western, now global) civilisation out of which such social and environmental issues have emerged (e.g., Andrews & Hoggett, 2019; David & Derthick, 2014; Ansley, 1997). Several problematic aspects of this dominant culture have been raised throughout the course of the current thesis: the separation and assumed dominance of humans over nature (e.g., Andrews & Hoggett, 2019), the violence and insecurity of white supremacy mindset and culture (e.g., Ansley, 1997; Meer, 2019), the internalised oppression of both oppressed and oppressor groups (David & Derthick, 2014), the objectivization of reality from scientism (Roszak, 1999), and the pervasive sense of lack characterised by a feeling of craving to be real posited by Loy (2002). I argue that a characteristic feature that underlies and can unite these different critiques is the concept of a psychologically reinforced and culturally distributed experience of separation existing at the level of participatory knowing, and that each of the above critiques point at different aspects of how this distributed psycho-cultural form of separation presents in the culture and for different individuals and groups.

Pervasive Culturally Distributed Experience of Separation Existing at Participatory Level of Knowing

This psycho-cultural distributed experience of separation existing at the participatory level of knowing is difficult to point to with language, as from my understanding of it, it can express and present in many ways. Moreover, it is so ingrained in the culture that it is difficult to see without some sort of sustained embodied or metacognitive practice and awareness of how other, non-Western, human cultures live and have lived through history. In my view the separation can be seen clearly to exist at the intra-personal level, of the different parts of the embodied cognitive system, such as the mind-body dualism that is pervasive in Western culture (e.g., Mehta, 2011), but also between aspects of the system that can be perceived through multiplicity lens, such as the IFS perspective (Schwartz & Sweezy, 2020), such as between an inner critic and the rest of the internal system. The separation can be seen at the interpersonal level, where we perceive ourselves as individuals first and foremost, and where feelings of separation from others, maintained for example through pervasive judgments, affective polarisation, and ingroup-outgroup dynamics, to name a few, maintain our sense of a separate self.

This separate self is understood dualistically: nondual approaches do not deny the everyday perception and practical usefulness of perceiving the distinction of ourselves and others as individuals, but our culture takes this to one extreme of the polarity rather than finding a dialectical balance. The sense of separation between humans and nature, both from the land and non-human individual beings is also self-evident as being pervasive in Western culture. This culturally distributed separation is passed down from generation to generation, and maintained within the institutions of the culture, such as an economic system that views nature as resources to be exploited for GDP growth (e.g., Aruga, 2022) or town planning and

normalised architectural practices that separate people into living situations that prioritise nuclear families and reinforce and naturalise separation and familial hierarchy (e.g., Aureili & Giudici, 2016).

Perhaps one of the most pervasive, psychologically painful, and unseen and unacknowledged form of separation, however, is from bigger-than-self reality itself. We seem to feel ourselves to somehow be separate from nature, separate from the physical laws of the universe, rather than as an expression of their emergent complexity. We certainly seem to behave as if we are separate from it, and from each other, based on how we are treating our collective home and fellow humans and non-human beings. Moreover, this perception of separation persists despite overwhelming evidence to the contrary. As has been reviewed throughout this thesis, both from a Big History and cognitive scientific perspective, humanity can be seen as emerging from the evolutionary history of the cosmos and biosphere, and cognition can be seen as continuous with this evolution, rather than something that is separate from, better than, or discontinuous with it.

Reconnecting our scientific insights with our lived experience, as Varela et al. (1991) argued persuasively for, has never been more urgent. We need to not just realise scientifically, propositionally, but experientially and in a participatory way that we are nonseparate from the cosmos and biosphere, as well as from one another. Such an experiential realisation can lead to profound experience of belonging, being at home in the universe and biosphere, safe in our existence, and open us up to meaning and purpose beyond our selves and egoic preferences and desires. Such an experiential realisation can help to metabolise the lack at the root of our, first individual, then collective psychocultural conditioning. This pervasive and multi-level separation is the key aspect of psycho-cultural

conditioning that I focus on in this chapter as it is at the root of so much of the other behaviours that stem from it.

Metabolising Psycho-Cultural Separation

Metabolising separation proceeds by similar mechanisms as in metabolising personal material. That is, the aim is to notice opportunities for experiential mismatches, in this case between the awareness of nonseparation at the depth of nondual or Self/presence experience and perception that is aligned with separation, which tends to come in the form of judgment or reactivity and can be observed to co-emerge with dense, heavy, agitated, or hot interoceptive sensations. Separation-aligned psycho-cultural material can be discerned at the intra-personal, inter-personal, or wider cultural levels (e.g., between self and the culture of a collective, between collective human cultures, or between human cultures and the cosmos, nature, or the more-than-human world). For example, a part of my own internal system can feel highly judgmental of and disgust for another part, which is an indication of intra-psychic separation. From what I can tell of the process, it seems that there are at least two principal sources where experiential mismatches of separation are noticed: the first comes from an experience of reactivity in one's system, including in response to an external stimuli; the second from an experience of contrast between what one imagines or hopes to be the case (i.e., a more expansive perspective) and what actually is. The second is actually a sub-category of the first, as it will most usually co-emerge with reactivity towards the present moment reality of what currently is.

As an example of metabolising dualistic separation at the inter-personal or inter-group level, I might notice my system judging a powerful political figure whose politics I find distasteful. I might identify judgments that this person is greedy, uncaring, and self-interested. From this place of metacognitive awareness of the judgment, a response in the

direction of metabolisation would be to notice how these qualities also exist within me. Instead of externalising such judgment, a metabolising response would be to do a radical U-turn (e.g., Herbine-Blank et al., 2015), and work with my own greedy, uncaring, and self-interested qualities. This does not prohibit me from acting in the world, for example to participate in protest or volunteering for an interest group related to the issues I care about, but it does lead to an opportunity to learn and grow from the experience. I might find, for example, that in my working with the judgmental part, I would find that as I move down the levels, I discover the missing experience is unconditional love. From this perspective, the judgment can be re-perceived and understood as coming from a distorted intention to love: that the intention behind the judgment is coming from an unconditional love for the world at the depth of presence or nonduality. This judgment, which was enacted by a part, might have been trying to defend its values by judging people who engage in behaviour that it does not think is good and right.

From this example of metabolising judgment of the political figure, it can be seen how the first beneficiary of the metabolisation process is the individual letting go of the judgment, and also how the benefits might help that individual to engage in more effective and wise behaviour in their socio-ecological niche as well. In enacting this metabolisation the individual gains access to this accepting and loving attitude towards self and others and can let go of that instance of judgment in their system. This does not mean sacrificing clear discernment between right and wrong behaviour, or between behaviour that will lead to suffering and disharmony and that which will lead to increased wellbeing and harmony. But this individual will be no longer judging the other, and insofar as this is true, they will have metabolised an aspect of separation (i.e., between them and that person and people sufficiently similar to that person) that was existing in their system. This will generally mean

the individual can be more effective, rather than less, in advocating for change, more able to focus on the behaviour that needs to change and not getting caught in judgment of the person, which makes it that much more likely that the person who is engaging in the behaviour might be able to hear what the individual is saying. This individual will also tend to have more understanding of the person's behaviour, and to feel nonseparate in the sense that the same qualities and struggles exist within them (and so they are not better than the person who's behaviour they might be standing up against). Engaging in this kind of metabolisation as a regular practice cuts off moral righteousness at the seed, continually, and both requires and leads to greater humility than the predominant separation-aligned way of processing this sort of experience.

Being Changed By One's Perception of Reality in Contrast To Imposing One's Worldview on the World

A significant psycho-cultural difference exists between the default civilisational culture way of psychologically processing experience and this metabolisation process. That is, in the default culture of psycho-cultural separation from the world, there is often a structure of competition between separate actors attempting to impose their own worldview. This exists, for example, in commercial contexts, or in intellectual debate, or in our adversarial political systems. Cooperation and collaboration (incidentally the exact processes needed to meet bigger-than-self issues such as climate change and biodiversity crises) are de-emphasised, while competition and zero-sum thinking are treated with relative high importance. In this metabolisation process, the obverse is true: the attempt is to come from an awareness of nonseparation. In doing so, instead of imposing one's worldview, the attempt is to understand reality and metabolise the aspects of one's own worldview that are not in alignment with both the facts of the situation and the perception of nonseparation, which is

held to be the participatory truth beyond the illusory psychological construct of a separate self.

This way of processing experience lends itself to cooperation and collaboration: rather than promoting a culture of defending one's ego and worldview, the focus is on sensing reality accurately and enacting a realisation of nonseparation between oneself and one's collaborators (as well as outgroup members). Enacted fully, this way of being could potentially lead to more coherent responses in a future that is likely to be volatile, uncertain, complex, and ambiguous (e.g., Millar et al., 2018), and individuals responding in this way could feasibly out-innovate and out-collaborate those stuck in defending outdated cultural norms that may be maladaptive in such a future.

Metabolising psycho-cultural aspects of reality, and especially the pervasive experience of separation, is aligned with what has been discussed in this thesis about updating priors. In Bayesian updating of predictions of self and world, the optimal strategy is to update priors where evidence from the environment suggests that the prior is not accurate. This can be viewed in IFS terms, where it is often observed that the parts will be operating as if the environment is the same as when they are formed. A burdened part might identify still as the six-year-old who started taking responsibility for their emotions by shutting them down after their parents' divorce. These parts, or priors, can be updated by creating an experiential mismatch with present moment reality: that they have their adult Self present that can help them process strong emotions, as well as their therapist, and perhaps social supports such as friends or a romantic partner. This can allow the part to release their burden, and for the system to release that constraint and resume presence-oriented processing, which affords the self-organising processes of cognition to resume a more adaptive processing of experience. The metabolisation process described here, over time, leads to a different kind of

psycho-culture being enacted: one where one is continually updating one's priors in response to reality, rather than defending maladaptive and self-deceptive perceptions of reality that maintain separation. Hopefully it is possible to see how this different psycho-cultural response is likely to be more effective in responding to bigger-than-self distress, and to lead to both wisdom and wellbeing.

Socio-Ecological Metabolisation: Enactively Bridging Gap Between What Is and What Is Ethical from a Nondual Perspective

Socio-ecological metabolisation refers to an enactive psychological processing of the gap between perspectives that arise from the depth of nonduality / presence and the currently existing built and cultural human environment existing in our civilisation and particularly within one's socio-ecological niche(s). As metabolisation of bigger-than-self distress unfolds in an individual, it would be expected that the personal and psycho-cultural metabolisation processes would lead to deep shifts in one's perspective on self and the world, in line with a more nondual perspective. In yoking this nondual participatory knowing to empirically based propositional knowing and perspectives about the biosphere and societal issues, a perspective would be expected to unfold that has the individual identifying not only as their individual self, but as the biosphere and as humanity too. This is a profoundly different way of perceiving the world than from a narrow individual self-identification, which is arguably the default mode of identification that is encouraged and modelled by the global (Western-based) civilisational worldview and way of being that is predominant in the world today. This deep psycho-cultural shift in perception, which represents a naturally unfolding result of metabolising bigger-than-self distress, would be expected to lead to a large gap between that individual's perspective of what is possible and ethical and what is currently happening in our civilisation as it is.

The existence of this gap between ethical action and what is currently taking place leads to an important aspect of socio-ecological metabolisation, relative to the forms of metabolisation discussed so far: socio-ecological metabolisation involves action in the world, as well as the psychological antecedents of such action, and as such is inherently enactive and ethics-laden in its nature. It seems important to note that given the default culture tends to have an action bias whereby concrete actions in the world are seen as more tangible than psycho-cultural change, many clients are likely to want to (or may already have) skip the first two aspects of the metabolisation process. They may cite the urgency and scale of the problem and argue that correspondingly urgent action is necessary (e.g., Cooper & White, 2022). There is truth in that perspective, and there are certainly many genuinely helpful things that people can do that don't require personal, psycho-cultural, or socio-ecological metabolisation. However, for those individuals who are presenting to a psychologist or coach with bigger-than-self distress, and for whom more standard and less deep approaches such as those recommended by Feder (2022) are not effective, this deeper metabolisation has the potential to be useful. The process of metabolisation takes longer but arguably has the potential to lead to more insightful, coherent, comprehensive, and sustainable changes than someone who has not gone through the process of metabolisation outlined here.

For those who are coming from a nondual identification as both individuals and as the biosphere and humanity, and who feel in a deep way a care for both their individual wellbeing and that of collective human and more-than-human world, the current state of bigger-than-self represents a profound set of ethical challenges. In many ways it is the entrenched default culture that stands between what is happening currently and more ethical ways of being and acting in the world. One of the principal challenges is to act from a nonseparate wisdom perspective, rather than an emotionally reactive or coldly rational

dualistic and separate perspective. For example, a nonseparate wisdom perspective would involve not cutting oneself off from feelings of common humanity with individuals or groups that could be perceived as resistant to change.

The challenge in metabolisation here is to maintain a clear perspective on what needs to be done to move towards a more ethical way of being and doing, in whatever socio-ecological niche(s) one is involved in, while utilising perspectival knowing to interact with the people and systems as they are in ways that do not make things worse and maximise their likelihood of being successful. This is not necessarily an easy task, and often will be just the opposite - but a sober look at history and social change will show that ethical progress is often hard-won and fought for (often over a long period of time), requiring moral clarity, persistence, and steadfast unconditional positive regard to even one's oppressors (Gandhi & Suhrud, 2019; King, 1963). The possible scale of the challenges likely to be faced by individuals seeking to enact change is why there is a focus on wisdom development in the current thesis: many of the capacities of wisdom (e.g., morally grounded excellence in social-cognitive processing, Grossmann et al., 2020) are likely to be highly useful in enacting change within socio-ecological niches.

Example: Bio-Centric versus Anthropocentric Relationship to Land

There are a great many possible examples of contrast between nondual biospheric and humanity-identified perspectives might create ethical mismatches between what is seen from a nondual wisdom perspective as ethical and what is currently happening in one's socio-ecological niche. Any of the issues identified in Chapter 1 presents several opportunities for action in the world for individuals who wish to participate in the culture to shape it in a more ethical direction, and that was far from an exhaustive list of social and environmental ills existing in the world today or which threaten our collective futures. It could be the subject of

several future books or research projects to detail what ethical responses and the corresponding socio-ecological metabolisation might look like in these different areas. However, I do want to make use of one example to illustrate some important aspects of the socio-ecological metabolisation process as I see it. This is a broad example and involves the differing approaches to land that seem to be associated with these two perspectives. The default global (historically Western) culture has historically taken an anthropocentric view towards land that stands in contrast with most indigenous cultures globally and with the emerging view towards land associated with the nondual bigger-than-self / biosphere-centric way of being and identifying in the world articulated in the current thesis. This indigenous and emerging nondual bigger-than-self view tends to view humans as emerging from the land and the ecosystems that naturally inhabit it, and as having an ethical responsibility towards caring for its wellbeing, which stands in contrast to the current default culture that views land as property to be owned and exploited for its economic value by its owners.

The anthropocentric relationship to land of the current default culture is in most countries largely enshrined in legislation and entangled in a global financial and economic system that maintains such a view. It is also maintained at the cultural level in norms of a relationship of ownership that are to a large part unquestioned in many corners of society. However, at one point the ownership of human slaves was also similarly culturally sanctioned and entrenched in the Western international economic, financial and legal system, despite being seen as abhorrent and ethically indefensible in most modern countries today. Many movements existing today can be seen to converge around the idea of a quite radically different relationship between humans and land (e.g., Dinerstein et al., 2020; Hackl, 2020; Landback, 2022; NRDC, 2021). Not all focus on ownership, but all share a perspective of valuing nature for its own sake, and for the role of humans to play a role in stewarding it

responsibly so it flourishes alongside humanity. A prominent example is the movement to afford legal rights, including legal personhood, to nature and natural bodies. This movement started in Ecuador (Challe, 2021), has gained traction in Bolivia (Shelton, 2015), certain cities in the US (e.g., Challe, 2021; Shelton, 2015), Canada (Townsend et al., 2021), and Aotearoa New Zealand (e.g., Challe, 2021; Shelton, 2015; Townsend et al., 2021). These pieces of legislation afford legal protection to nature for its own sake, just as humans have rights stemming from their having value for their own sake. This in many cases reflects an Indigenous worldview that sees nature as a living being rather than as a resource (e.g., Townsend et al., 2021).

Three Interlinked Aspects of Socio-Ecological Metabolisation: Affective, Cognitive, Behavioural

Now that there is an example to apply to, we can discuss important aspects of the socio-ecological metabolisation process, namely affective, cognitive, and behavioural. These aspects are meaningfully interlinked, as attempting to act in the world to close the gap between one's nondual bigger-than-self perspective and the current behaviour that is happening within one's socio-ecological niche is likely to bring up each of these three aspects at different times in a continual cyclical fashion. First: affective. To live in a world where one has a deep sense of nonseparation from the land, feeling it as a living being, while seeing the ways that the current civilisation relates to and treats the land and the ecosystems that have traditionally constituted it, is painful. This pain is perhaps always there, but the culture we live in has had us dissociate from it. Second: cognitive. In using this term here, I refer to the more restricted definition of cognitive as in cognitive therapy (e.g., Beck et al., 1979), rather than the more expansive understanding of the term implied in the Santiago theory (e.g., Maturana & Varela, 1980). To intellectually make sense of how to respond to such pervasive

harm being enacted by the culture at large is difficult. Does one protest? Does one work to change the law, or engage in awareness raising, or start a social enterprise? Might one become a regenerative farmer and work with the land in ways that restore the health of the soil and local ecosystems? Even if an individual comes to clarity regarding their own opinion of what could or should be done, how does that fit with the life they are living? How could that individual become the kind of person to enact such change, and do they have the internal and external resources, motivation, and capability to carry out such a plan? There is a lot of cognitive sensemaking involved in coming to come sort of optimal grip with such a situation and how to respond to it in bigger-than-self reality and one's socio-ecological niche.

Depending on how strongly one is moved, this could potentially involve a multi-year plan or implementation involving education, up-skilling, career changes, changes in self-concept, changes in social networks, and changes in living situation. These behavioural changes are the third aspect of socio-ecological metabolisation. It is hopefully clear to see how these three aspects would feed into one another continually: making behavioural changes such as becoming involved in protest groups might lead to changes in self-concept, social networks, and both feelings of greater emotional resilience due to increased social support and feelings of greater emotional difficulty from more direct exposure to morally confronting situations. What I have observed in this area is that individuals sometimes become disillusioned with, burnt out from, or both, direct protest forms of activism, or realise that there exist other ways of participating in social change that could have more leverage (e.g., Leventon et al., 2021; Meadows, 1999). Such individuals of course do not generally stop caring or experiencing distress in relation to the issue at hand, however, and so it may lead them to further intellectual sensemaking (and often corresponding emotional distress) about what to do when direct protest is seen to be ineffective or insufficient. Another common response

might be to simply stop trying and engage in some (ultimately maladaptive) form of avoidance of the issue, which is unlikely to be emotionally or existentially satisfying. In both cases, the metabolisation process can be useful, to give space and a process for exposure to the difficulties and assistance in making sense of how to respond within one's socio-ecological niche.

Common Features of Metabolisation: Culturally Normative Self-Deceptive Cognitive Priors, Exposure, Experiential Mismatching, Presence, and Wisdom

Now that each of the three aspects of metabolisation I distinguish have been mapped out, attention can turn to some of the common features of metabolisation, which will help to define it further as a psychological concept. The key features of personal, psycho-cultural, and socio-ecological metabolisation, in each case, involve a moving towards the distress, exploring it with curiosity, and bringing presence to sources of distress that, directly or indirectly, have to do with bigger-than-self reality. In each case, the bigger-than-self distress that has been metabolised is, strictly speaking, not external to one's embodied cognitive system: while the source might be external (e.g., awareness of systemic discrimination), what is metabolised is something within the individual's autopoietic embodied cognitive system. That is, it is the processing that leads to the experience of distress that is metabolised. This is a subtle difference, similar to the distinction that is made between pain and suffering in Buddhism: we cannot stop the experience of pain as this is part of life: it hurts to stub one's toe, or contract a physical illness, to experience systemic disrespect and discrimination, or to see ecosystems devastated and waterways polluted. What the metabolisation process focuses on is the extra suffering that our own cognitive systems put on top of these externally occurring phenomena. These are the self-deceptive cognitive priors that act as barriers to being able to process bigger-than-self reality more optimally and lead to an

increase in distress. The concept of self-deceptive cognitive priors as presented here is similar to but distinct from the idea of maladaptive appraisals in traditional cognitive therapy.

Differences Between Maladaptive Cognitive Appraisals and Culturally Normative Self-Deceptive Cognitive Priors

First, maladaptive cognitive priors are generally regarded as maladaptive in reference to cultural norms of the dominant culture, while self-deceptive cognitive priors are regarded as self-deceptive with regard to the reality of nonseparation from aspects of bigger-than-self reality, and the actually unfolding meta-crisis. That is, while maladaptive cognitive appraisals are used to denote an erring of the individual from cultural norms of adaptive functioning, the term self-deceptive cognitive priors here is used to denote a largely culturally normative erring (within Western culture) of the individual-within-culture from deeper, more regenerative cultural norms that are conducive to human, more-than-human, and biospheric flourishing on a finite planet. The link between maladaptive appraisals and cultural norms is demonstrated in DSM diagnoses that generally include a criterion about the condition the individual is experiencing leading to clinically significant distress or impairment in social, occupational, or other important areas of functioning (American Psychiatric Association, 2013), and the general linking of maladaptive cognitive appraisals with psychiatric diagnoses.

The current thesis has attempted to establish an argument that our culturally normative experience of lack (Loy, 2002) and corresponding separation from important aspects of bigger-than-self reality is linked to self-deceptive cognitive processing within our culturally embedded embodied cognitive systems. Re-establishing a connection with Self/presence and the nondual experience, yoking this to our scientific and wisdom-tradition based propositional understanding of the world, and then metabolising this difference through the systematic creation of experiential mismatching between self-deceptive processing and

processing associated with Self/presence/nonduality and non-self-deceptive propositional understanding is presented as a way to heal and awaken from this lack and culturally normative self-deception.

Second, in the concept of maladaptive appraisals in traditional cognitive therapy, there is not usually a focus on interoceptive sensations, with some notable exceptions such as the focus on hot spots in cognitive therapy for PTSD (e.g., Ehlers & Clark, 2000) or on the link between interoceptive sensations and appraisals in cognitive therapy for panic disorder (e.g., Clark et al., 1994). However, the proposed focus on interoceptive sensations here is more extensive, and draws on more recent developments both in the MBI literature (e.g., Cayoun, 2011) and interventions that emphasise somatic sensations much more in the formulation and course of treatment (e.g., Levine, 2012; Schwartz & Sweezy, 2020). As in MiCBT, any stimuli or appraisal of what is happening in the environment / bigger-than-self reality will have corresponding interoceptive sensations co-emerging with it, and these co-emerging interoceptive sensations are understood to reinforce maladaptive appraisals and thus comprise important aspects of the maladaptive prior itself.

In IFS (Schwartz & Sweezy, 2020) and other parts-work interventions (e.g., March, 2021), body sensations (as well as thoughts, images, emotional reactivity, and action urges) are used as trailheads to initiate an investigation into the parts of the system that might be active and carrying burdens related to that trailhead. This is how self-deceptive cognitive priors are understood in the current proposed conceptualisation: as the embodied cognitive lenses or participatory knowing that the (usually burdened) parts are coming from in their habitual unconscious ways of orienting to themselves and the world. Body sensations can be used to guage the co-emerging cognitive appraisals for how wholesome or unwholesome they are (in Buddhist terms), or how much self-deception might be intwined with the related cognitive

priors. Body sensations can thus be used as trailheads for locating and then working to see through self-deceptive cognitive priors pertaining to personal, psycho-cultural, and socio-ecological areas of life.

Similarities with Exposure and Differences from Transcendence

Exposure therapy is one of the most robust empirically supported behavioural treatments, with evidence supporting its use in a range of anxiety (e.g., Ougrin, 2011) and trauma and stress-related disorders (e.g., McLean et al., 2022). In exposure therapy, individuals are systematically exposed to feared or otherwise avoided external stimuli and their corresponding affective, cognitive, and memory-based encoding in the individual's system. The individual must have enough time being exposed for the fear or other strong emotional response can begin to subside.

Metabolisation shares significant similarities with exposure therapy, with the differences pertaining to that discussed in the above subsection: the exposure is to the interoceptive sensations (and other internal cues) associated with the stimuli and these are used as trailheads for parts-based work that unfolds towards the depths of process, Self/presence, and sometimes nonduality (March, 2021); and the exposure is attempting to target experiential mismatches between currently existing self-deceptive cognitive priors and the experience of Self/presence/nonduality and propositional knowing of science and established wisdom traditions. Metabolisation also relies on or makes use of the self-organising, self-correcting nature of cognition at a greater depth than most traditional forms of exposure, with its emphasis on the experiential depths of Self/presence/nonduality, although some more recent conceptualisations of exposure therapy move closer to this, for example the combination of wise mind state and exposure used in DBT for Complex PTSD (e.g., Bohus, 2022). However, I feel that although substantial similarities exist, there are enough

differences to warrant a unique term, in order to avoid confusion between two distinct psychological concepts and processes: exposure and metabolisation.

Another related but distinct psychological concept to metabolisation is that of transcendence. The term transcendence has been used in works cited throughout the current thesis, for example in Garland and Fredrickson (2019) in describing the arc of mindfulness to self-transcendence, or McKee and Barber (1999) describing how wisdom involves the transcendence of illusory thinking. Transcendence is often invoked when discussing nonduality: that dualistic thinking is transcended (e.g., Josipovic, 2021). However, there is a danger in the term, that if misunderstood, it can lead to a bypassing of psychological content to reach for disembodied and slightly dissociated versions of such transcendent states rather than connecting with and through the contents of present moment experience (e.g., Monteiro et al., 2015). I believe that the term metabolising helps to lessen the risk of such misinterpretation, and moreover describes a psychological process that is distinct from transcendence.

Directionally, transcendence seems to invoke an image of moving up, ascending above the world into a pure and idealistic realm, while metabolisation invokes a moving downwards, and getting involved with the messy, often unpleasant, imperfect reality of life. The imagery of metabolisation (at least this author) conjures up associations with the gut and digestive tract breaking down nutritional content, as well as of fungi on the forest floor or mycelium under the ground, breaking down waste matter and transforming it into compounds that can then be reused within the ecosystem in other ways. The imagery of metabolisation implies a process requiring an active working with the content being metabolised, rather than an avoidance or skilful sidestepping of it. At the same time, however, metabolisation is something that natural systems do quite automatically when

healthy and functioning optimally and is essential for the wellbeing of the organisms and ecosystems that they operate within. For these reasons, the word metabolisation to me has a face validity for the process I am invoking it to describe, and so I use it rather than transcendence.

Metabolisation, Wisdom, Nonduality, and Bigger-than-Self Reality

Metabolisation accesses nondual wisdom by moving downwards through progressively deeper psychological material, as is implied by March's (2021) use of "depth" to describe these levels, of which nonduality is the deepest. As is commonly reported by individuals who describe having experienced states of nonduality, the everyday dualistic perception of experience that preceded such nondual awareness is realised to have been nondual in its (non-)essence the whole time. This describes the perception of experience as being able to be perceived as divided into parts, which are later revealed to have their roots in nonduality for at least a significant proportion of individuals who move through Aletheia Coaching (March, 2021). For example, the experience of anger towards politicians for perceived inaction on environmental and social crises might, as one works through the Aletheia Coaching protocol, be linked to a manager part that is pugnacious in nature and motivated to fight for what they value in life. As the process unfolds and the individual moves down the levels of depth, they might discover that this anger is rooted in a kind of nondual love, which encompasses both the politician that the anger was originally directed towards as well as the beings that are affected by the perceived lack of action. From there, the person might be able to inquire, direct-access style (Schwartz & Sweezy, 2020), into the root of what is stopping the politicians from acting, and perceive a deep-rooted fear covered over by self-deceptive protectors that attempt to find safety through power. The individual might then still decide to strongly advocate for political change but may do so coming from a place of

nonseparate love and understanding rather than separation and hate. The person might also choose a different form of activism, for example one that involves more direct participation in their socio-ecological niche and offers more leverage than signing petitions that political leaders gripped by such fear and self-deception are quite likely to ignore.

Such a metabolisation route into nondual experience illustrates the profound shift in perspectival knowing that unfolds from such deep level shifts in one's participatory knowing, as well as the compassion and understanding that can unfold from such a process. Metabolising a part and accessing the Self/presence/nonduality modes of being does not imply losing any strength or ability to advocate for what one values (Schwartz & Sweezy, 2020), but it might lead to different perspectives that over time give one more agency and optimal grip on a field of affordances for engaging with bigger-than-self distress (e.g., Bruineberg & Rietveld, 2014). This example illustrates the link between metabolisation and wisdom, and how this kind of nondual wisdom might assist in responding to bigger-than-self distress. This wisdom makes more sense over a deep time perspective that is aiming towards developmental niche construction over the course of decades and generations rather than immediate change, which is often out of the control of an individual in relation to bigger-than-self events or phenomena.

In this way, we can now discuss how the concept of self-deceptive cognitive priors as proposed in this chapter differs from the concept of suffering in Buddhism reviewed above in at least one important way. While these self-deceptive cognitive priors lead to increased distress, similar to how the roots of suffering are seen in Buddhism, the perspective of the self-deceptive priors being primarily to do with our separation from the cultural and socio-ecological world rather than from some state of transcendent (and individual) spiritual enlightenment, mean that the terms provide different affordances for how they might be

worked with, and the results of that psychological work. The understanding of suffering articulated in the Four Noble Truths affords one great capacity to deal with the roots of one's individual psychological suffering. The understanding of self-deceptive cognitive priors articulated here affords the individual to metabolise them and so transmute them into enactive wisdom that over time enables greater capacity to act in the world in ways that reduce suffering of other human and non-human beings and the biosphere as a whole. It should be noted that this perspective on reducing suffering of beings on Earth is not very different from more recently conceptualised socially engaged forms of Buddhism (e.g., King, 2009): it is more traditional, and especially Theravādan, forms of Buddhism that are more focused on individual enlightenment to which this critique applies.

Conclusion

In summary, the term advanced in this chapter, metabolisation, seeks to point to a self-unfolding psychological process for untangling and breaking down self-deceptive cognitive priors that lead to sub-optimal processing of bigger-than-self reality which are involved in mediating levels of distress related to bigger-than-self reality. This process is distinctively embodied, and as such in practice does not always clearly distinguish between personal, psycho-cultural, and socio-ecological types of psychological content as much as has been discussed in the current chapter. However, breaking metabolisation down into such categories helps to be able to grip the process propositionally, and to illustrate different domains through which this process might unfold into for individual clients. The overall result of the metabolisation process is to break down dualistic self-deceptive processing into nondual wisdom-aligned processing and afford individuals greater capacity to enact developmental niche construction-type changes within their socio-ecological niche(s). This metabolisation process represents a unique contribution of the current thesis to addressing

distress related to bigger-than-self issues, and while sharing some similarities to the processes of exposure and transcendence, is meaningfully distinct from either. What it contributes to is an updating of embodied cognitive priors to come into more present moment, wise relationship with bigger-than-self reality, which I discuss in the following chapter as a process of nondual enactive wisdom development.

Chapter 11: Nondual Enactive Wisdom Development: The Unfolding of Wisdom-Led Present Moment Participatory Relevance Realisation

The current chapter in many ways represents a culmination of the rest of the thesis. In it I present a model of nondual enactive wisdom development that I propose individuals can use lead to a more optimal gripping of bigger-than-self reality that reduces bigger-than-self distress and allows the practitioner (whether client or therapist) to make more effective contributions to aspects of bigger-than-self reality that they care about. In it I first define what I mean by the term nondual enactive wisdom development and how it relates to and emerges from the understandings developed in other chapters of the current thesis. I go on to discuss how my experience of enacting such change in my own embodied embedded cognitive system has changed me and informed the process.

Defining Enactive Nondual Wisdom Development

Having discussed in the previous chapter the process of metabolisation of bigger-than-self distress, we can now zoom out a little to the process as a whole, which I label enactive nondual wisdom development. This term, and the words within it, encompasses much of what has been discussed in the current thesis. “Enactive” refers to the original use by Varela et al. (1991) and comprises both the embodied and embedded understandings of cognition that are often invoked alongside it. In nondual enactive wisdom development, the agent enacts structural changes in its embodied system (via updating of 4P cognitive priors) in response to inquiry into the reality of how things are in the current environment or bigger-than-self reality.

This structural change may lead to behavioural changes in the organism that can lead to niche-organism coordination dynamics (Fabry, 2021) or even over time to developmental

niche construction (Stotz, 2017). The structural changes can be understood as autopoietic (Maturana & Varela, 1980) as they not only enact structural change in the organism but occur through psychological interventions that focus on constraint releasing and unfold in a way that makes use of self-organising cognitive processes (Schwartz & Sweezy, 2020; March, 2021). The word "nondual" is included as, even though partially implied in the term enactive, it points to the depth of experience that priors are updated in relation to, and to the usefulness (or possibly necessity) of change at such depth when working with bigger-than-self distress. This depth corresponds to participatory level of knowing, and change at this level is both profound and often destabilising, so will often require skilful holding of the type I have tried to articulate in the description of metabolisation in the current chapter.

The word "wisdom" is used to point to the kind of cognitive capacities that I argue are most relevant and useful in meeting bigger-than-self distress. As discussed throughout the current thesis, I argue (alongside Vervaeke, 2019) that computational rationality or executive control only of one's cognition is not sufficient, and that working with bigger-than-self distress requires the kind of social, moral, and meta-cognitive capacities (such as dialectical thinking, metastable attunement, seeing through illusion) are essential in developing the kinds of capacities to reduce bigger-than-self distress. Wisdom as a term also has a long history in humanity and points us to rich traditions in different cultures from which it is possible to draw, both for individual clients and for psychologists and psychology as a whole in developing ecologies of interventions for assisting clients in meeting bigger-than-self distress. The word "development" is used to denote the open-ended, self-complexifying, developmental nature of any proposed "solution" to bigger-than-self distress. The sources of bigger-than-self distress are not in the past, nor contained within the individual, and so they cannot be resolved with the same kind of closure that, say, an individual experiencing PTSD

from a car accident or sexual assault may be able to find. The ongoing, open-ended nature of bigger-than-self distress, as I have tried to show through the current thesis, implies a transformation of self, and this transformation is to seeing self not as a static individual dualistic subject or object but as a fluid, nondual, dynamic, developmental, interactive process between agent and environment, continually unfolding itself.

Nondual enactive wisdom development encompasses and is defined by a seeing through of relevant self-deceptive embodied and embedded cognitive priors in a way that confers a more optimal participatory gripping of bigger-than-self reality. An important aspect of nondual enactive wisdom development is that it transforms the practitioner's cognitive system such that their self-organising relevance realisation machinery autopoietically tends to produce a wiser, more optimal grip response to situations and bigger-than-self reality. This dissolves a kind of disembodied, computational grip on self and reality that I argue is deeply culturally normative within Western culture and which maintains the lack and (often unconscious) experience of separation from self, other beings, and bigger-than-self reality itself. This computational gripping, in IFS terms, is represented by manager parts who seek to predict and control self and bigger-than-self reality.

What the computational gripping dissolves into (in the process that has been built up and outlined throughout this thesis) is an embodied, embedded gripping arising from Self/presence, which connects the individual to aspects of bigger-than-self reality that are larger than themselves. Some terminology that may be helpful to understand this change is a change from (often ineffectual attempts to) control or manipulate parts of the self, other beings or aspects bigger-than-self reality to a Self/presence-led attempt to come into relationship with and skilfully navigate the same. The net effect of this is that one's automatically arising cognitive priors are updated in line with wisdom such that the individual

can now “come from” wisdom (McKee & Barber, 1999, p. 151), rather than having to order ourselves to do the right thing - having seen through the flaw and self-defeating pattern at a participatory level, the individual no longer needs to operate via coercion in that area of their life. In seeing through these self-deceptive cognitive priors, there is a natural reduction or even transformation of distress as the person is no longer railing against that which cannot be otherwise, a viewpoint commonly associated with wisdom (see, for example, the Christian Serenity Prayer, or multiple passages within the Tao Te Ching).

Nondual Enactive Wisdom Development and Present Moment Participatory Relevance Realisation

Properly understood, the nondual enactive wisdom development approach is not only a description for a process that unfolds over time but an attitudinal stance or orientation towards present moment experience. Any given moment can be sensed into, or focused in on (e.g., Gendlin, 1997), from the perspective of nondual enactive wisdom development that has been presented in the current thesis. In doing so, individuals can progressively re-orient their relevance realisation machinery from a dualistic, parts-led relationship with their self and the world, to a nondual enactive, Self/presence/nondual-led sensing into what the mind-body-environment system is presenting as relevant: the individual can orient their attention within a field of relevant affordances, sensing and responding flexibly and wisely to internal and external stimuli as they arise. Once an individual has strengthened their connection with and capacity to stay centred in Self/presence/nonduality, they can bring this presence to bear on any aspect of present moment embodied embedded experience, which may be internal or external to the self (i.e., anywhere within the mind-body-environment system). This presence can be applied to interpersonal situations, intellectual sensemaking, active projects or work

in the world: any situation an individual encounters, they can come from Self/presence/nonduality: they come from nondual enactive wisdom.

Of course, it is nearly impossible to be centred in Self/presence/nonduality all the time, never identifying with or getting blended with parts. This is not a problem, but part of the nondual enactive wisdom development approach: parts are not wrong (Schwartz, 2021), but they do tend to have agendas and be less accepting and more judgmental of how things are, and so they can distort and bias one's perception relative to the clarity of Self/presence/nonduality. This distortion renders one's relevance realisation temporarily less trustworthy: for example, when feeling acute anger, we might want to say things that we later regret. This example is relatively gross and easy to recognise, but the same kind of distortion can happen in much more subtle ways, from parts that are so habitual to us that we do not perceive them as distortions. This is one place where mindfulness practice can be beneficial: we become more aware of our parts, thoughts, and co-emerging sensations, so present moment experience can be freshly seen and evaluated (paradoxically, a nonjudgmental stance can result in clearer discernment, and the two are combined in SG-MBIs, as discussed earlier in the current thesis). Once aware of potential distortions, for example from noticing the co-emerging sensations as being characterised by heaviness, density, heat, or agitation, these can be worked through, either with a therapist, or as the practice develops, by the person's own Self/presence.

As an example of how present moment participatory relevance realisation is affected by the kind of presence one is coming from, it has frequently been surprising to me, throughout the process of working on the current thesis content, how my perspectives have often shifted, at times quite dramatically, as a result of personal metabolisation work. For example, in earlier parts of the current project, I had only recently come out of a period of being

involved with activism more directly, and so my thinking was dominated by parts that were convinced that not only was climate change happening (it is), but that were judging it as morally wrong and that society in general was wrong in its response. This was a distortion of the truth: these thoughts were coming from parts of my system that felt angry towards society, and separate from people in it, which I recognise more clearly now as distorted and ineffective relative to the clarity of Self/presence/nonduality.

As I have worked with these parts, they have become more able to un-blend from my Self, in IFS terms, and access a more nondual-centred perspective where I can see from outside my own individual self-centred perspective and activist identity. At the participatory knowing levels of my being, I have become more radically accepting (e.g., Linehan, 1993) of the situation as it is, and seeing more clearly how conditions have led to the situation we are in now - even though I do not like it, and still feel a strong need to respond to the situation as it is, this seems to co-occur with significantly more calm nowadays. This shift in my participatory knowing level of being has allowed in helpful perspectives, for example that most people in society actually do care, and that the task is not to rally against some projected enemy but to help identify what the blocks to effective action are and work to ease these. The content of the thesis that I have written has shifted as a result of this process, not as because I gained any new information, but from the kind of fact-free learning (Aragones et al., 2005) characteristic of insight problem-solving (e.g., Ostafin et al., 2012).

This example illustrates one case of how the nondual enactive perspective relates to relevance realisation. As the participatory knowing that I was orienting from in my being shifted as a result of engaging in metabolising self-deceptive priors in my embodied cognitive system, changes occurred in what appeared as relevant in the field of my awareness. In this case, it was from an angry, separate perspective to a calm, nondual, more bigger-than-self-

centred perspective. Other such shifts in responding to bigger-than-self distress I could imagine would include from feeling anxious and helpless to a feeling of confidence and agency, or from grief-stricken and depressed to a big-hearted perspective that can hold both the grief and love for what is still existing, with resolve to do what can be done to save the targets of that love. In the intellectual realm, these kinds of changes could involve a multi-year journey that cycled through periods of activism, soul-searching and mental health difficulties, meaning-making, vocational training, and finally more optimal gripping of a life that is lived at least partially in service of the aspects of bigger-than-self reality that the individual is drawn to caring about and for.

Hopefully it is possible to see how this kind of change is more than a mere reappraisal of thoughts as in traditional cognitive therapy: it is a shift in the embodied affective cognitive schema, or set of relevant priors, which make up the person's grip on their agent-arena relationship at the level of participatory and perspectival knowing. It need not be a multi-year journey, but the process is flexible enough to expand into this. The whole way along, individuals can be guided by a present-moment practice and intention to develop in wisdom, see through self-deceptive cognitive priors by metabolising personal, psycho-cultural, and socio-ecological reality, and gain more of an optimal grip within their socio-ecological niche. This intention can filter through into each present moment, as cognitive systems are always already engaging in participatory relevance realisation: we might engage in relevance realisation in more or less mindful or skilful ways, but there is no avoiding the fact that cognitive systems do relevance realisation in navigating experience. Mindfulness practice aligned with nondual enactive wisdom development can help individuals to become more conscious participants in this process, and the notion of nondual wisdom (and the embodied ability to discern when this is present) can help them parse out what is relevant to focus on in

the process. Obviously, not all this process will necessarily be explained or make sense to participants from the outset, and as in some MBIs (e.g., Cayoun, 2015) and IFS (Schwartz & Sweezy, 2020), concepts are generally explained to clients as they become relevant from their experience (e.g., the concept of Self is often not explained to clients until after they have had an experience of the 8 Cs).

The intention in present moment participatory relevance realisation is to progress in the direction of wisdom development. The addition of "development" to the term "wisdom" as it has been used in the literature, particularly in McKee and Barber (1999), Vervaeke and Ferraro (2013a), and Grossman et al. (2020), is intended to enable a dialectical gripping of the concept of wisdom. In this gripping, there is a dialectic between wisdom as something that is continually aspired towards and never completely realised, and wisdom as something that it is possible to come from in each present moment, that can in this sense actually be reached, although never owned. As Vervaeke (2019) re-interprets the Buddha's First Noble Truth, due to the nature of our cognitive systems, we are continually vulnerable to self-deception: we never truly can become wise in a complete and finished way, but we can participate in the self-organising development of our cognitive systems so that they become more wise. All this context is inherent in the concept of present moment participatory relevance realisation guided by nondual enactive wisdom development. There is a continual metastable attuning going on, between acting in our lives with the wisdom available to us at that moment and engaging in the process of developing our capacity to access wisdom in progressively more (and more challenging) situations that life presents. One moment it might be relevant to engage with a co-worker one finds difficult; in another one might be able to inquire into one's reactivity to that co-worker to see what is causing the experience of difficulty in one's own cognitive system, and so on.

I believe this concept of present moment participatory relevance realisation is a potentially enduring and novel contribution to MBIs and psychology and has implications beyond just responding to bigger-than-self distress. “The faculty of voluntarily bringing back a wandering attention, over and over again, is the very root of judgment, character, and will. No one is compos sui if he have it not. An education which should improve this faculty would be the education par excellence. But it is easier to define this ideal than to give practical directions for bringing it about.” The preceding quote is attributed to James (James & Miller, 2007, p. 267), and is often cited in discussions of mindfulness training as a description of the process of mindfulness training of attention regulation. What I have attempted to show in this thesis is that mindfulness has traditionally been associated not only with the regulation of attention but to do so in service of the development of wisdom, and perhaps foolishly have attempted to give practical directions for bringing this about. I have attempted to describe a form of mindfulness-based wisdom development that is suited to contemporary times, where our scientific and technological knowledge and power both exceeds and is largely out of touch with our experiential moment to moment experience. I have, along the lines suggested by Varela et al. (1991), attempted to point to a practice or orientation to practice that can bridge the gap between our scientific propositional knowing of the world and our moment to moment experiential participatory knowing of it, which can be relevant in responding to bigger-than-self distress. Present moment participatory relevance realisation is this process, and fittingly given the topic, is a process that has evolved itself in a seemingly emergent, self-organising way, through iterative practice both in meditative practice and in the world, refining itself as it has progressed.

Relevance Realisation, the Meta-Crisis, and Bigger-than-Self Distress: The Meta-Crisis is a Crisis in Relevance Realisation

The understanding of present-moment participatory relevance realisation can perhaps be illustrated further by unpacking its relevance to the meta-crisis and bigger-than-self distress itself. Present-moment participatory relevance realisation functions optimally (with fewer distortions) when done from Self/presence/nondual awareness, as has been discussed. What has perhaps not been made clear yet is the role of intentionally held not-knowing in this process. As discussed in Chapter 7, relevance realisation solves the problem of what would otherwise be a combinatorially explosive task: that of parsing out relevant information from the environment (including one's own cognition). There are, from a computationally rational point of view, unlimited ways this task can be done in each moment and context, and yet most humans do so with relative ease – for example, by selecting for psychological similarities and so on, as discussed in Chapter 7. Culture greatly assists us in the process of parsing out what is relevant in a given moment, providing us with ways of understanding ourselves and the world, of knowing aspects of the world as one thing and not another. However, this assistance from culture comes with a significant potential drawback: what if the wider culture we are participating in is teaching us to do relevance realisation in ways that are not rational or wise? That lead not to a more adaptive fit with our environments but less of one? What if this culture leads to a kind of ossification of outdated ideas and ways of being, and significant defence mechanisms against being updated and changed?

I put forward the idea that the meta-crisis is a crisis of relevance realisation. This takes into account the notion that relevance realisation is a property of embodied embedded cognition taking place in cultures and socio-ecological niches. Relevance realisation is not something that brains do, nor bodies, nor environments and cultures, but the four together.

It is possible to shift relevance realisation in many ways: arguably, the Extinction Rebellion, Black Lives Matter, and Me Too movements have shifted the way society as a whole tends to do relevance realisation in relation to climate issues, systemic racial injustices, and abuse of power, including sexual abuse and harassment, by men. Movements such as these, however, do create a lot of tension in society: suddenly, things that had been considered culturally normal are now being perceived in a different light, and this can result in polarisation, political gridlock, and undesirable outcomes as much as it can lead to progress. What is required is a way to metabolise this tension and enact wiser collective responses in relation to these bigger-than-self issues. Similarly, movements from the other side of the political spectrum need to be listened to and responded to wisely, too: if we take the notion that there are no bad parts seriously, then the parts of people that are resisting such change, or standing up for different causes, need to be listened to as well, helped to process their burdens and recognise what the wisdom is that they're carrying. This perspective potentially contains the seeds of possible solutions to polarisation and the meta-crisis itself.

"We Are All Just Here Trying to Make Sense of It All and Live the Best That We Can"

A perspective that can help to enact and further elucidate the idea that the meta-crisis is a crisis of relevance realisation is that encompassed by the sentiment that "we are all just here trying to make sense of it all and live the best that we can". The times that we live in are characterised by a saturation of information, much of it motivated by political or corporate self-interests, or to earn money from generating clicks and views, and paying little heed to accuracy or truthfulness (e.g., Cooke, 2017). It was difficult, even before the internet and social media, to discern the truth of what was going on, and that task has been made even more difficult, perhaps exponentially so, in contemporary times. In this information landscape, then, it is easy to see why there has been rising rates of polarisation and difficulty

in responding to the crises of our time. What can be helpful in such a context is letting go of over-certainty in one's views, practicing intellectual humility, and, with the perspective available to us at this point in the current thesis, realising that one thing humanity has in common is the difficulty of doing relevance realisation well.

The parts of our cognitive systems that get overly identified with a particular point of view and which are likely to get polarised, from an IFS point of view, are just that: parts. Self/presence/nondual awareness does not tend to grasp on to such points of view: while it is possible and necessary to hold beliefs, this need not lead to reactivity and polarisation upon seeing or interacting with another person holding a different point of view. From a Self/presence/nondual perspective, there can be a recognition that you and the other person are defined not by your beliefs or identity, but instead by this deeper truth of being involved in the struggle of doing relevance realisation in a complex world, with complex cognitive systems that are vulnerable to self-deception. From Self/presence/nonduality, there can be a resting in not-knowing, from which beliefs and identifications are held lightly rather than grasped and defended tightly. This does not mean that we are restricted from believing in or advocating for certain positions: though all beliefs are produced by relevance realisation processes, this does not reduce us to complete moral relativism. We can take sides in political issues still. The change here is in one's participatory gripping or relating to self and others, rather than necessarily a change in propositional knowing.

This position of recognising self and others are caught in the same condition of difficulty in enacting relevance realisation provides a means by which to help give contrast to parts of the personality that are identified with beliefs in a grasping way. These parts will tend to be reactive to others who hold a particular different view, rather than accepting, at the participatory level. A part in such a state represents a dualistic, non-metastably attuned way

of relating to this other person, as such is in a state of self-deception relative to a nondual perspective, and so presents as a trailhead for entering a metabolisation process where this self-deception is seen through. The result of such a process is likely to take the emotional reactivity out of the situation and may or may not result in change at the propositional level of knowing. Whether or not there is change at the propositional level of knowing, the freedom from emotional reactivity and grasping will confer the individual with greater capacity for optimal grip in relating to this other person and thus increase optimal grip within their field of affordances within that socio-ecological niche. It has a net effect of taking heat out of a potentially polarising dynamic and increasing the likelihood of wise relevance realisation occurring over time.

The Meta-Crisis Includes Psycho-Cultural Reactions to the Meta-Crisis

Seeing the meta-crisis as a crisis in relevance realisation has an important implication: the meta-crisis includes psycho-cultural reactions to the meta-crisis. Following the overall argument of the current thesis, we can posit that optimal, wise relevance realisation involves perceiving bigger-than-self reality with relative accuracy, updating one's 4P cognitive priors in accordance with such reality, and enacting wise responses to what is perceived. Given, too, the notion that the meta-crisis is a crisis in relevance realisation, it is plain to see that this does not always happen. People react to the meta-crisis, and this can result in conflicts within different sub-cultures of society that are characterised by polarisation, an unwillingness to listen to other sub-cultures, or even violence towards outgroups. To protect from a polarised or judgmental perspective developing in response to such reactions, the nondual enactive wisdom development orientation to noticing this is to see that it is occurring within one's own embodied embedded cognitive system. Moreover, because one is nonseparate from the wider culture, engaging in judgment of others for sub-optimal responses to the meta-crisis is

not wise or effective. Instead, a kind of mindful, commitment and recommitment to forgiveness of self and others for such sub-optimal responses to the meta-crisis seems like a way of relating to this that is more in line with nondual wisdom. Relating to this in a light-hearted way, with humour, compassion, and humility, but also wisdom, may be more likely to lead to more optimal grip than with heaviness and over-seriousness.

This last point regarding nonjudgment being said, it is possible to see how many of the facets I used to point to the existence of the meta-crisis in Chapter 1 can be understood as symptoms of a meta-crisis rather than the meta-crisis itself, which can be seen at its root as being psycho-cultural in its origins. The culture of Western society perhaps worked more effectively, or at least passably, in previous time periods, but many of the cultural legacies that have been handed down from those periods are now being acted out habitually and automatically, in contexts where humanity has vastly greater technological power to harm each other and the natural environment (e.g., Schmachtenberger, 2018). Knowledge regarding mindfulness, and what is referred to as Self, presence, and nondual awareness, is not widespread, and practical integration of nondual wisdom practices from different cultures even less so. This results in a kind of unconscious identification with parts, beliefs, and cultural ways of being that are often both not responding to bigger-than-self reality in adaptive ways and resistant to changing these ways. This can be written about in terms of white supremacy (e.g., Ansley, 1997; Meer, 2019), climate or science denial (Fischer, 2019; Krange et al., 2021), scientism (Roszak, 1999), terms which get closer to the view I put forward in the current thesis but which are still rooted in dualism and judgment. Woodbury's (2019) conceptualisation of climate trauma gets closer in its pointing towards trauma and psychological processes as being both a response to and precipitant of climate change.

Relevance Realisation Points to Alignment Between Psycho-Cultural Solutions to the Meta-Crisis and the Reduction of Bigger-than-Self Distress

At the root of what these labels are pointing towards, as I have argued in this thesis, is the distributed experience of lack (Loy, 2002) existing at the level of participatory knowing. This lack arises from a disconnection with the nondual experience that is theoretically available to all humanity, but which Western culture has fallen out of relationship with in the main, lacking cultural knowledge or practices which put individuals within the culture in touch with such experiences, much less integrate them into wise ways of being in society. Western culture has historically invented individual and collective pursuits to try and fulfil this experience of lack, as Loy (2002) describes at length. While these attempts have arguably resulted in more worldly and societal forms of liberation than the East, which has tended to focus on the nondual experience as a means of liberation that is largely confined to the individual, spiritual realm, the experience of lack has persisted. The labels used above can be understood, from this perspective, as psycho-cultural syndromes that are responses to this underlying lack.

Part of the solution to the meta-crisis, then, is to metabolise this lack, and then enact relevance realisation from a place of not-lack, or nondual wisdom, which involves compassion. This compassion sees through the labels of white supremacy, climate or science denial, or scientism, and into the unconscious distress at the root of these psycho-cultural syndromes. They are seen as the result of a profound disconnection from a kind of spiritual or deep psychological sustenance at the participatory level of knowing. Creating ways for this reconnection to occur, from this perspective, would help to create the conditions for wise responses to the meta-crisis. Simple experiences of reconnection with nondual awareness would not be expected to solve everything: what is needed, ultimately, is to move from this

nondual awareness and compassion into an integration of it into one's being, and an acting from updated priors that consider the real, physical and sociological issues in our biosphere and civilisation. This is what the nondual enactive wisdom development perspective involves.

In my own system, it has been necessary to have a theory and related praxis linking bigger-than-self distress with the meta-crisis in order to reduce/transform my experience of bigger-than-self distress. With the theory and praxis of nondual enactive wisdom development presented here, this link has been made. The meta-crisis can be understood as a crisis in culturally and psychologically mediated relevance realisation that is downstream of a pervasive distributed experience of lack resulting from disconnection with nondual experience. To make progress on the psycho-cultural root causes of the meta-crisis is to enact nondual wisdom development and participate in one's socio-ecological niches in a way that contributes to wise developmental niche construction and our collective ability to respond to bigger-than-self issues. To make progress on my experience of bigger-than-self distress is to do the same. The perspective of seeing relevance realisation at the core of both the experience of bigger-than-self distress and the meta-crisis, humanity is put all on the same side. We all want humanity and the biosphere to flourish and are caught in the difficulty of doing relevance realisation well in a highly complex and uncertain world. Learning to do enactive relevance realisation more wisely can result in greater psychological flourishing at the individual and collective level and contribute to more desirable collective outcomes as well.

Nondual Enactive Wisdom Development Must Be Enacted… But This Is Aligned with Wellbeing

Nondual enactive wisdom development unfolds from following nondual wisdom-oriented present moment participatory relevance realisation, in real-world contexts within one's

socio-ecological niche. It is inherently mindfulness-based, embodied, and embedded within a concrete (non-abstract) context. An important implication of this is that nondual enactive wisdom development can only, while remaining true to what it is, be enacted by an embodied embedded cognitive agent that is doing relevance realisation in concrete (non-abstract) contexts. This is something that starts with the clinician, for the clinician's embodied embedded cognition, situated in their socio-ecological niche, is the self-organising cognitive system that is capable of such relevance realisation and nondual wisdom development and enactment. In this vein, clinicians can only assist their clients with their wisdom development to the extent that they have enacted similar such wisdom development in their own system. Like with MBIs (e.g., Kabat-Zinn, 1990; Cayoun, 2011) and IFS (Schwartz & Sweezy, 2020), nondual enactive wisdom development is something that cannot be separated from practice, and cannot be learned or even properly understood without engaging in the practice of it. However, both MBIs and IFS, as contemporary psychological interventions, have been codified and written down: while not (always) presented as manual-based treatments, there are definite protocols for administering these as treatments, and right and wrong ways to administer them that can be evaluated against these written protocols.

Differences from Protocol-Based Treatments: Going Beyond Scripts

The approach presented in this thesis differs from what I will refer to as the protocol-based form of these treatments in subtle but important ways. It focuses not on what the clinician should administer to the client (corresponding to the propositional level of knowing), nor even on how they should do it (the procedural level of knowing) but on the clinician's own development (their own perspectival and participatory knowing). This is a subtle point because it is not in opposition to protocol-based forms of treatments per se: rather, it is in its

best form complementary to them. A clinician that is seeking to enhance their own nondual wisdom development may well choose to train in multiple treatment modalities, including MBIs, IFS, and other models that can enhance their propositional and procedural knowing, and apply their learnings to themselves to enhance their perspectival and participatory knowing. All these forms of learning and embodied training can contribute to nondual enactive wisdom development. This is, these trainings would be expected to help clinicians advance in their wisdom development journey: to increase access to Self/presence, and awareness of and ability to work skilfully with the embodied cognitive priors and to increase the optimality of their grip within their socio-ecological niche (via the acquisition of propositional and procedural knowing about how to work with client issues).

What I am attempting to point at with the term nondual enactive wisdom development includes the potential to go beyond engaging in these protocol-based forms of treatment or psychological practices. It is attempting to point at something that is not commonly included in professional development: the clinician's development of their 4P cognitive priors, seeing through self-deceptive priors and (at the further ends of the path) realisation of nonduality. Individuals with expertise in any domain will be familiar with the process of developing insight in their domain that goes beyond what one achieves from simply following protocols: they have developed expertise that allows them to respond skilfully in the moment to situations that the text may not have anticipated. The capacity that allows for this skilful responding is a feature of the expert's embodied embedded relevance realisation, their perspectival, participatory grip on the situation that allows them to find the exact metaphor that will help their client to understand a concept, or how to write up a publication such that it has the best likelihood of being published in a specific journal. Wisdom development, as I am proposing it, is similar to expertise development pertaining to skills in a particular domain

(e.g., Patterson et al., 2010), except the skill involved is a domain-general one that involves seeing through illusory priors and thinking and affording oneself a more optimal perspectival and participatory grip on reality. It is domain-general because its object is the individual's relevance realisation machinery itself, rather than a skill in a particular domain of the world.

Less Separation Between Clinicians and Clients in Nondual Enactive Wisdom Development

Because nondual enactive wisdom development is something that can only be enacted by an embodied embedded cognitive agent, and to do so skilfully requires engaging in practices that change that agent's embodied embedded cognitive system and grip with their environment, the clinician is placed in a more similar place to their client than is generally understood to be the case in more traditional mental health treatments. There is less separation between clinicians and their clients. Both must go through the embodied changes from some form or combination of wisdom development practices to be able to enact such wisdom in their lives. For the clinician, a significant context or socio-ecological niche that they will enact the fruits of such wisdom development will be the therapy room: how they show up for and relate to their clients. For the client, the context or socio-ecological niche will be more variable: it may be how they show up in the classroom as a teacher, or in their children's lives as a parent, as a community organiser in their local district, or as a worker of the land in their job as a regenerative farmer.

What links clinician and client is the inescapability of the fact that their embodied cognitive system will enact some form of grip on their self, their relationships with other people, beings, and their environment (e.g., Bruineberg & Rietveld, 2014). How an individual's system does this is a question of relevance realisation, and when this is understood it becomes clearer that both clinician and client stand to benefit from being able to enact this relevance realisation as skilfully as possible (e.g., Miller et al., 2022). Since

nondual enactive wisdom development is the process of placing attention on and optimising the process of how one's system enacts relevance realisation itself, this places clinician and client in a broadly similar position of both having a vested interest in engaging in more optimal wisdom development.

This deep similarity between clinicians and clients has perhaps always been there, but potentially obscured in some cases by a medical model dominated mental health system that tends to separate clinicians, who are assumed to be broadly mentally healthy, from clients, who are assumed to be mentally unwell. The proposed wisdom development framing is more like a mindfulness-based approach, where experience is perceived nonjudgmentally, and in non-pathologising ways, and the relationship between clinician and client is more non-hierarchical (e.g., McCown, 2013). All individuals, by virtue of having human cognition, are doing relevance realisation, and might benefit from doing this more effectively and wisely: this requires no separation in the form of pathologising experience and requires more of the clinician to develop their own embodied cognitive systems (using their perspectival and participatory knowing), rather than simply evaluating literature and administering evidence-based treatments (using propositional and procedural knowing).

Less Separation in Shared Context of Meta-Crisis and Bigger-than-Self Reality Distress

This reduced separation between clinicians and clients is relevant to the experience of bigger-than-self distress and circles us back around again to the principal thesis question. In a traditional mental health context, where the clinician prototypically is helping the client with their individual problem, the clinician is usually outside the client's problem. They did not experience what the client experienced to precipitate the presenting problem; they may not have the same predisposing biological or historical factors, and although they can empathise broadly by virtue of having a shared human experience, the clinician is not experiencing the

same issues as the client, generally speaking. In the context of the meta-crisis and the experience of bigger-than-self distress, the clinician and client are much more likely to be sharing substantial overlap in their experience, particularly as clinicians drawn to working with bigger-than-self distress are likely to have an experiential connection with bigger-than-self distress themselves. While there may still be some significant differences (a Caucasian clinician might not have first-hand understanding of a Latino client's experience of racial discrimination), the broader socio-ecological context of the meta-crisis that humanity shares as a whole is shared by both clinician and client. This is undeniable particularly in the case of the biospheric conditions such as climate change, biodiversity and ecosystem loss and degradation, and associated emotions and experiences of psychological distress.

The implication of this reduction in separation between clinician and client in their experience of bigger-than-self distress, in combination with that discussed in the immediately above sub-section, is that perhaps the best thing that clinicians can do to assist their clients in experiencing bigger-than-self distress is to go into their own experience of such distress and metabolise that. Doing so will enable the clinician to develop their own perspectival and participatory gripping of the realities of the meta-crisis and be able to offer clients an embodied and wise response, whatever treatment approach they end up administering with that client. The clinician will increase their ability to come from Self/presence/nondual wisdom in the present moment, and to meet their client's experience with whatever they are bringing. Of course, there are propositional and procedural pieces of knowledge that the clinician will be able to helpfully offer as well, but these are relatively straightforward and not overly different from standard clinical practice, such as that which Feder (2022) recommends in his discussion of eco anxiety. What I have focused on in the current thesis is the (typically more existential and complex) aspects of bigger-than-self distress that are not overly affected

by approaches that target the levels of propositional or procedural knowing, which are highly significant for individuals suffering bigger-than-self distress.

Nondual Enactive Wisdom Development is Linked with Wellbeing

While there is somewhat of an imperative on the clinician to 'do their own work' in the nondual enactive wisdom development approach to bigger-than-self distress, the other side of the coin is that this is a process that is aligned with wellbeing. There are multiple reasons to suggest that the nondual enactive wisdom development approach would be aligned with wellbeing. Nondual awareness is traditionally associated with positive, self-transcendent states, such as love, compassion, nonseparation, unity, deep belonging, and the ceasing of desires (e.g., Mills et al., 2020; Tzu et al., 2015), although the path to get there is not necessarily pleasant and may involve many more challenging experiences (e.g., Tzu et al., 2015, 2016). Given the stated aim of nondual wisdom traditions to provide a stable sense of wellbeing that is relatively independent of external conditions, it has been suggested that the evaluation of nonduality and wellbeing might require its own paradigm of research and tools to measure it, as this differs substantially from the constructs of wellbeing that western psychology has focused on to this point (Jones, 2022).

Another reason to believe that the nondual enactive wisdom development approach might be associated with higher levels of subjective wellbeing is in its integration of predictive processing models of cognition. Miller et al. (2022) discuss wellbeing from the perspective of predictive processing, reasoning that cognitive agents that are good predictors of the hidden causes of its sensory states will tend to be more mentally healthy and have higher levels of wellbeing. They posit that affect-driven regulation is the most likely to lead to higher subjective wellbeing over the long-term: that the valence of affect can be used to update one's priors on what is expected to occur. Miller and Vervaeke (2022) discuss how

mindfulness meditation involves paying attention to these subtle changes in affective valence, and how over time this can lead to an attuning of one's priors to come to expect what will actually happen, rather than how one might want things to happen. For example, paying close attention in this way might lead to an awareness, experientially of the nature of impermanence, and the formation of global- (as opposed to local-) level error dynamics predictive models that expect fluctuations in affect and external conditions and are able to remain in a sense of calm equanimity despite these changes (Miller & Vervaeke, 2022). Miller et al. (2022) discuss how these kind of global error dynamic priors lead to metastable attunement and a more optimal gripping on a relevant field of affordances, and how this would be expected to underpin a more stable source of wellbeing that is not as reliant on external conditions.

Conclusion

In summary, the nondual enactive wisdom development approach is something that synthesises the understandings of cognition discussed in this thesis, in a context of nondual wisdom-led participatory gripping of bigger-than-self reality. With the right methods, this is a self-unfolding process of development that results in reductions in bigger-than-self distress, decreased self-deception and psycho-cultural distortions in one's grip on self, one's socio-ecological niches, and bigger-than-self reality overall. Because of its nature as something that embodied embedded cognitive systems carry out, the nondual enactive wisdom development approach is not something that can be applied in a protocol-driven way to clients without substantive integration by clinicians themselves. While protocols such as CBT, ACT, DBT, MBSR, MiCBT, IFS, Aletheia Coaching have all been mentioned or discussed through the current thesis and might be able to be directly applied with clients in useful ways, the clinician will only be able to take the client as far as they have metabolised in their

own embodied cognitive systems. This need not be viewed negatively, as engaging in such metabolisation will likely coincide, in the long term, with reduced bigger-than-self distress and increased wellbeing for the clinician.

Chapter 12: Discussion: Methodological Considerations, Auto-Ethnographic Reflections, Limitations, and Future Directions

The current thesis investigated how psychologists and other mental health professionals might assist their clients with bigger-than-self distress. While an earlier version of this thesis included an empirical study (into MiCBT for general psychological distress), ultimately the investigation led into novel embodied and theoretical territory that attempted to put these in relationship with each other in relatively novel ways. It found, given the understanding of the meta-crisis and the nature of bigger-than-self distress as being something that every individual, whether clinician or client, is contained within, and that it can be understood at a root psycho-cultural level as an issue of enactive relevance realisation, that one of the most effective things that clinicians can do is metabolise their own bigger-than-self distress first, and this has been the focus of the current thesis. This thesis has been an example of the author's own journey through that, including finding relevant language and theoretical models from the cognitive science and enactivism literature to provide a vocabulary for talking about aspects of bigger-than-self distress and wisdom development that were experienced as missing or underdeveloped in the standard clinical psychology interventions literature. The metabolisation process described was an enactive, and includes both intellectual learning but also, and perhaps more importantly given our culture's relative strength in intellectual learning and education, embodied shifts in one's perspectival and participatory gripping of self and bigger-than-self reality.

The progression of the current thesis represents the author's own journey in metabolising bigger-than-self distress, starting with conventional cognitive behavioural therapy and third-wave approaches, progressing to FG- and SG-MBIs, before moving on to

parts-based models that unfolded towards Self/presence/nondual awareness. Overall, this intellectual and experiential developmental approach has been labelled nondual enactive wisdom development, which proceeds via present moment participatory relevance realisation. In this approach, the individual's noticings of the self-body-environment system (or present moment enactive relevance realisation) can transcend itself via an embodied metabolisation process. In the current thesis, each of the psychological approaches were progressively seen through in terms of their limitations, and a new model was worked with for a time before it too was transcended. The parts-based models of IFS and Aletheia Coaching were ultimately transcended in terms of synthesising them with an updated understanding of cognitive science and situating them within a larger bigger-than-self context that included an emergentist, scientific, cosmological overarching narrative provided by the Big History (e.g., Christian, 2018), Systems View of Life (Capra & Luisi, 2014), and ToK System (e.g., Henriques, 2003), as well as a non-exhaustive covering of symptoms of a proposed biospheric-civilisational meta-crisis given in Chapter 1.

Ultimately, the symptoms of the meta-crisis were linked with culturally distributed self-deception in our relevance realisation processes: our culture is doing relevance realisation, individually and collectively, in ways that are collectively leading to many outcomes that none of us want. The presence of culturally distributed self-deception in relevance realisation was traced to a widespread experience of lack in Western culture (Loy, 2002) experienced at the participatory level of our being, which affects our enactive gripping that characterises our relationships with self, bigger-than-self reality, and particular aspects of and human and non-human beings within bigger-than-self reality. This perspective on the meta-crisis afforded a deep continuity between the reduction of bigger-than-self distress and mitigation of and adaptation to the meta-crisis: at the core of both, from the perspective of an individual

experiencing bigger-than-self distress, was their capacity to enact wise present moment participatory relevance realisation in the face of such distress. This capacity was something that could be cultivated through enactive wisdom development practices such as those discussed within the body of the thesis, and to be able to lead clients in this ability required the clinician to first embody this themselves. The current chapter will discuss methodological considerations, limitations, future directions, and offer some auto-ethnographic reflections to complete the current thesis.

Methodological Considerations

The methodology applied in the current thesis was both innovative and recursive: innovative in that it deviated from standard auto-ethnographic approaches, and recursive in that it applied its own methodology to itself, both as a practice and as a research method. As discussed in Chapter 2, I applied a layered autoethnography approach that was quite highly theoretical, and which involved thinking with the theory that was being used in the research process (Jackson & Mazzei, 2012, 2019). The theory itself was enactive cognitive science, which as discussed throughout the thesis, looks to draw links between experiential and intellectual ways of understanding reality. This led to a novel and innovative blending of more conventional auto-ethnographic research and mindful, enactive approach that looked to link embodied embedded experience with theory and research literature.

Reasons for Theoretical Nature of Methodology

There were several reasons for the thesis being mostly theoretical in nature, rather than involving a lot of autobiographical content, despite employing an auto-ethnographic methodology. First and perhaps most importantly had to do with compression of information. The metabolisation process, in its concrete form, playing out in the author's day-to-day life, involved daily processing for several years, occurring in many different

settings: sometimes in the world, sometimes in conversation with people or in a therapeutic / coaching setting, sometimes while listening to or reading content from others, sometimes in meditation, sometimes while journaling. It was a combinatorially explosive task to both participate in this and track it in written form to describe it, and so some compression of information was seen to be necessary to present the information in a relevant way to readers.

Second, and related to the first reason was that the author tried to filter out irrelevant information for the reader as much as possible. There is already a lot of information, and a lot of new or not-yet widely used terms, within the current thesis as it has been presented. The author attempted to do work for the reader to be concise and truthful to what was relevant to the enactive impulse that was being followed and discovered. This aim, however, meant focusing on what the author assumed would be relevant to readers: primarily those looking to apply the content of the current thesis to work with clients (and on their own embodied embedded cognitive systems), and secondarily researchers that may seek to employ similar methodologies or build off or draw on content from the current project.

Third, much of the content taking place at the concrete, autobiographical level of experience did not necessarily convert well into text form. An embodied sensation of an inner critic part going from realising that it is enough, to realising that it is nonseparate from the physical universe, and the accompanying emotions and sensations of relief, flow, ease, and grounded lightness is perhaps interesting to describe once, but a whole thesis of similar descriptions is neither interesting nor particularly informative, especially without the relevant contextualisation and cognitive scientific landscape within which to situate these experiences. To an individual, these experiences can be highly transformative and meaningful, but to read about another person having such experiences is not necessarily very

informative on its own, especially without accompanying theoretical explanations, for example of parts, embodied sensations, and bigger-than-self reality.

What I have tried to focus on is in taking steps towards articulating a kind of vocabulary for discussing these experiences: those involving bigger-than-self distress, particularly embodied aspects of it, aspects that involve one's grip on a field of relevant affordances within one's socio-ecological niche, perspectival and participatory levels of knowing, or distinctions between relevance realisation enacted by parts versus Self/presence/nondual awareness. The attempt, following in the footsteps of, for example, Vervaeke (2019), Clarke (2013), Friston (2010), Varela et al. (1991), Maturana and Varela (1980), was to develop a vocabulary to describe, phenomenologically and scientifically, aspects of experience that are otherwise difficult to talk about, work with psychologically, and develop research protocols to study. Undoubtedly the author failed or fell short in this attempt in many ways, some of which will be discussed in the Limitations section below, but this was the attempt of the research project.

Recursive Nature of Research and Product of Research

The present research project was highly recursive, in its methodology and output. That is, it seemed to bootstrap itself as the author engaged with it. This went through several iterations. Initially, the author was interested in the link between positive psychology and clinical psychology. In engaging with the literature in exploring possible links between these fields, mindfulness training and MBIs stood out as something that was discussed in both fields. This led to further engagement with the mindfulness training and MBI literature, and to MiCBT, which the author engaged with the theory and practice of in a sustained, disciplined way for two years. In this, he developed more of an awareness of the link

between appraisals and co-emerging body sensations, the link between body sensations and discernment of wholesomeness, and other distinctions covered in Chapters 4 and 5.

The author began to see through or past the MiCBT methodology, initially without much clarity, as the practice led to diminishing returns: he spent a lot of energy being mindful of my patterns and being able to control his behaviour, but this did not seem to lead to a relief in the deeper more existential levels of my distress: in IFS terms, it seemed rather to make him a more effective manager of himself. When the author discovered parts-based work, it was initially outside the context of IFS or Aletheia Coaching, in an environment where participants were encouraged to explore the raw, embodied territory of one's awareness or relevance realisation machinery themselves more and make their own distinctions. This led to the idea that would later crystallise as participatory present moment relevance realisation. When the author eventually undertook formal learning and training in IFS, he found the distinctions within that model very useful, but had already seen that this was only one way of viewing the territory and that it was possible to relate to the territory in other ways, and to make one's own distinctions: to take an active role in one's own relevance realisation process.

The intellectual distinctions and shape of the current document were profoundly and closely tied to the author's own embodied embedded wisdom development journey of relating to bigger-than-self distress. In learning to relate to the experience of distress in a closer and more mindful embodied way, the author was able to stay with the experience long enough and in a mindful (e.g., defused, nonreactive, non-identified) enough way for novel insights to emerge. For example, there was an initial inkling that there was a relationship between mindfulness and climate change - but as the author stayed with this for longer, he realised on one hand that what was relevant was more than just climate change, but a kind

of intersectionality of issues, and then that it was a set of interlinked crises affecting our biosphere and civilisation. On the other side of the equation, the author realised that it was more than just mindfulness: that there was a more all-encompassing developmental transformation process going on, which upon further engagement with the literature he started to think of in terms of nondual enactive wisdom development, present moment participatory relevance realisation, and metabolisation.

This evolution of thought came principally not just from engaging with the literature, nor just in personal practice, or in being in the world, but in the mix of both - which I came to see as a metastable attuning process of relevance realisation between theory and practice, which is one of the characteristics of wisdom. This was a similar process to that practiced by the Ancient Greek philosophers, discussed in Chapter 8: the author was attempting to make sense of his experience and of the world, and live a praxis to bring his experience in accordance with it. Unlike them, he was in a radically different information environment, connected to a globalised industrial, Information Age society linked by an internet so dense in information that they would have been scarcely able to imagine it. The natural world and civilisation are in very different states now than in Axial Age times, and the academy has greatly expanded and diversified since then. There was so much more information, and so many more thinkers to consider, as well as research methodologies.

What I am attempting to describe or point towards here is that many of the distinctions that I have presented within the finished product of the current thesis have been a result of a highly recursive process. In a way, I was stumbling forward as if in the dark, punctuated by insights at predictably unpredictable intervals, and from different directions. These insights built on themselves to make up a methodology of nondual enactive wisdom development, which in hindsight is what I was doing all along, with progressively greater levels of clarity. It

is thus difficult to separate the methodology of the research from the product of the research. However, this is perhaps appropriate and a sign of success: I was aiming for a yoking together of theory and practice, and via the metabolisation process the separation between the two was reduced to such an extent that the two were almost impossible to disentangle.

The thesis was written using present moment participatory relevance realisation, and would not have been possible without a progressive transformation of the author's own embodied embedded relevance realisation machinery. In writing it, I was mindful that I wanted, in each moment that I was able to be aware, to "come from" a place of Self/presence/nondual awareness and embodied embedded wisdom of my socio-ecological niche. If I was not able to do so, it would be a prompt to engage in some form of inquiry to be able to enable that part to metabolise their distortions and find the wisdom within it. This seems innovative to me: I am not aware of any other project that has attempted to do quite the same thing, or at least that have described it in such a way. Auto-ethnographic studies tend not to have such enactive, mindful approaches to metabolising experience, while enactive cognition research articles typically do not seem to directly include the writer's experience in any serious capacity. This seemed innovative in relation to IFS also: In IFS, the parts are often cleared temporarily, by working through a process to get them to unblend. The process the author went through was more comprehensive than that, involving working through the layers to metabolise the sense of separation inherent in the parts, to get to a place of nondual connection with bigger-than-self reality, and sensemaking from there.

Auto-Ethnographic Reflections

Before moving on to discussion of limitations and future directions regarding the current thesis, I will offer some auto-ethnographic reflections from my own journey with this thesis,

and the larger life journey that the thesis was a part of for me. These relate to what was discussed in the previous section on methodological considerations, but also offer some personal views on the nondual enactive wisdom development process and responding to bigger-than-self distress that have come from my own experience of engaging in these processes. In my view, one of the significant fruits of engaging in nondual enactive wisdom development is that over time insights emerge and may be consolidated into offerings that can be helpful for others who are grappling with the same kinds of issues and experiences. This wisdom is qualitatively different from the kind of insight that comes from empirical literature (and can be complementary rather than antagonistic to it).

Metabolising Projections

This section starts with some thoughts on projections in relation to metabolising bigger-than-self distress. It has been my observation, both noticing activity in my own mind as well as in discourse in subsections of society that discuss topics associated with bigger-than-self distress, that it is easy for attention to be drawn towards projections of what might be in the future. For example, the Deep Adaptation (e.g., Bendell, 2018) community explicitly discusses the possibility of climate-related civilisational collapse, and provides interpretations of climate science that justify the need for discussion of and preparation for this possibility. Other communities I have engaged with have focused more on a kind of new renaissance, enlightenment, or political system fit for the current age and which might resolve our contemporary bigger-than-self issues (e.g., Eisenstein, 2013; Freinacht, 2017).

It is perhaps human nature to project ideal and catastrophic views into the future, especially in times of higher stress and tumult, which we appear to be entering into. The approach that I have come to take, as I have persisted in being mindfully present with these bigger-than-self issues, observed my own projections of the future come and go, and

engaged with them and their content and the evidence to suggest their likelihood of occurring, is one of learning to metabolise these projections. By this I mean that the projections can be observed to co-emerge with certain interoceptive sensations in the present moment, which root them in the body. These projections can be seen as a form of separation from present moment experience, of the self-body-environment system first of all, but of the present moment bigger-than-self reality we are in. In metabolising these projections, the aim was to arrive at a realisation of groundlessness, which involved a sort of intellectual humility characterised by not-knowing. This kind of post-metabolisation not-knowing is distinct from an uninformed unknowing of the possible outcomes, as it involves awareness and deep engagement with possible outcomes, and an intentional light holding and tolerance of uncertainty.

The process of metabolising projections came from an initial awareness of a possibility I noticed, and explored further, of observing my own projections and the sensations co-emerging with them, and to treat these as trailheads for entering a metabolisation process. This process seemed to produce results: it would help to ground these projections in the body, and generally resulted in more energy available in my own system and ability to engage with present moment reality as it is, somehow strengthened by the emotional charge that had formerly been tied up in the projection. I will attempt to illustrate what I mean by this metabolising projections process with two examples: one brighter and more idealistic, and one darker and more catastrophic. Of course, using these examples is not suggesting that the exact same examples should be used with our clients: many possible lighter and darker projections of the future exist, from a plethora of sources, including non-academic or fictional literature. The following examples are used to illustrate a point about the process of metabolising projections.

Eisenstein's poetically engaging (2013, p. 1) "more beautiful world our hearts know is possible", which imagined a society that transitioned from a "story of separation" to a "story of interbeing", which made use of a term originally coined by Engaged Buddhist and mindfulness teacher Hahn (Hahn & Kotler, 1991). The notion of a society coming from a story of interbeing (as articulated by Eisenstein, not Hahn, which I discovered and engaged with later) tended, for me, to activate lighter, more fluid sensations, but also to feel slightly ungrounded and disconnected from current trends in society. I felt hopeful in reading it, and it opened me to potential different ways of viewing bigger-than-self reality and humanity's role within it. However, it was difficult to see how humanity might get to the kind of understanding that Eisenstein was describing: it put me in a mode of grasping, trying to work out how to get to this imagined future that was being so poetically imagined within its pages.

The notion of a society coming from a story of interbeing inspired something in me at the time, and what I have metabolised from it is the valuing of beauty, mutuality, a sense of hope, and a kind of possibility of coming from interbeing in one's individual way of being, which is given a more concrete operationalisation in the current thesis through nondual enactive wisdom development. What I have let go of is the notion that the whole world will be this way: this view led to grasping and attempts to control or shape mine or other's experience, which increased my experience of bigger-than-self distress overall. The end result was a tighter focusing within my own sphere of influence, to enact my own values that were encapsulated within the projection of the future that Eisenstein's and Hahn's work was representational of.

Bendell's (2018) work exemplifies a kind of opposite end of the spectrum, at least in terms of the projection of society it envisioned: treating as realistic the possibility that civilisation as we know it will undergo catastrophic changes, and possibly collapse, within the

next century. It is important to note that he too emphasises loving and wise responses to this possibility: it is not an entirely negative take on reality, but it is notably darker than that of Eisenstein (2013), for example. Engaging with this kind of work co-emerged with heavy, stuck-feeling sensations, with high cohesiveness, down in the lower parts of my abdomen and hip areas particularly. There was a feeling of deep groundedness in engaging with the possibility of catastrophe or collapse, and yet there was also resistance to a kind of over-certainty and feeling of helplessness that was associated, in my experience, with this projected future.

Metabolising the possibility of civilisational catastrophe or collapse (Bendell, 2018) was rich, as this projection made up a large degree of my experience of bigger-than-self distress. I do not claim to be finished with metabolising this possible future, as my honest assessment at time of writing is that there is a lot of change still to happen if we are to avoid that kind of future. Metabolising it has helped me to connect with the importance and urgency of the situation: it is clarifying, focusing. But it no longer feels as heavy and cohesive in my system as it once did: there is less grasping to things as they are, more acceptance of impermanence, and more resolve to do what can be done to respond effectively now and in the future. I am less likely to get stuck in feelings and thoughts of hopelessness and despair, or anger at perceived inaction, and so have more freedom to respond with energy and attention that is no longer sunk into these emotions and mental patterns.

I experienced a kind of post-letting-go hope emerge – not for civilisation as a whole but for what me and people I am in relationship with might be able to do in response. This is not to say I have let go of all hope for civilisation: it is more that I have let go of attachment to things being a certain way, which has reduced my experience of bigger-than-self distress. I still want the best for humanity, and work towards making contributions such that we might

respond the most effective way possible, but there is an acceptance of the limitations of my and other's agency in this and of the possibility of catastrophe, collapse, or other undesirable and unpleasant outcomes. The metabolisation process has loosened the fixation on outcomes and emotional and interoceptive reactivity that co-emerged with these.

These are only two examples of projections that can be metabolised, and which I have spent time metabolising in my own wisdom development journey. It seems to be that metabolising them can unlock from the projections a kind of embodied wisdom and other useful psychological resources, such as positive affect, perspectival wisdom, and intellectual humility, that were previously tied up within the projections. Metabolising such projections, too, seems to unwind self-deception in the cognitive priors that are involved, and for excess emotional charge associated with that (e.g., excessive anger or hostility, debilitating hopelessness) can either be let go of or be transformed into more adaptive emotions and cognitive priors (e.g., calm resolve, metastable attunement between grief, self-care, and action towards valued goals).

Implications of Metabolising Projections: Metabolising Lack and Coming from a Desire to Serve the Whole

Hopefully it is possible to see how metabolising projections is one way that the pervasive lack that Loy (2002) posits being distributed throughout Western civilisation can be metabolised. As Loy posited, Western civilisation has come up with many projects to pursue to attempt to find the satisfaction he views as coming from the unconscious experience of lack at the root of many Westerners' experience. Many of these would count as projections: the idea of freedom, progress, the building of civil society, or the pursuit of means as the ends themselves in the form of money, individual wellbeing, or status. The point, as in

understandings of nonduality, is not to negate the projections or dualities, but to recognise their essential groundlessness, and that happiness will not come from these pursuits alone.

Western civilisation has arguably created a great many useful projections for organising society and making it a fairer and more just place, despite the many still existing injustices. Metabolising projections does not mean rejecting them: for example, just because money is a projection does not mean it is wise to attempt to live without it. However, it is possible to live without a blind attachment to money, or to not derive all of one's self-worth from being an effective activist or helper. These examples illustrate a more metastable grip on these aspects of bigger-than-self reality, and what a relationship with these aspects might look like that has metabolised the projections and lack associated with them.

What I would like to posit as being a key insight here is that it is the place we are coming from that makes the difference, rather than the projection of where we imagine we are going to. It is possible to hold projections, and even advocate strongly in favour of them, but do so lightly, with minimal attachment to the outcome. With this lighter hold, the projection (for example, a political point of view) does not cloud over background aspects of reality (for example, the relationship between you and the other person, or fact that we all live in a society together). It is possible to engage in bigger-than-self human systems based on projections without attaching to them: which offers the possibility for those systems to evolve and change in response to changing bigger-than-self conditions. For example, it is possible to engage in the economy or legal system as it currently exists and hold open the possibility of systemic change or evolution in these systems.

In my own journey of nondual enactive wisdom development, I have found that coming from an intention to serve the whole is a grounding and connecting intention to come from, and one that seems to emerge and align naturally with Self/presence/nonduality. This

beneficent intention needs no force or coercion to arise: it seems to emerge naturally from the metabolisation process. From this place, there is more capacity to find some optimal grip with one's socio-ecological niche and bigger-than-self reality in several different ways. Coming from wisdom, the decisions one makes will tend to be clearer: the bigger-than-self metabolisation process cannot prescribe outcomes for how to find this grip, but the embodied cognitive agent can do so in their real-world environment much more easily when coming from a place of Self/presence/nonduality.

Limitations and Future Directions

The principal limitations of the thesis stem from its nature as a largely theoretical thesis. While there was originally an empirical component to the thesis, the themes discussed within the completed thesis were broad-ranging and quite theoretical. This is both a strength and a weakness of the current thesis. It can be defended by pointing out that many of the areas discussed, including the broad area covered by the thesis question, are relatively novel, or at least represent relatively novel combinations of ideas within the clinical psychology literature. Moreover, these areas, as has been hopefully demonstrated, show signs of having important and growing clinical relevance in contemporary times, and are co-relevant to one another in ways that are plausibly highly useful and relevant in the context of clinical practice and bigger-than-self distress. What is needed now is a sense of clarity in direction as to how the ideas that have been discussed here might be taken forward and interact with the fields of study and research that they intersect with. The following section will attempt to break this down into four main areas: (1) methodological critiques of the enactive wisdom development / auto-ethnographic approach used in the current thesis; (2) the construct of bigger-than-self reality distress; (3) mindfulness training and MBIs, including MiCBT; and (4) nondual enactive wisdom development.

Methodological Critiques

The methodology used in the current thesis was unique and innovative, and I believe justified given the nature of the topic at hand. However, this does not save it from the need for critique. The nondual enactive wisdom development approach to auto-ethnographic research is, as a research method, highly idiosyncratic and therefore vulnerable to the biases of the researcher carrying it out: there is a sample size of one. For example, my most pressing bigger-than-self-related concern coming into the project was climate change, and as a result I have more knowledge in the area of environmental threats than with other aspects of the meta-crisis covered in Chapter 1. There was a wide range of material from the literature and a lot of personal work and transformation involved in this methodology and this was highly demanding on the researcher, so it was difficult to be an expert in all the areas of literature that were covered in the scope of the current thesis.

This first point relates to a second limitation with the methodology used here. The current thesis covered such a wide range of literature that it was difficult to do a systemic review of all the different areas covered. As a result, strategic reviews of the literature were used, with more of a sufficing strategy employed rather than exhaustive systemic reviews in many areas. As a counterpoint to this limitation, this is a potential strength of the enactive wisdom development approach to research: the researcher's wisdom-influenced relevance realisation guides the literature that is selected as relevant, enabling unique, thoughtful combinations of empirical findings and theory that reveal patterns not necessarily evident from systemic review. While this is obviously vulnerable to considerable bias, it may be an improvement on a systemic, objective review of literature in some cases: indeed this is the aim of orienting towards wisdom, to find a middle, alternative path between objective and subjective interpretations of phenomena that do not get lost in complete moral relativism.

This seems especially relevant in the area of embodied psychological interventions, where the amount and quality of integration of practice is significant in the understanding of the content of the literature being reviewed.

A third methodological limitation of the current thesis relates to the need for testing the validity of the insights and distinctions in the real world. Because of the combination of the nature of the doctoral research process being a prerequisite for registration as a practicing clinical psychologist, and time constraints in achieving conceptual clarity in this novel frontier of psychological research, it was not possible to practice as a clinical psychologist and carry out this research project at the same time, nor to test the theoretical perspectives developed here in the same project. This restricted the work that could be done to the author's own embodied cognitive system, and while there was no shortage of work to do in this domain, the insights generated in the current thesis will likely stand to benefit a lot from testing and developing them further with clients. It therefore seems likely that the distinctions made here, including language use, will continue to evolve as the approach is developed.

A fourth methodological limitation potentially doubles as a strength of the method: that wisdom-based insights can run ahead of evidence-based insights. For example, the notion that coming from Self/presence/nonduality will help one navigate and reduce their experience of bigger-than-self reality distress is a wisdom-based insight or distinction. It is not completely disconnected from the empirical literature as IFS is an evidence-based treatment, as are MBIs, which are related. But it does run ahead of the empirical literature in terms of making claims in areas that have not yet been exposed to empirical research. I posit that while this can certainly be seen as a limitation, it can also be seen as a positive feature: the kind of inductive relevance realisation process inherent in wisdom development can help

to scout out the way for other research methods to come later and test empirical claims that can be drawn out from the initial scouting.

In terms of future directions of the current research in a methodological sense, this approach stands to greatly benefit from future researchers grappling with similar issues and developing the theoretical understanding of the current approach as a research method. I described the territory the current thesis explored as a new frontier in terms of embodied embedded psychological responding to bigger-than-self reality and distress. This is particularly true for the deeper, more participatory and perspectival changes in one's embodied cognitive system, which are not necessarily affected or, more to the point, researched and talked about by established psychological interventions. As with any exploring of a new frontier, there is a lot to be discovered, classified, and understood more deeply. There are many contexts that the nondual enactive wisdom development approach could be applied within.

As one example, I speculate that such a metabolisation process as discussed within the current thesis might be helpful for those with highly anxious projections about present and future bigger-than-self reality that take the form of conspiracy theories. Evidence seems to suggest that subscribers to conspiracy theories tend to have psychological features such as lack of agency, high uncertainty and low feelings of control that may predispose them to believing in such theories (Erisen, 2022). It would be interesting to go through a metabolisation process with subscribers to conspiracy theories, to see whether such individuals' participatory grip on bigger-than-self reality might change, and whether the emotional patterns possibly underlying the narrative projections of what is going on in bigger-than-self reality shift and lead to belief change at the level of propositional knowing.

One challenge facing future researchers in this area is that once one brings in the understanding of cognition as being enacted by not just the brain but by a brain-body-environment system that is influenced as well by culture, it is difficult to use conventional methods of psychological research, particularly post-positivistic qualitative methods to tease out and understand these interdependencies. The area of wisdom development within bigger-than-self distress potentially compounds this problem, as what is considered wise goes beyond mere objective facts to interpretations and moral responses to those facts, which involves participatory and perspectival knowing. In all, there are considerable challenges in subjecting this area to robust empirical research, but the importance of the subject matter potentially makes it a worthwhile pursuit nonetheless.

The Bigger-than-Self Distress Construct

The construct of bigger-than-self distress was put forward as a term that is purporting to describe a still-emerging cluster of psychological distress that contains elements that relate to bigger-than-self reality and bigger-than-self issues. What perhaps would have been ideal had the scope of the research project been larger would have been to undertake a review of the literature and attempt to create a psychometric assessment tool for assessing forms of distress that are potentially relevant to this proposed construct. However, on reflection, the emergent nature of this field might have rendered this approach premature and unsuccessful for want of more empirical research. It is only recently that the constructs of ecological grief and eco-anxiety have started to be discussed in news media and subsequently in the empirical literature.

There is much work to be done in investigating the prevalence of these and related forms of distress, and in determining clusters or syndromes which are statistically and meaningfully distinct from one another. In the absence of this work being done, the construct of bigger-

than-self reality distress has appeared to be a useful one for this thesis. It is yet to be determined whether this will be found to have face validity with clients, or construct validity in statistical modelling studies. Future research (e.g. interpretative phenomenological analysis, discourse analysis of individuals reporting distress in relation to climate change or bigger-than-self reality issues, or quantitative survey-based research into clusters of distress related to eco anxiety or other relevant bigger-than-self distress syndromes) could address this and gather more data from relevant populations, both qualitatively and quantitatively, in order to move towards more clarity and robustness of constructs that will benefit clinicians and researchers alike in this emerging field. The aim of such research would be to investigate terms that have not only face validity in describing the phenomena in question, but also convergent and divergent validity – as well as clinical utility in leading to a more optimal grip on the phenomenon for individuals experiencing it.

As a contribution to this future research, this thesis would suggest that bigger-than-self reality distress be explored as a construct of non-pathological psychological distress – and that it may contain both pathological, neutral, and actively healthy or anti-pathological forms of distress. It would be unfortunate and self-defeating to see individuals who are distressed about the future of society and the environment pathologised, when all evidence suggests there is legitimate reason to feel such distress and that the distress itself can be a legitimate catalyst for change. I would also suggest that the construct be explored in a cross-disciplinary way. This thesis has examined it mostly from the perspective of clinical psychology, reflecting the nature of the thesis and the perspective of the author, but it would be expected that such a construct would benefit from dialogue between different traditions inside and outside of psychology. This might include, for example, radically embodied cognitive science, community psychology, environmental psychology, social psychology, ecopsychology, and

potentially public mental health and philosophy. Each of these disciplines, alongside clinical psychology, would potentially offer valuable perspectives on such a construct, and afford broader and more complete understandings that would benefit researchers, clinicians, and ultimately the individuals and communities who experience such distress.

Mindfulness training, MBIs, and MiCBT

Much attention in the first half of the thesis focused on mindfulness training, MBIs, and MiCBT in the context of assisting clients to respond to bigger-than-self reality distress. This discussion ultimately informed the progression to the psychological interventions discussed in the second half of the thesis. In all, MiCBT and other approaches like it were placed, within the broader framework of the nondual enactive wisdom development model that was articulated, as specific manualised or protocol-driven treatments that could be used flexibly and appropriately within the broader context of an individual's unfolding nondual enactive wisdom development journey. Despite the focus within the current thesis, it is still anticipated that MBIs and third wave cognitive behavioural interventions within clinical psychology will have a lot to offer to clients who are experiencing bigger-than-self distress. It is highly unlikely that there will be just one intervention or type of intervention that will be valuable in assisting clients with such issues.

In terms of the discussion on mindfulness training, it is anticipated to continue to be fruitful for there to be a dialogue between the literature on MBIs, 4E cognition, bigger-than-self distress, and nondual wisdom development within cognitive science. Unresolved questions remain about possible differences in efficacy between FG- and SG-MBIs, questions that in some respects can only be answered with the benefit of empirical data. Future researchers could focus their efforts in these areas and identify helpful mechanisms and specific interventions (e.g., novel SG-MBIS or psychological interventions that have been

adapted from wisdom traditions) that might be applicable to different forms of bigger-than-self reality distress.

MiCBT as an approach would be anticipated to continue to be relevant and useful. Its focus on the development of interoceptive awareness, non-reactivity, and non-identification would be anticipated to be relevant strengths as an approach, and for clients who might benefit from internalising those kinds of external sage systems to be recommended to MiCBT-trained therapists. Of course, as a trans-diagnostic treatment approach, it would be anticipated to be useful for a broad range of clients, albeit perhaps not with the flexibility afforded by the more universalistic wisdom development model and treatment approaches developed from that or similar frameworks that was ultimately argued for within the current thesis.

Nondual Enactive Wisdom Development and Related Psychological Interventions for Bigger-than-Self Distress

The nondual enactive wisdom development approach, presented here as an embodied developmental journey for clinicians to undergo to gain capacity in assisting clients experiencing bigger-than-self distress, now needs to undergo empirical research to establish whether it is safe and efficacious. It will most likely need to undergo theoretical development and refinement as such clinicians come into contact with clients. Given the nature of the approach and its relatively early stage of development, it would make sense to use research designs that reflect this reality. It would be anticipated that both qualitative and quantitative research designs could benefit the development of this pedagogy and its use with clients.

In the quantitative realm, single-case experimental designs such as the one employed in the current thesis would make sense as pilot studies, before reaching the kind of conceptual clarity that could conceivably lead to large randomised controlled trials being feasible. In the

qualitative realm, it could be an interesting approach to investigate for rich idiosyncratic data, perhaps lending itself to interpretative phenomenological analysis, or further enactivist / auto-ethnographic methodological blends and innovations. This rich qualitative data could then be used to give insights into the approach and its implementation that might be missed by quantitative approaches. In these early stages of its development, and in the early stages of treatments for bigger-than-self reality distress or related difficulties, qualitative data could potentially give insight into the idiosyncrasies of such individuals' experience and what effective wisdom development looks like across different socio-ecological contexts and in different cultures.

Another possible avenue for future research related to the approaches discussed in the current thesis is into the area of non-clinical settings. This could link in with the cross-disciplinary approach recommended above for research into bigger-than-self reality distress. For example, community psychology perspectives could be employed to investigate the use of IFS for bigger-than-self distress in community settings, potentially implemented in groups. The potential of such groups being peer-led could be explored, with psychologists playing a role in initiating, training, and supporting community leaders to facilitate or co-facilitate groups within community contexts (practitioners with less intensive training pathways are eligible to be trained in the IFS approach).

The interventions recommended within the current thesis are such that they could be used in one-on-one clinician-client interactions or practiced within groups, and community-led, clinician supported approaches could have numerous advantages, not only in efficiency of resources, but in supporting community resilience, mental wellbeing, and in generating and supporting community-led approaches to mitigating and adapting to bigger-than-self issues. Quantitative and qualitative research could help to inform this process, evaluate it for

safety and efficacy, generate insights into how approaches such as these could be used in community settings, and clarify complexities and idiosyncrasies of implementing these approaches in community settings.

Summary of Limitations and Future Directions

There are several promising research avenues stemming from the material covered in this thesis. Given the early stages of research into bigger-than-self distress and related constructs, there is a lot that is not known. Given the urgency of the bigger-than-self issues facing clients and humanity at large, it seems likely that there will be growing demand for trustworthy empirical knowledge in this area. This thesis has hopefully provided a useful theoretical contribution to an emerging cross-disciplinary field, and especially to the kind of contribution that clinical psychology and mental health professionals might make to this budding field and to clients experiencing such distress. What is needed now is more empirical research, qualitative and quantitative, both into the constructs involved as well as into potentially useful approaches to intervention both in clinical and community settings.

There is reason to believe that these approaches may represent a creative and novel contribution to emerging fields that are highly relevant to both individual mental health and bigger-than-self phenomena within society. They potentially represent a pathway to an open-ended, self-developing method of wisdom development that can lead to more insights into wise, in-context responses that are optimally and, in a self-organising manner, increasingly well-adapted to contemporary times by virtue of their design. This optimism should be tempered by the need for more empirical research and likely theoretical development before strong conclusions are drawn as to the applicability and efficacy of such approaches. Overall, there is reason to believe that the material discussed in this thesis could represent valuable contributions to emerging fields of research and practice, but more work needs to be done to

develop and empirically test these contributions, and it is to this that attention should now turn.

Nondual Enactive Wisdom Development as a Logical Next Evolution of Cognitive Behavioural Tradition

In this next and final section, I want to discuss a special case of a potential future direction for this research. What I hope that this thesis can be a contribution towards is an expanded role for psychology in helping humanity to respond to the meta-crisis involving not only our whole civilisation but the biosphere underpinning it. As I have argued, this meta-crisis can be understood as having psycho-cultural roots, and this understanding of the situation expands the kinds of actions that are fitting responses to it. While technological, political, and economic actions are certainly required, there is a role for psychology in helping individuals to change their own embodied embedded cognitive systems to get more of a wise grip on important aspects of the meta-crisis that are relevant to them and find a way to contribute effectively to doing so.

In the discussions of the context within which these contributions might occur, the term developmental niche construction was introduced. If an individual can understand their own socio-ecological niche(s), whether that be their local regional council, a sub-field of their professional vocation, or their own children and family, and find a way to contribute to that niche such that its cultural and technological artefacts confer a more optimal grip on responding to the meta-crisis for current and future generations, then that will have been a worthy contribution. In this vein, I now briefly want to expand from the discussion of the principal work of this thesis to consider how this work might contribute to the broader socio-ecological niche it sits within, namely that of clinical psychology and related fields.

Enactive Wisdom Development as Logical Next Evolution of Cognitive Behavioural Tradition

I have presented the work in this thesis as being in relationship with and a part of the cognitive behavioural tradition in psychology. As I have attempted to show, the possibility of nondual enactive wisdom development is consistent with existing and historical trends in the tradition of cognitive behavioural interventions and empirical science. It is based on an understanding of cognition that has evolved since the 1970s (e.g., Varela, 1970) and 1980s (e.g., Maturana & Varela, 1980) in the first and second waves of the cognitive behavioural tradition gained initial momentum and traction. The nondual enactive wisdom development approach proposed here builds on advances made in the third wave of mindfulness and acceptance-based approaches that have added to the scope and efficacy of evidence-based cognitive behavioural interventions.

However, the nondual enactive wisdom development approach discussed in the current thesis goes beyond these, too. It pays attention to the way that society and the biosphere which it resides within have developed in recent decades, and the need for a reconciliation between these socio-ecological realities and human behaviour, culture, and psychology. It makes use of recently developed psychological interventions that are aligned with the self-organising, enactive, predictive processing accounts of cognition reviewed in the current thesis. It invokes not just rationality but wisdom, which both links it with the historical and philosophical roots of the cognitive behavioural tradition as well as expanding the range and depth of historical and philosophical psychological insights that the future cognitive behavioural tradition might draw from.

Overall, what I have attempted to do is not only argue that psychology can play an important role in society the 21st Century but also show how one avenue to do so, within the cognitive behavioural tradition, is already well within reach and requires only the willingness to enact and develop such new directions, in both applied and empirical ways. Whether this

develops in this way, of course, remains to be seen. No one can control such outcomes. What I have tried to focus on in this thesis is to articulate a path, aligned with currently existing trends, which could contribute towards psychology making coherent and useful contributions towards humanity's response to the meta-crisis that we now find ourselves within.

Appendix 1:

Research Case Study: MiCBT, Positive Clinical Psychology, and Sensing and Responding Therapy: Towards a new framework for an interoception-informed eclectic approach to psychological interventions

A case study presented in partial fulfilment of

The Degree of

Doctorate of Clinical Psychology

Nick Laurence

2017

This case study represents the work of Nick Laurence during his internship at Taranaki District Health Board in New Plymouth in 2017.

Candidate: Nick Laurence ……. Date: ……

Supervisor: Andrew Hignett ……. Date: ……

This research case study attempts to synthesise research into mindfulness and interoception, and its application to clinical psychology. It builds on work done in the author's doctoral thesis, which investigated Mindfulness-integrated Cognitive Behavioural Therapy (MiCBT; Cayoun, 2011) in the treatment of general psychological distress. The study

undertaken as part of the doctorate investigated psychological distress symptoms but also took measures of wellbeing, as the author sought to integrate perspectives from positive psychology into clinical treatment. Specifically, there was a focus on building lasting wellbeing and not merely on reducing distress, even in clients who presented with clinical levels of psychological distress.

What is presented here is not intended to be viewed as a finished product, but rather as a work in progress, which the author intends to continue to develop in the future. The paper outlines the case for MiCBT to be understood as a positive clinical psychology intervention, and proposes a new framework for integrating insights from MiCBT into an eclectic intervention approach based on the operationalised principles of sensing and responding. As well as describing MiCBT and the co-emergence model of reinforcement upon which it is based, the paper proposes some additions to MiCBT in clinical practice that are aligned with it being viewed as a positive clinical psychological intervention. Literature on interoception and mindful emotion regulation is reviewed that is consistent with the co-emergence model of reinforcement. These evidence and theory-based additions are synthesised into a framework for a more eclectic approach to therapy that integrates insights from MiCBT, literature on interoception and mindful emotion regulation, positive clinical psychology, mental contrasting, and operationalises this into the terms “sensing” and “responding”. The sensing and responding framework is presented as a client-friendly operationalisation of the reviewed literature, and is combined with the upward spiral metaphor to present a framework for guiding psychological interventions.

Positive Clinical Psychology

MiCBT can be understood as a positive clinical psychology intervention. Positive clinical psychology focuses just as much on both understanding and improving upon states of

subjective wellbeing as it focuses on the alleviation of mental distress and maladaptive functioning (Maddux, 2008; Wood & Tarrier, 2010). Proponents of positive clinical psychology argue that clinical psychology would benefit from focusing on positive characteristics for several reasons, including improved ability to alleviate distress, enhance wellbeing, and prevent the development of clinical disorders in clients (Wood & Tarrier, 2010). MiCBT can be understood as a positive clinical psychology intervention because of its dual focus: first, the co-emergent model of reinforcement upon which it is based emphasises a rebalancing of the brain towards a state of equilibrium that is viewed as optimal for mental wellbeing: that is, it is *oriented towards a state of wellbeing*; second, it focuses on populations experiencing clinical levels of distress, and targets the maintaining factors of distress in its methods, e.g. interoceptive exposure to avoided situations related to the area of difficulty.

Mindfulness-integrated Cognitive Behavioural Therapy

Mindfulness-integrated Cognitive Behavioural Therapy (MiCBT; Cayoun, 2011) is a transdiagnostic treatment approach that integrates mindfulness meditation with cognitive behavioural therapy techniques such as exposure and cognitive restructuring. Treatment progresses in four stages, from the personal stage, to exposure, to interpersonal exposure, to the empathy stage. Each stage builds on the last. In the first stage, the focus is on building personal mindfulness skills, and in stages two and three, the mindfulness skills are directed towards exposure to avoided life situations, which are held to be maintaining the current sense of distress. In the final stage, participants are taught skills for increasing empathy and building positive relationships with others, which is for the purpose of building lasting wellbeing (Cayoun, 2015). In this and other ways, MiCBT is an intervention that focuses not

only on reduction of clinical level psychological distress but also seeks to give participants skills to build wellbeing and live a valued life.

Co-Emergent Model of Reinforcement

MiCBT is based upon a five-part model of reinforcement, known as the "co-emergent model of reinforcement" (Cayoun, 2011). According to this model, stimuli are perceived by the sensory organs in the body or through memory, given an appraisal or judgment of meaning through the evaluative, thinking part of the brain, which produces simultaneous interoception, a co-emergent body sensation. The reaction is then prescribed by the type and intensity of the sensation felt consciously or subconsciously in the body. The co-emergent model of reinforcement holds that resilience is a by-product of the system in equilibrium – and that, conversely, psychological problems arise when the system is out of balance (Cayoun, 2011).

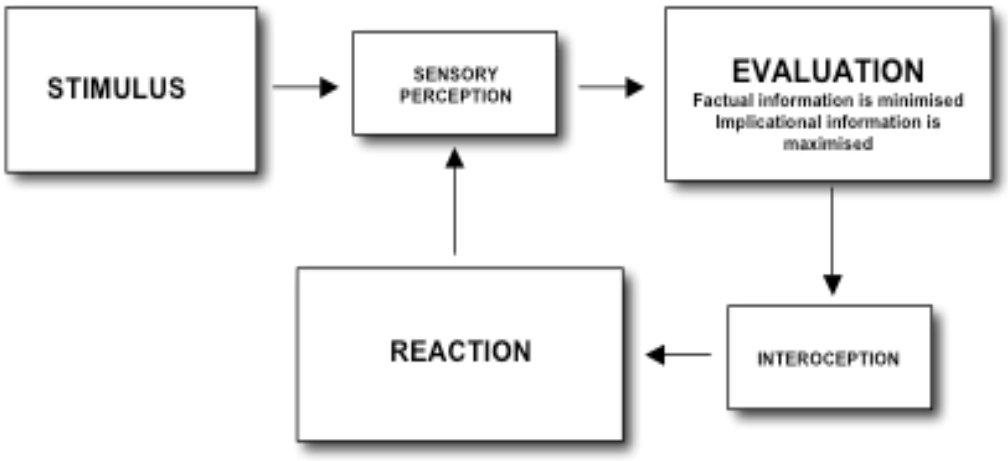

Figure 1. Components of the co-emergence model of reinforcement during disequilibrium in information processing (from Cayoun, 2011).

Most commonly in people with psychological problems, as shown in Figure 1, the system is out of equilibrium such that the evaluative and reactive parts of the system are overemphasized while the sensory and interoceptive parts of the system are underemphasized, if not neglected completely (Cayoun, 2011). In MiCBT, the main purpose of mindfulness training is to help restore balance in the system, which enables the trainee to notice experiences occurring in the present moment with less judgement (e.g., less catastrophic thoughts) and less reactivity (less need to avoid discomfort). The integration of mindfulness training with CBT is believed to increase the individual's overall resilience by restoring balance to the system, rather than limiting the intervention to a specific disorder (Cayoun, 2011). When the system is in balance, there is a balance of attentional resources allocated between the evaluative and reactive components and the and sensory and interoceptive components of the brain.

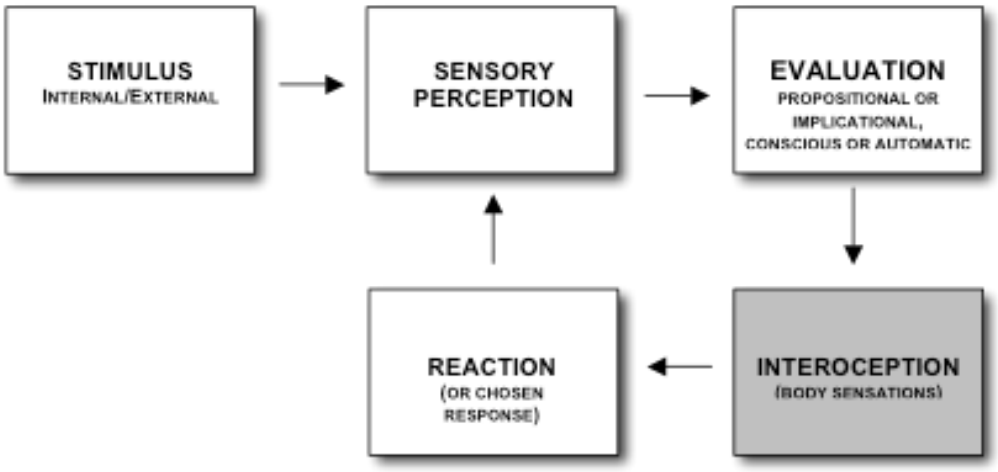

Figure 2. Components of the co-emergence model of reinforcement during equilibrium in information processing (from Cayoun, 2011).

Deep Operant Conditioning

According to the co-emergent model of reinforcement (Cayoun, 2011), interoceptive sensations influence behaviour through operant conditioning processes. Interoceptive sensations are seen as the key component of experience from which all reactions or responses are prescribed. The emphasis on interoceptive sensations acting as deep-level operants has profound implications for treatment, as a major goal of treatment becomes working with interoceptive sensations that are held to reinforce behaviour. Mindfulness training is used to increase awareness and neutralise reactivity to interoceptive conditioning as it arises, which helps with emotion regulation and facilitates the deconditioning of the maintaining factors of the presenting difficulties. As a consequence of this, the origin of the distress is not held to be as important as learning skills to deal skilfully with the present moment – for example, with clients who are experiencing posttraumatic stress disorder (PTSD) symptoms, it is not necessarily necessary to go over a trauma narrative from start to finish, if the client can learn to deal skilfully with re-experiencing, avoidance, and other PTSD-related symptoms as they come up in the present moment, in day-to-day life and in meditation practice. For clients with depression, it is not necessarily important to explore and

restructure the cognitive beliefs associated with low mood, if the interoceptive conditioning can be neutralised and the mind rebalanced in such a way that attention is reallocated towards sensory and interoceptive rather than evaluative components. As we will see, there is emerging evidence suggesting mindful emotion regulation that emphasises interoceptive processing could become a central strategy for reducing distress and increasing wellbeing in future clinical psychological interventions.

Evidence from neuroscience of mindfulness and interoception

A number of studies point to the importance of interoceptive conditioning in regulating emotions and predicting recovery from mental illness. Farb et al. (2007) found evidence for neural modes that distinguish between self-referential and experiential-focused processing. When engaging in experiential rather than narrative processing, participants who had completed eight weeks of mindfulness training displayed reduced activity in cortical midline structures such as the medial Prefrontal Cortex (mPFC) and increased activity in lateral regions such as the insula, somatosensory cortex, and parts of the parietal lobe (Farb et al., 2007). In another study, Farb et al. (2010) found a similar effect in the neural expression of sadness: relative to wait-list controls, participants who had completed eight weeks' mindfulness training displayed less activity in cortical midline structures and less deactivation of lateral regions such as the right insula and somatosensory cortex when experiencing sadness. Participants who completed mindfulness training reported similar levels of self-reported sadness but had lower self-reported depression scores (Farb et al., 2010). Interestingly, depression inventory scores correlated with greater reductions in right insula activity, suggesting that the insula, which is associated with interoceptive awareness, is implicated in the expression of mood (Farb et al., 2010).

Ives-Deliperi, Solms, & Meintjes (2011) subjected experienced mindfulness meditators to fMRI during a state mindfulness meditation task. In contrast to Farb et al. (2007, 2010), Ives-Deliperi et al. found decreased activity in areas associated with interoception (the anterior insula and right mPFC) when participants were engaged in the experimental condition. At first glance, these results may seem to contradict with the findings of Farb et al. (2007, 2010), which found increased activity in regions associated with interoception. As Ives-Deliperi et al. suggest, this may be explained by the difference in experimental tasks: while participants in the Farb et al. (2007; 2010) studies were asked to engage in self-referential processing (either from a narrative or experiential focus), participants in the Ives-Deliperi study engaged in mindfulness meditation alone, which did not require any self-referential processing. These findings are consistent with the rationale for mindfulness training: that formal meditation practice is to develop skills in de-identifying from a permanent sense of self (as shown by reduced activity level in Ives-Deliperi et al. (2011), skills which can then be utilised in daily life to de-identify from unhelpful narratives and instead focus on the non-elaborative, neutrally valenced sensory experience (as shown by reduced deactivation in experiential versus narrative conditions in Farb et al. (2007; 2010).

Lutz et al. (2014) carried out an fMRI study of mindfulness and emotion regulation. They found that trait mindfulness correlated negatively with activation in prefrontal and right insula regions for participants anticipating a negative emotional stimulus. This finding is consistent with the notion that individuals higher in trait mindfulness require less neurological resources to regulate negative emotions.

Farb et al. (2015) offer a predictive coding model to explain how interoception is implicated in clinical disorders and learning. In this model, the difference between how the system predicts a phenomenon will feel in the body and how it feels once it has come to pass

provides motivation for moving towards homeostasis. Farb et al. posit that the brain produces what is referred to as a simulation map, which is an assimilation of primary sensory inputs from the central nervous system, through primary sensory regions in the brain, to the higher level simulation map that is an approximation of the sum of recent inputs. The authors discuss how regulation can then proceed in two broad paths: active or perceptual inference. In the active path, the difference between the predicted and actual interoceptive signal is seen as problematic and changes in the environment are sought – for example, one reaches to turn the air conditioning or heat pump on when they notice they are warmer or cooler than expected. With perceptual inference, the difference is neutralised by a change in perceptual expectations – that is, one learns to adjust their internal perception to be able to accommodate the difference between predicted and actual room temperature.

When applied to emotional regulation, the two strategies of active and perceptual inference have similarities to Hayes et al. (1996) conceptualisation of experiential avoidance as a functional dimensional approach to behavioural disorders, and the contrast with acceptance in Acceptance and Commitment Therapy. A difference with perceptual inference as a strategy is that it is only through this pathway that insight can be developed into the thoughts and body sensations that arise in response to stimuli (Farb et al., 2015). With active inference, the person changes the external situation rather than tolerating the discomfort of the difference between predicted and actual body sensations, which prevents learning into the nature of the relationship between interoceptive sensations, thoughts, and behaviours.

Interoceptive Sensations, Ethics and Wellbeing

Mindfulness is often presented in western psychological literature as little more than values neutral attention/metacognitive training, which is not how it was used in its original Buddhist context, where it is seen as “a special kind of awareness… that is continuously

conditioned by equanimity" (Grossman, 2015, p. 18), which refers to the tendency to not react to or identify with mental and emotional stimuli that arise, stemming from a deepening awareness of the impermanence of these phenomena.

Grossman advocates for a definition of mindfulness that is more consistent with the context it has traditionally been couched within, which includes a strong emphasis on ethics, and links ethics with embodied interoceptive experience. He offers a simple explanation of ethics in Buddhism, which "is immersed in and emerges from considering the simple experience of being alive in the world: actions and thoughts meant to cause harm are considered unwholesome; whereas conduct and mental activity meant to be benevolent or helpful are, on the other hand, considered wholesome" (Grossman, p. 18). This is contrasted with a dogmatic or religiously prescribed set of ethics as is often seen in Western cultures. Presented this way, with an emphasis on reduction of harm and cultivation of pro-sociality in both thought and action, ethics can be added to mindfulness based interventions without requiring an explicit reference to Buddhism or being couched within a Buddhist worldview.

Grossman (2015) further describes how mindfulness itself helps to bring an embodied quality to ethical life. That is, through practice, the participant is invited to pay attention to body sensations that are present with different mental activity, including that which arises with wholesome or unwholesome intentions. Participants can experiment with bringing a kinder, less judgmental attitude or quality of attention to the target of meditation, and may experience how this creates an increased likelihood of experiencing moments of serenity, calm, or peace. Over time, and with regular practice, Grossman describes how mindfulness practitioners learn an association between wholesome attitudes such as kindness, tolerance, equanimity, courage, nonattachment, and felt internal states of "a special state of eudaimonia, which for many people may have never or only rarely experienced before" (p.

21). In this way, Grossman describes how mindfulness practice itself is inextricably related to ethics, through the lived experience of how holding ethical intentions and carrying out ethical actions impact on subjectively felt states in the body. This is consistent with the co-emergence model of reinforcement and with clinical practice in MiCBT (e.g., Cayoun, 2017).

Cayoun (2017) outlines three reasons for the integration of ethics into MiCBT and MBIs generally: relapse prevention; cultivation of joy and wellbeing; and the cultivation of compassion and a reduction in self-referential processing. Noting that feelings of self-hatred or social disconnection often precipitate a relapse into states of mental distress, Cayoun proposes that commitment to ethical behaviour can protect people from falling into these states. Ethical behaviour can be viewed as a hook to mindfulness, as harmful behaviour seen through the lens of the co-emergence model of reinforcement is always a reaction to unpleasant or distressing interoceptive sensations. Thus mindfulness can be used to detect unpleasant or distressing interoceptive sensations at early stages and prevent reactivity to them, thus preventing potentially harmful behaviour such as shouting at a colleague. In this way ethical behaviour helps to protect against thoughts and behaviours that are destructive to relationships or that could lead to guilt and self-hatred.

The second reason Cayoun (2017) provides for why ethical behaviour is clinically useful is in the cultivation of compassion. Self-compassion has been shown to have a range of mental health and wellbeing benefits (e.g., Baer, Lykins, & Peters, 2012; Neff, Kirkpatrick, & Rude, 2007), and can be boosted through loving-kindness meditation (e.g., Bankard, 2015; Boellinghaus, Jones, & Hutton, 2014), which is traditionally practiced in combination with mindfulness training. However, the generation of warm and friendly feelings towards others can become hollow if not complemented with compassionately motivated behaviour. Cayoun presents commitment to ethical action as the most plausible way to train our compassion on

a daily basis. This leads to less attention focused towards the self and self-referential processing, because participants train themselves to think of the impact of their behaviour on others, and it is incongruent to think of others and ruminate on the self at the same time. Over time, attentional resources are shifted away from self-referential processing through compassion training combined with daily ethical behaviour.

The third and final reason Cayoun (2017) cites for ethical behaviour being included in clinical practice is for the cultivation of joy and wellbeing. He describes how he has seen the practice of ethical behaviour transform people's locus of self-care from external to internal, or from seeking praise from outside sources to having an internal sense of worth that comes from living a more ethical life. Cayoun discusses how this in turn promotes self-efficacy, as clients learn that they are capable of ethical behaviour, and make what are often quite significant personal life changes, such as changing relationships, jobs, or initiating new more ethical ways of living, as Cayoun has observed in Stage Four of MiCBT. Cayoun describes how as people observe things change in their life, they realise that their unhappiness was based on certain conditions that it is possible to outgrow, and that an awareness of ethics is essential to this process of maturation.

Moving Towards Wellbeing: An Upward Spiral Process

The process of maturation into states of joy and wellbeing described by Cayoun (2017) is consistent with the focus of positive clinical psychology on helping clients move towards states of wellbeing and not only away from states of distress. Cayoun's clinical observations appear to be consistent with an upward spiral process of the type that is described by Garland et al. (2010), who introduce the idea of mutually reinforcing changes in cognitions and behaviour that instigate and propagate a positive feedback loop in the direction of wellbeing. Garland et al. (2010) linked the practices of mindfulness meditation and loving-

kindness meditation with Fredrickson's (1998) broaden and build theory of positive emotions and described an upward spiral process by which these practices might unlock a mutually reinforcing cycle of growth in personal resources and social connectedness. A preliminary study of an 8-week MBI using autoregressive latent trajectory modelling found results consistent with an upward spiral process, with earlier state mindfulness scores significantly predicting later use of positive reappraisal strategies (Garland et al., 2016). Further studies are needed, and other variables should be investigated, such as interoceptive awareness, equanimity, and commitment to ethical challenges, to determine whether factors other than state mindfulness and positive reappraisal may act in mutually reinforcing feedback loops, but the dynamic of the upward spiral has the potential to be a useful metaphor for psychoeducational use with clients.

Mental Contrasting

The concept of mental contrasting is also useful for psychoeducation with clients and helps to tie together what has been discussed so far with regards to positive clinical psychological interventions. Mental contrasting is a behavioural change strategy that has been shown to be effective in generating goal-oriented behaviour and goal attainment (Fritzsche et al., 2016; Kappes & Oettingen, 2014). As a behavioural change strategy it is comprised of two components. First, the participant engages in visualisation of their desired outcome or end goal. Second, the person imagines any potential obstacles that may present themselves in pursuit of that goal, and plan for how these obstacles will be dealt with (Oettingen, 2000, 2012). Oettingen (2012) discusses evidence showing that fantasising about a positive future without taking into account obstacles is counterproductive: it negatively impacts on motivation, displayed goal-oriented behaviour, and mental health outcomes over

time. In contrast, when mental contrasting strategies are employed, Oettingen (2012) reviews literature showing that motivation and displayed goal-oriented behaviour increases.

It is important for any positive clinical psychological intervention to not just orientate towards a positive desired state (i.e. wellbeing), but also incorporate an awareness of obstacles along the way and a method or methods to deal successfully with these obstacles. MiCBT does this: it articulates that the desired state is one where evaluative processing is in balance with sensory processing, and then offers mindfulness training as a method of systematically neutralising any interoceptive sensations and reactivity that are obstacles towards creating this balance. While MiCBT is one existing intervention that can be viewed through the lens of positive clinical psychology, the literature discussed so far points towards the possibility of a novel framework aligned with a more eclectic approach to positive clinical psychological intervention. This framework, which is the focus of the following section, puts the advances in the science of interoception and mindful emotion regulation at the centre, and attempts to operationalise these advances in such a way as to be broadly accessible to clients.

Towards an Integrative Model

As has been shown, there is considerable evidence to suggest that interoception is an important construct to integrate into clinical practice. When taken alongside its often central importance in contemplative traditions over a 2500 year period, interoception seems to offer itself as a likely candidate for becoming a central focus of therapy in a similar fashion to how cognitions became a central focus in the advent of cognitive therapy from the early 1980s. What is needed is a framework that allows for the central importance of interoceptive sensations to be flexibly applied into clinical practice, much in the way the five-part model allowed for the flexible application of cognitions, feelings, and behaviours to be applied in

cognitive behavioural therapy, or the hexaflex model allowed values, self-as-context, and other important constructs from contextual behavioural science to be applied into Acceptance and Commitment Therapy (ACT).

This paper proposes an integrative, inclusive "Upward Spiral / Sense and Respond" framework that builds upon second wave (cognitive-behavioural) and third wave (acceptance-based) approaches to therapy. It draws on Cayoun's (2011) co-emergent model to assist in operationalising literature from the fields of interoception and mindful emotion regulation. The framework uses a 'toolbox' approach, whereby tools from other evidence-based approaches (such as CBT, ACT, DBT, MiCBT, etc) can be used within the overarching framework. Disorder-specific models and information (for example, Ehlers and Clark's (2000) cognitive model of PTSD) or can also be integrated into the framework to tailor the intervention more specifically to a client presenting with a certain set of difficulties.

The Sense and Respond / Upward Spiral Framework

"Sense and respond" refers to the two major tasks for the client to begin to master during therapy. "Upward spiral" refers to the dynamic and interdependent nature of how the changes are conceptualised in sensing and responding therapy, and how the changes are expected to lead to both a broadening and building effect.

The upward spiral model is used in tandem with mental contrasting principles to help set goals with the client and explain how obstacles will be overcome during the course of the intervention. The goals are initially set with the client's valued life direction and wellbeing in mind, and then obstacles to those goals are reviewed, and psychoeducation around how those obstacles will be overcome is delivered. Because the changes that take place are to the interoceptive sensations that act as deep operants and condition behaviour, much of the client's former behaviour is de-conditioned over the course of mindfulness training. This

paves the way for new thoughts and behaviours to be initiated and reinforced, which are more in line with traditional notions of wholesomeness: that is, thoughts and behaviours that prevent harm and increase benefit to self and others. These changes are not independent of each other but instead seen to be mutually and serially reinforcing in an upward spiral fashion, and are unlocked during the course of engagement in therapy and the use of therapeutic tools and practices.

As Grossman (2015) puts forward, mindfulness practice naturally engenders and reinforces wholesome attitudes through discovery that attitudes such as kindness, courage, and equanimity co-emerge with pleasant, calm, peaceful sensations in the body. Cayoun (2017) emphasises that these changes in cognition and interoception are best reinforced through daily ethical behaviour, which helps to prevent relapse, foster compassion, and cultivate an internal sense of joy and wellbeing that flow into interactions with others and the world. In this way, changes that begin with internal practice of mindfulness and interoceptive skills reinforce each other to create changes in social relationships, so the effects of the practice can be seen to follow a broadening effect.

Sensing and responding is the process that is carried out by both client and therapist in order to progress along the upward spiral. Sensing refers to paying attention to internal and external events (cognitions and interoceptive activity) in the present moment with an attitude of equanimity. When sensing into an event, the person's mind is focused on the felt experience of that event – i.e. "when xx said yy, I noticed I felt zz in the pit of my stomach", or "when I had the thought xx, I noticed it co-emerged with the body sensation yy in the chest area". Interacting with internal experience in this way helps to reduce reactivity associated with the internal experience, and calm the mind.

Sensing can refer to an informal, moment-by-moment process of mindful emotion regulation that occurs throughout daily life, but also represents a skill that can be cultivated through formal contemplative practice such as mindfulness meditation, especially body scanning meditation. For simplicity's sake, sensing is represented by one word in the framework, but sensing represents an umbrella of tools that help develop the skill that is encompassed by the word, which may take several weeks, months, or years of practice. In contemplative traditions entire retreats or lifetimes are dedicated to the development of interoceptive awareness and nonreactivity, or what is referred to here as "sensing", however this is not necessary to obtain benefits in clinical symptoms and wellbeing. For clients, sensing in daily life provides a two-fold benefit: (1) it allows them to regulate their emotions by experiencing sensations in the body, and (2) it builds metacognitive awareness of current thoughts, feelings, and contextual variables, and then allows for the client to choose a response from a centred, emotionally stable state rather than a reactive state.

Responding is akin to acting with awareness, and also to cognitive flexibility. It comes after sensing into the internal and external events that co-emerge with an event. Clients are encouraged to respond to the situation in accordance with their contextual values. Contextual values are informed by sensing into interoceptive sensations: "what feels like the best decision to in this moment?" This means valuing interoceptive sensations as valuable sources of information, just as thoughts and contextual factors from the environment are important to take into account. For example, a client may have a moment of sensing in the middle of a heated argument with a partner. They might sense heat and agitation rising up from their chest through their shoulders, neck and head, and as they sense this they become aware of how their emotional reactivity has been guiding their behaviour, and become aware of thoughts of wanting to be right and that they were about to say something they might

regret. The client can now respond from this more mindful state, taking into account their own interoceptive state, the thoughts that are going through their mind, and information from the environment – their partner's emotional state (which the client can estimate from the partner's body language, vocal tone, and the content of their speech). The client might decide (respond) in this moment to de-escalate the conflict, or to negotiate with the partner to come back to it after they have had a chance to calm down.

Clients' responding skills are honed throughout therapy. If the client senses that they are distressed or emotionally dysregulated, then they are encouraged to use tools to help with emotion regulation – such as interoceptive exposure, or mindfulness, or diaphragmatic breathing. Oftentimes the most useful response will be to practice sensing skills in order to be better able to de-identify from the interoceptive sensations that are reinforcing the distress. However, once basic sensing skills have been developed, the most useful response may require behavioural changes, in line with valued living or ethical behaviour. If the client senses that they are experiencing discomfort related to their relationship to another person or another person's behaviour, then the client is encouraged to use tools to help with interpersonal relationships – such as interpersonal exposure, assertive communication, scheduling pleasant events or gifting acts of kindness. If the client senses that they feel a lack of clarity in their thinking, or trouble with beliefs that are not serving them, they are encouraged to use tools for working with cognitions – such as journaling, talking with a trusted friend or companion, or engaging in cognitive restructuring exercises with the therapist. The important thing is that the client chooses their own response based on first having done their own sensing work, which will mean that they have de-identified from the experience and neutralised the reactivity that was reinforcing their behaviour, and they will be acting with an awareness of what is going on in the context, both internally and externally.

At the beginning of therapy, the therapist's role is to sense and respond for the client. The therapist's role is to provide a therapeutic relationship where the client feels unconditional positive regard, empathy, and congruence – traits that Rogers (ref) identified as general therapeutic factors, which are aligned with the relationship the client is guided to create with themselves through mindfulness and loving-kindness practice. In the early stages of therapy the therapist gathers information about the client and their presenting difficulties and uses their clinical judgment and knowledge of the literature as to which tools to offer to the client. The therapist models mindfulness in the way that he or she responds to the client, which is consistent with evidence suggesting that greater levels of therapist mindfulness is predictive of greater therapeutic alliance (Razzaque et al., 2013).

As therapy progresses, the therapist provides the client with a number of tools that help with the difficulties that they have been experiencing, and experiment to see which tools work for them. When the therapist senses that they are lacking for an effective tool to work through a particular difficulty or towards a valued life direction, he or she works with the client to identify an appropriate tool. By the end of therapy, the client will have working knowledge of a number of tools and be skilled in responding to their own sensory experience to choose the appropriate tool or response. In this way, the client learns to become their own therapist. Sensing and responding provides a framework for guiding the therapist from initially being highly directive to becoming less directive over the progression of therapy, and is in line with recommendations that therapists model mindfulness throughout sessions (e.g., Baldini, Parker, Nelson, & Siegel, 2014; Razzaque, Okoro, & Wood, 2013).

Summary

Sensing and responding describes two terms that can be used to operationalise the literature on mindful emotional regulation and make it accessible to clients. It makes use of

the notion that paying skilful attention to sensory experience can give clues as to what sort of thoughts and behaviour is wholesome, and what thoughts and behaviour is not. The client is guided to hone the ability to relate to sensory experience in a way that is characterised by non-identification and equanimity. As these skills are honed, the client is able to respond from a state of less emotional reactivity and thus make life choices that are more in line with valued and ethical behaviour. The skills of sensing and responding are theorised to mutually and serially reinforce each other in an upward spiral fashion to lead to increasingly broad changes in the client's daily life, from changes in cognition and interoceptive experience through to changes in relationships and other aspects of life that were not in line with the client's valued life direction. The model is still in its early stages of development and the author intends to develop it further in the future and run pilot studies on an iteration of the model presented here.

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