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Enaction, relevance realisation and wisdom: establishing a theoretical framework for contemplative education

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Interest in contemplative education in higher education has grown significantly over the last two decades. Much of this work has focused on mindfulness interventions and their impact on the wellbeing and academic outcomes of students. However, there has been considerable diversification in how contemplative practice has been applied, particularly in university contexts where educators often have greater autonomy in the design and delivery of teaching. In this paper I argue that for contemplative education to develop, a theoretical framework is important, particularly if robust research is going to build an evidence base for informing practice. Useful links have started to be drawn to other educational theories such as social and emotional learning and transformative learning theory but they do not yet point to the depth of learning made possible through the integration of contemplative practice into teaching. This paper uses the lens of enaction to explore contemplative education and draws on the concepts of relevance realisation and wisdom to present a conceptual model of contemplative education that could support future research and pedagogical integration by explaining how contemplative practices may take effect. This paper offers fresh theoretical insights to stimulate discussion about how contemplation can support the development of wisdom and what this means for higher education.

KEYWORDS

contemplative education, enaction, relevance realisation, wisdom, higher education, mindfulness

1 Introduction

In their article on the science of wisdom, [Grossmann et al. \(2020\)](#) show that renewed interest in wisdom research has emerged in response to rising misinformation, growing incivility, eroding trust in institutions, and ethical concerns surrounding scientific and technological progress. These complex challenges—shaped by competing interests and dynamic social forces—require wisdom to address effectively. To keep pace with rapid social, technological, and environmental change, education must cultivate the kind of wisdom that can engage with complexity and uncertainty ([Ergas, 2020](#); [Palmer et al., 2010](#); [Zajonc, 2016, 2013](#)).

In this context, contemplative education has been subject to growing interest, particularly over the last two decades. It is an approach to teaching and learning that incorporates contemplative practice such as, but not limited to, meditation, to encourage students to engage directly with their lived experience. By cultivating an awareness of their lived experience, students are encouraged to make sense of what they are learning in relation to their own values and sense of meaning ([Britton et al., 2013](#); [Barbezat and Bush, 2014](#); [Barratt, 2016](#)). They are encouraged to “understand the world from inside as well as the outside” ([Zajonc, 2014](#), p. 115). Contemplative pedagogy has also been shown to have a positive impact on educators who find

greater meaning in their work with students through contemplative practice and pedagogy (Chirillo, 2021).

Writers in the field of contemplative education have drawn attention to what we might understand as the ‘wisdom gap’ in higher education and noted how the inclusion of contemplative practices in education may help to address it. Barbezat (2013) notes:

‘The consequences of our unwillingness [in mainstream educational approaches] to bring into the classroom our own students’ sense of meaning and have them begin to build and exercise a sense of discernment about that meaning and the implications in the world, are quite frankly horrifying’.

Also picking up on this theme of wisdom, Deroche et al. (2025) explore how mindfulness could help to move from the distraction of endless information to the development of wisdom through the use of contemplative practice ‘as the means for finding joyful flow in learning’. They note that the importance of contemplative education is its potential to realign learners with an awareness of life itself, overcoming the abstraction of information and concepts and returning to meaning and lived experience.

Despite growing recognition of contemplative education’s relevance to today’s educational challenges, the field still lacks a clear definition and cohesive framework. Most theoretical discussion and large-scale research studies have focused on mindfulness-based interventions. Whilst these offer valuable insights, they do not capture the variety of contemplative pedagogy used in higher education.

In this paper, I connect recent wisdom research with contemplative education and introduce a framework based on the enactive approach and the concept of relevance realisation. I propose that wisdom is a useful concept in the exploration of contemplative education, particularly when thinking about how it impacts students in higher education. And although it has been mentioned in previous research, the link between wisdom and contemplative practices as understood within education research has not been made clear. The enactive approach provides an appropriate lens for this theoretical framework because it provides a non-dual perspective, enabling an understanding of contemplation and its effects that is embodied and embedded within lived experience. It enables explicit consideration of how contemplative practice can transform experiential awareness, sense-making and foster self-transcendence - the seeing through of unconscious framing that shapes perception and understanding. I argue that this integrated perspective makes the transformative potential of contemplative education more visible and will inform the development of contemplative pedagogies in safe and intentional ways.

I start by briefly considering the relevant literature about contemplative education before outlining the key components of the proposed framework. I finish by considering the practical implications and future research.

2 Defining and researching contemplative education

In this section, I provide a brief summary of research in contemplative education and in particular summarise the challenges that I hope that the theoretical framework introduced in this paper might help to address.

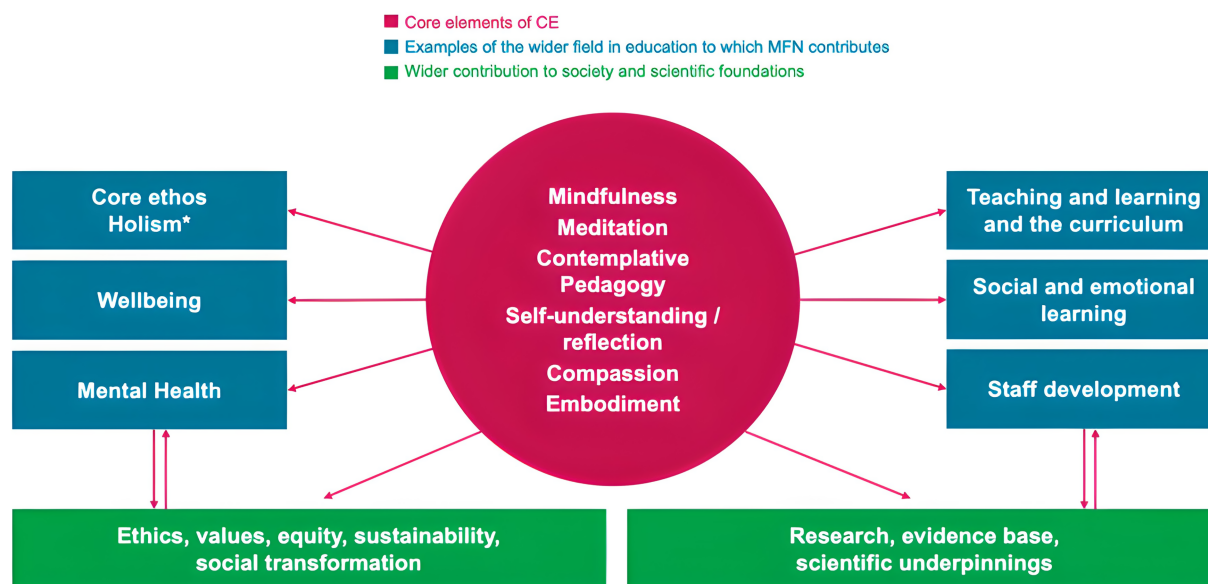
In a review of contemplative education, Mind & Life Europe Contemplative Education Community drew together its different threads. Figure 1 draws connections between contemplative practice, learning and wellbeing. It also captures ethics, social transformation and a holistic approach to life. It is a useful map for understanding the different and related aspects of contemplative education and reflects well the complexity of the field. But it does not provide a clear definition or theory about how contemplative education takes effect.

Research on contemplative education, particularly mindfulness, has tended to focus on the wellbeing and academic outcomes of students (see Phan et al., 2022). However, there has been acknowledgment that interest in mindfulness in education practice and research has extended beyond mindfulness interventions, and increasingly draws on different theories, research methods and more integrated approaches (Weare, 2019; 2023). More recently social and emotional learning as well as critical (Kaufman, 2017; Barratt, 2018; Hyde and Johnson, 2024), transformative (Burns et al., 2022; Gunnlaugson et al., 2023) and anti-oppression learning theories (Berila, 2015) have been reflected in contemplative education research. Discussion about mindfulness practice more generally has mirrored this broadening approach, questioning the individualistic nature of secular manifestations of mindfulness training in the west and inviting consideration of ‘social mindfulness’ and impact of mindfulness on social change (Leonard, 2019; Bristow et al., 2020). Research is yet to paint a clear picture about how ‘effective’ contemplative education is. Qualitative studies provide valuable insights into student and teacher experience and report a positive and transformative experience amongst students on courses which integrate contemplative pedagogy [see for example Godlaski (2018), Gunnlaugson et al. (2023), and Morgan (2012)] whilst Chirillo (2021) emphasises the value of contemplative approaches for educators themselves.

The most robust research on the integration of contemplative practice in education has been research on mindfulness interventions. The quantitative evidence for the effectiveness of mindfulness in schools and universities reports some positive effects, particularly regarding increased mindfulness and reduced anxiety (Dunning et al., 2019; Dunning et al., 2022; Weare, 2019). Fulambarkar et al. (2023) found that there was no significant effect for anxiety or depression but did report reduced levels of stress in the mindfulness intervention group compared to the control. A large study in the UK ($n = 8,376$) comparing standard social-emotional teaching to school-based mindfulness training found no significant difference in mental health outcomes and social-emotional-behavioural functioning between the two groups. They also reported poor engagement with mindfulness practices by student participants (Kuyken et al., 2022). However, other positive outcomes such as an improvement in school climate and staff wellbeing were reported. There is also concern being raised about the acceptability, effectiveness and risks of other types of school social and emotional learning interventions, that often include mindfulness and other contemplative practices, which may increase susceptibility of mental ill health in the medium to long term (Foulkes et al., 2024; Deighton et al., 2025).

Adding to this issue of evidence is the challenge of definition. Rather than trying to provide a definitive list of what might be considered ‘contemplative’ activities, Weare (2019, p. 321) notes that contemplative education aims ‘to put the learner, and their self-reflective mindfulness at the heart of the teaching and learning process’, indicating that contemplative education is not so much about the type of activity but how it is approached. Relatedly, Dorjee (2016) explored

A WORKING MODEL OF CONTEMPLATIVE EDUCATION (CE)



* „Holism“ refers to joined up thinking – an approach that takes in the totality of the organisation as the focus of change efforts (not just the curriculum) and at all aspects of the person (social, emotional, physical, spiritual, cognitive) not just the cognitive.

Version: February 2020

FIGURE 1

Working model of contemplative education (Reproduced with permission from [Mind and Life Europe Community of Contemplative Education, 2020](#)).

the difficulty of defining contemplative science in the context of an evolving interdisciplinary field that was developing on research on an increasingly broad range of practices. She states:

“The terminological challenges are likely to increase further as the research on meditation becomes more inclusive of a broader variety of contemplative practices: ranging from contemplative inquiry and focused meditation on sensory experience, through mantra recitation and visualization, to movement and energy-based practices” (Dorjee, 2016, p. 2).

This complexity is intensified in education which has embraced a broad range of practices as ‘contemplative’ and includes a wide variety of settings from formal schooling for children to adult community education and everything in-between. The tree of contemplative practices developed by the association for Contemplative Mind in Society includes a very broad range of activities as ‘contemplative’ including dance, drumming, pilgrimage and community-based projects. This is far broader than the scope identified within contemplative science by [Dorjee \(2016\)](#).

This issue of definition makes meaningful comparison across evaluations and research difficult. Research in contemplative science is usually directly concerned with the experience and immediate outcomes of a particular practice. Within education, researchers are often interested in the impact of a multifaceted intervention that includes contemplation amongst a range of learning activities. They may measure a broad range of outcomes including academic performance, learning and mental health which will be impacted by many other variables making it harder to attribute changes to the contemplative practice or the intervention alone (see [Phan et al., 2022](#) for a detailed discussion about this in school contexts). Across the body of work on contemplative

pedagogy it is not clear how effectiveness should be defined and measured given the diverse ways that related terminology such as contemplative education and contemplative pedagogy are used and the broad range of practices taken to be included under its umbrella.

An additional challenge is that traditionally, the arguments for how particular contemplative practices lead to wisdom, are embedded within the religious or philosophical context from which the practices originated. They are therefore implicitly framed by the epistemological and ontological context of that tradition. The integration of contemplative practice into education and the accompanying secularisation and decontextualisation of these practices, has placed the teaching and evaluation of contemplative practice within the materialist and realist framing of the western scientific model which makes it hard to investigate and make visible the deep transformation potentially facilitated by contemplative practice.

It is clear that diversity and flexibility is needed in contemplative education research. My proposal here is not designed to ‘flatten’ or homogenise research, but to draw on recent thinking in cognitive science and philosophy to deepen understanding of how contemplative education may take effect and thereby contribute to improved research and practice. I now consider how the enactive approach is helpful in this endeavour.

3 The enactive approach and meaning-making

The enactive approach is informed by biology, dynamical systems theory, phenomenology and Buddhist philosophy. It takes a naturalistic approach, refuting representationalism and computational theories of cognition that construct the mind as perceiving mental

images of external objects that are then understood by processes in the brain. Instead, the enactive approach views sense-making as an active process of autopoietic beings, inseparable from the embodied experience of the organism within its life world (Varela et al., 2017).

According to this approach, it is through our actions in the world that meaning arises (Di Paolo and Thompson, 2014). There is not an external world which contains meaning - it is not there for us to 'extract'. Varela et al. (2017, p. 157) describe how meaning is 'not prescribed but is the result of the organisation and history of the system itself'. A world of meaning is, therefore 'enacted' or 'brought forth' by dynamic processes of organism-environment couplings through embodied experience. De Jaegher (2021, p. 8) describes how:

'Organisms cast a web of significance on the world. In this world of significances, organisms moreover adapt, because identity-maintenance takes place in precarious circumstances: living beings are continually threatened with disintegration, from their own systemic organization and from their environment'.

Therefore, meaning arises from the coupling of the precarious self-organising organism within its environment, to ensure its continued survival. What a particular feature within the environment means for an organism is not a property of that feature, nor is it held within the organism but arises relationally, between them.

Di Paolo and Thompson (2014) have emphasised the importance of social interaction in sense-making. Their theory of participatory sense-making takes as its starting point the body as an adaptively autonomous system orientated towards its own viability. They note that:

'Given that sense-making is an embodied process of active regulation of the coupling between agent and world, social interaction—through patterns of bodily coordination and breakdown—opens the possibility of this process being shared among the interactors. This shared form of sense-making is what is meant by "participatory sense-making." (2014: 75).

Sense-making is not just about the individual within the environment, but the interactions of individuals within that environment, collectively making-sense of the world together. They note that what arises in between is dynamic; distinct from and outside of the control of the actors involved: *'the actions of the agents involved, or their intentions, do not fully determine the outcome of the encounter'* (Di Paolo and Thompson, 2014, p. 75).

The enactive approach therefore emphasises the relational nature of how the world appears to us and what it 'means'. It disputes the idea of an external world that exists independently and that can be simply 'known'. Both self and world arise through ongoing sense-making process. The dominant model of subject-objective duality which is central to the scientific endeavour and western education prioritises knowing about the world or *'propositional knowing'*. Palmer et al. describe this way of knowing as *'atomistic facts about an atomistic knowing'* (2010: 25) which is less motivated by the development of wisdom than knowing the world in such a way that enables us to use it for our own ends. The enactive approach, in reflecting new understandings about cognition and how self and world are related can support the theorisation of contemplative education and how it can help ensure *'teaching and learning are faithful to new*

understandings of how the cosmos is constituted' (Palmer et al., 2010, p. 26).

Having described the perspective offered by the enactive approach, I now on go to explore the significance of this for education by drawing on the concept of relevance realisation.

4 Relevance realisation and the appearance of a world

I utilise Relevance Realisation (RR) as a way of understanding how sense-making processes function. This will be drawn upon later when discussing the relationship between contemplative practice and wisdom.

Like the enactive approach, Vervaeke takes 4E (embodied, embedded, extended, enacted) cognitive science as his theoretical starting point for RR. Riedl and Vervaeke (2022, p. 18) explain the significance of this framing:

'Cognition and cognitive processes are no longer seen as outside the environment but considered to emerge from nonlinear and circular causality of continuous sensorimotor interactions between brain, body, and environment. Cognition is regarded to be a temporal phenomenon and needs a dynamic system perspective (Thompson, 2010). Relevance realisation is then the underpinning of cognition as the exercise of skilful know-how in situated and embodied action, not reducible to prespecified problem-solving.'

This reflects important threads of the enactive approach, captured by Di Paolo and Thompson (2014, p. 76) who described the nature of cognition and its imperative stating:

'Cognition, in its most general form, is sense-making—the adaptive regulation of states and interactions by an agent with respect to the consequences for the agent's own viability...Moreover, sense-making is a bodily process of adaptive self-regulation. The link between the body and cognition is accordingly constitutive and not merely causal. To be a sense-maker is, among other things, to be autonomous and precarious...'

RR describes how, embodied human beings, are exposed to too much information to consciously process it all. As a result, RR, is an essential cognitive process concerning *'how you care about and care for information'* (Vervaeke and Ferraro, 2013, p. 31). This ongoing largely preconscious process means that as autonomous beings deciding what matters and continuously enacting our world, we are selecting (below the level of conscious choice) the direction of our attention, appraising value, and rationing attentional and physiological resources. The world that is experienced is determined by what comes into conscious awareness. RR occurs 'behind' or 'before' the worlds appearance to a being. RR is fundamental to our enaction of the world and how the kind of being that we are (physiologically, psychology, socially) interacts with its environment. Vervaeke and Ferraro (2013) use the term 'agent-arena relationship' to capture how the known world and our experience of it, is the outcome of self-organising dynamical processes through which agent and arena are related.

Vervaeke and Ferraro (2013, p. 33) describe RR as the *'basic ability that makes us intelligent'* because it is this that prevents 'combinatorial

explosion’—the complete overwhelm that would be experienced without the capacity to be selectively attentive. However, because RR is a self-organising dynamical process it involves feedback loops that are inherently ‘self-reinforcing, self-maintaining, robust and resilient’ (2013: 34).

These feedback loops create stability, resulting in consistency in experience that is challenged when unexpected things arise in experience and predictions about the world have to be re-examined and modified. This stability can be good and bad—if patterns of RR and sense-making are foolish—presenting a deluded sense of what is real, they become a self-perpetuating source of foolishness. Foolishness is not about a lack of knowledge or information about the world (which would be defined as ignorance)—it arises from RR [see Vervaeke and Ferraro (2013) for a more detailed discussion].

The theory of RR is important because it describes how experience of self and world emerges from their structural coupling [as described by Maturana and Varela (1987)]. Every ‘thing’ that can be known is only knowable as a result of the processes of embodied cognition. RR is a process through which it becomes possible to identify what is meaningful, whilst avoiding combinatorial explosion. Using an enactive lens and by drawing on the concept of RR the sense-making processes which contribute to the emergence of self and world in lived experience become ‘visible’ thus allowing our taken for granted for notions of independence, objectivity and separation to be questioned. This is crucial for the development of wisdom which I will now explore in relation to RR.

5 Wisdom, ethics and breaking frame

As mentioned in the introduction, the topic of wisdom is not new to the field of contemplative education and has also been brought into discussion about mindfulness in education most recently by Deroche et al. (2025). The development of wisdom has been mentioned as a

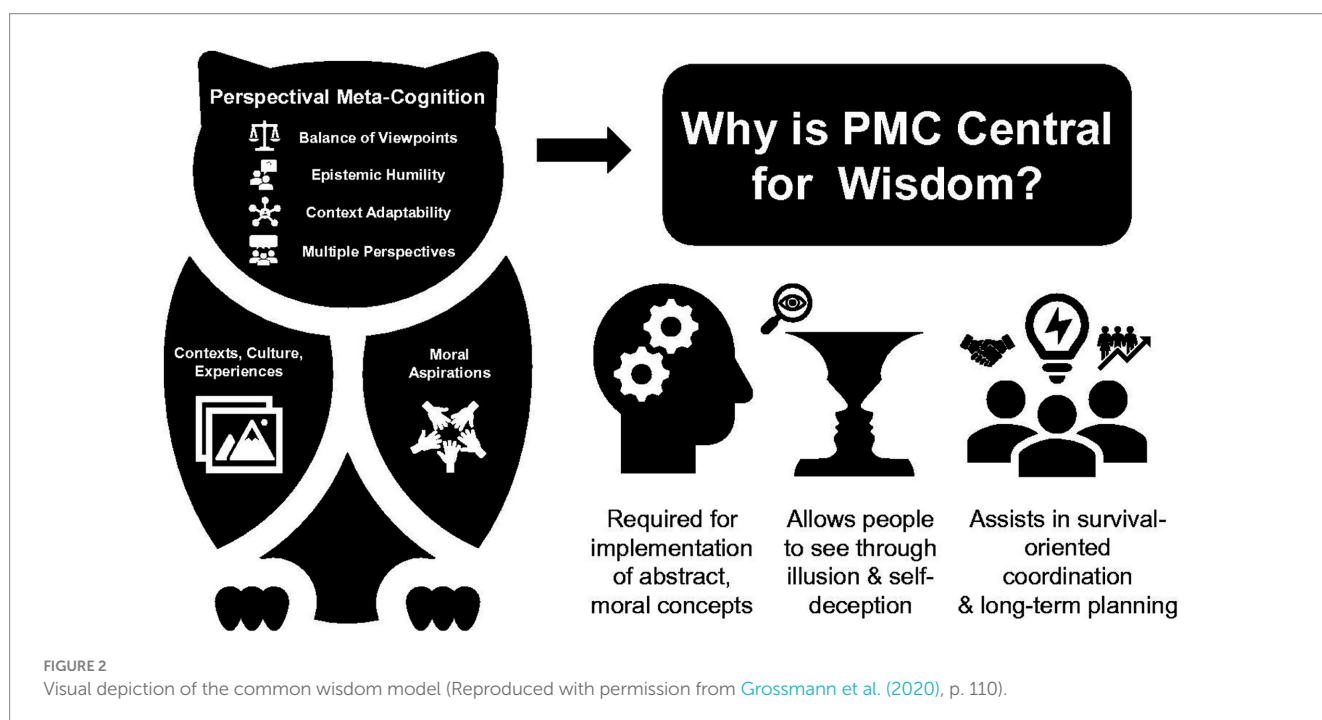
key motivation for the introduction of contemplative education by a variety of early writers in the field (see Ergas, 2020; Palmer et al., 2010; Zajonc, 2016) and recognised in a more recent overview of the field (Mind and Life Europe Community of Contemplative Education, 2020). Defining wisdom is not an easy task, however it is usually associated with an ethical dimension, includes the ability to take different perspectives and is considered to be distinct from but inclusive of, related concepts such as intelligence.

Grossmann et al. (2020) carried out a study with wisdom researchers in which they identified the key components of wisdom. They identified Perspectival Meta-Cognition (PMC) as being crucial for wisdom because it permitted the wise person to hold different points of view, retain epistemic humility, remain adaptable in different contexts and take multiple perspectives. In Figure 2 you can see a summary of the main components of wisdom that they identified in their study. They also emphasised the importance was how PMC was embedded within lived experience and related to moral aspirations—the desire to develop virtue.

We can see from how the model is present in Figure 2 that flexibility is key in the development of wisdom—they list perspective taking and sensitivity to contexts as key to wisdom. RR enables the identification of what is relevant to the problem at hand and consideration of what outcomes are meaningful to us (Vervaeke and Ferraro, 2013). Because of the problems of combinatorial explosion, due to the infinite number of things to consider regarding taking a certain action, and the unlimited range of potential outcomes, human cognition must find a way of ‘framing’ a problem so that it is made manageable. Therefore, wisdom cannot be rooted in propositional knowledge about the world which is disconnected from being in the world.

Crucially this also establishes an important relationship between being and ethics. Jaeger et al. (2024, p. 45) explain this connection:

‘What we care about, of course, is what is relevant to us. Only if we care about something can we choose the appropriate kind of action. Only



by acting in the world can we get to know it. This is the very foundation of our knowledge and our morals. It is also what connects us to the rest of the living world. Life is meaningful and precious that way.

Varela (2002, p. 4) picks up on a similar thread, explaining that the cultivation of wisdom should be ‘the basis of our being here. If we start with the appreciation of being as it is, then practical action—how we act in the world with our theoretical knowledge—will have the kind of prudence that it needs to have’. He highlighted the deep relationship between ethics and wisdom explaining that how we see the world and relate to life is instrumental to our capacity to be ethical. He describes how by ethics he means ‘a recollection of the entire realm of life that is often obscured by the power acquired over it’ (Varela, 2002, p. 5) and in so doing emphasises the value of seeing ourselves as embodied, embedded beings rather than independently, inherently existing entities asserting their desires onto the world. This captures the importance of developing a model of contemplative education through an enactive lens—that places us back in the world that we are shaping and being shaped by.

A connection between wisdom, ethics and flourishing has been highlighted throughout philosophical history. Nusbaum (2019, p. 123) draws out how Aristotle’s depiction of practical wisdom links ethical conduct and human flourishing, noting that human flourishing ‘is a key aspect that distinguishes wisdom from intelligent decision-making or just good common sense’. Like Vervaeke and Ferraro (2013), Nusbaum (2019, p. 123) emphasises the difference between being wise and being intelligent. Flourishing in this context is not simply about success, happiness and well-being, but crucially includes ‘grounding in the moral virtues...including the civic virtues such as civility, compassion, and fairness.’ Wisdom, ethics and flourishing are also discussed in writing about contemplative education, most poetically by Zajonc (2006) who describes how contemplative practice might open the way for an epistemology of love. He contends that the capacity to be wise, exhibit the ethical behaviours, and flourish from doing so is constrained by a lack of wisdom not a lack of information.

If it is accepted that wisdom is not primarily about overcoming a lack of information or knowledge but about gaining insight, breaking the frame through which self and world are perceived, then at the root of wisdom is humility. Grossmann et al. (2020) describe this as ‘epistemic humility’—an understanding that whatever the world is, it can never be known beyond experience as made available through the five senses of embodied being. Describing Varela’s valuing of the openness and provisional nature of theoretical frames Varela Cohen describes how:

‘Francisco always held fast to an anti-reductionist position: he chose to realize it by accompanying complexity in spite of, or rather because of, the precariousness it presupposes, since generative precariousness is a fundamental property of life. The path he laid down is grounded in a fundamental exigency, that theorization should never cease to espouse personal experience’ (Varela, 2002, p. 6).

Vervaeke talks about reframing as ‘reciprocal opening’, coming to see possibilities, new affordances in our environment that were not possible previously (Vervaeke and Mastropietro, 2021; Vervaeke, 2022). Things are seen and experienced differently, opening-up the possibility of new ways of being through shifts in our participatory

and perspectival knowing (Vervaeke and Ferraro, 2013). Becoming wise therefore includes increased sensitivity to beauty, wonder and awe—experiences that can support seeing beyond what the current framing allows. It is important to note that Vervaeke also draws connections between reciprocal opening and love—describing how love is an existential mode of the agent-arena relationship (where reciprocal openness permits ever transcending understanding and connection). There is never a point where knowing is finished or complete. This is the opposite to states of delusion where there is a reciprocal narrowing where affordances become increasingly limited and the arising of wisdom curtailed (Vervaeke and Ferraro, 2013).

This theme of reframing is captured, in slightly different yet related way, by De Jaegher (2021, p. 858) in her discussion of how we become wiser about each other, a central issue for higher education in an increasingly polarized world. She identifies how the way we know things is often over deterministic ‘...where a big part of the knowing is determined by the knower, and a smaller part by the known. This is an over-determining, and thereby limiting knowing.’ An important way that this can be overcome is through ‘Letting be’ a concept used by Maclaren (2002) to describe allowing something to be what it is before jumping to conclusions about it. In other words, allowing something or someone to be itself before determining what we think we know about it. De Jaegher (2021, p. 859) states letting be:

‘...is [not] disengaged. On the contrary, it is a full engagement: an ongoing, never-finished balancing between over- and underdetermination—just the right amount of determining, at this moment, for this person engaging with this other, this thing, event, situation.’

By combining RR with the enactive approach, it is possible to see that changes brought about through contemplative practice are not just cognitive or affective. They are not just changes in knowing (although that may be part of it) but changes in being, shifts in sense-making that alter self and world.

Becoming wise then is not just about correcting mistakes in propositional knowledge. It is a systematic seeing-through of delusion, appreciating the previous ‘mis-framing’ of the world. By ‘letting-be’ made possible through epistemic humility, a central component of wisdom according to Grossmann et al. (2020), our ‘framing’ and its emergence from the self-organising processes of relevance realisation, become apparent. This breaking frame and re-framing can be understood as ‘insight’—moments where it is possible to identify solutions to a problem or understanding that had previously been hidden due to the frame through which the problem or issue had been viewed. Understanding RR makes it clear that wisdom comes not from having the definitively ‘right’ knowledge or the ‘right’ framing but from awareness that this framing, generated by the sense-making processes play a crucial role in what we perceive as reality, in what we experience as a ‘world’.

6 Groundlessness and human flourishing

According to enaction, the reality that is being revealed through contemplative practice is the groundlessness of lived experience.

Describing groundlessness in the context of the enactive approach, Meling (2022, p. 21) provides a very helpful summary:

‘...a world is not pre-given but enacted through sense-making. Most importantly, sense making is not a fixed process or thing. It does not have substantial existence. Instead, it is groundless: it springs from a dynamic of relations, without substantial ground. Thereby, as all cognition is groundless, this groundlessness is considered the central underlying principle of cognition.’

The idea of reciprocal opening and transcendence explored above, assumes the groundlessness of things. Varela et al. (2017) argue against foundationalism, the search for something that inherently exists, and acts as the basis for all other things to arise. They describe how ‘The worlds enacted by various histories of structural coupling are amenable to detailed scientific investigation, yet have no fixed, permanent substrate or foundation and so are ultimately groundless’ (Varela et al., 2017, p. 218). There is no end point to knowing, no perfect understanding. Varela et al. (2017) go on to point out that having a ground creates a limitation for human development and transformation. It fixes something, creates a foundation that cannot be moved beyond.

De Jaegher (2021, p. 13) brought out the significance of groundlessness with regards to ‘letting be’, by stating ‘knowing as letting be thus happens between knower and known. This means they are each implicated in this. Letting be is a way of knowing premised on change. These three elements the knower, the known, and the relationship between them all change’. Groundlessness therefore opens the possibility of true human flourishing through the development of wisdom - an important outcome of an education system. It is our current, limited understanding that we need to transcend through awareness of the self-perpetuating and ongoing processes of relevance realisation. Without an appreciation of groundlessness this is not possible because there is always something ultimate to come to know.

Groundlessness is not a rejection of the scientific endeavour or propositional knowing but it does illuminate the limitations of knowing in that way. As Sternberg (2019) notes, even if we collected all the possible scientific truths about complex issues such as climate change or poverty this alone would not enable them to be solved. The dominance of propositional knowing constricts how it is possible to know the world, limiting wisdom and the capacity of human beings to address complex issues. Palmer et al. (2010, p. 26) summarise well the challenges and ethical consequences that this constriction causes in higher education:

‘Helping students come to terms with reality is a fundamental aim of higher education, an unattainable goal when the unexamined foundations of education, the ‘hidden curriculum’, are atomistic and competitive rather than interconnected and communal.’

Appreciation of groundlessness can open the door to wisdom because it is through becoming aware [for example through the development of PMC as described by Grossmann et al. (2020)] that self-interest can be attenuated and ethical know-how emerge: ‘The recognition that those [grasping tendencies] are empty of any actual existence manifests itself experientially as an ever-growing openness and lack of fixation. An open-hearted sense of compassionate interest in others can replace the constant anxiety

and irritation of egoistic concern.’ (Varela et al., 2017, p. 234). Wanting to find an ‘absolute ground’ causes us to look outwards into the world or inwards into our subjectivity and that on not finding either, nihilism can arise.

Varela (1997) highlight the need for contemplative practice in the development of wisdom but emphasise that this practice needs to be within a context where groundlessness and other-concern are central, otherwise any insight gained becomes the fuel for ego—a phenomena powerfully explored in ‘Spiritual materialism’ by Trungpa (2002). In Varela and Poerksen (2006, p. 49), Varela strongly argues that ethical qualities that emerge in an individual as a result of contemplative practice, are not based on rational analysis but through the realisation of self-lessness and non-individuality which leads to experiencing the condition of another being as ‘a matter of direct personal concern’. This is one form of the ontological and epistemological shift that Vervaeke refers to when using the term transcendence (Vervaeke and Henriques, 2023).

Groundlessness is important for understanding wisdom and the subsequent ethical orientation that arises from becoming wiser. Yet education tends to imply that there is a ground, that if you now enough ‘facts’ about something then a solution can be found, overlooking the uncertainty and ethical complexity of human decision making. An education based on the distinction between self and world, subject and object, inevitably abstracts knowing from experience. Things that are actually relational continue to appear to have independent and enduring existence. From the theoretical vantage point offered in this paper, it is possible to see the potential of contemplative education and how it might contribute to the development wisdom by providing spaces to ‘break frame’ and invite possibilities of participatory knowing to balance abstracted, propositional knowing which can dominate higher education pedagogy. In the next section I explain how.

7 Framework summary and implications

I have suggested that the enactive approach and RR can help us understand contemplative education as a means of developing wisdom, establishing a provisional framework to better understand the role of contemplative practice in educational settings. Begg (2013, p. 93) provides a useful segway into this part of the paper. He notes:

‘Enactivism has pushed me to question the balance between academic knowing and knowing through developing an awareness of self (through forms of contemplative thinking)...I see enactivism as not creating dichotomies between non-cognitive and cognitive... but as ensuring that complementary ways of knowing are all given attention and credit...Our challenges as educators is to explore these other ways of knowing and learning.’

How does contemplative education help to bring these complementary ways of knowing into view? How does contemplative education support the development of wisdom and human flourishing? Figure 3 outlines how contemplative education, through the integration of contemplative and meditative practices in education could lead to the development of wisdom based on the ideas of enaction and relevance realisation.

At the base of Figure 3, in blue, it is recognised that the form that contemplative education takes, the particular contemplative pedagogy that is utilised, depends on numerous factors that educators are already familiar with such as pedagogical theory, the learning environment, what is being taught, the needs of the students and knowledge and skills of the educator. Understanding the appropriateness and acceptability of contemplative practices in higher education spaces to inform their safe and effective use is important. Research that has already been done can inform decision making, particularly if when relates to the same subject or context in which the educator is working. Developing further research is important for developing pedagogical understanding and can be supported by relating contemplative education with other educational theories.

Above the blue base in Figure 3 are the different steps that connect having engaged in contemplative practice with the development of wisdom. They depict how contemplative and meditational practices serve as the vehicle for transcendence by breaking through current framing, leading to reciprocal opening and reframing and establishing a wider perspective that contributes to the development of wisdom, leading to flourishing. To help illustrate this framework, I will discuss an example from my contemplative teaching experience in which the different aspects of the framework and the connections between them became evident.

When running a workshop with master's health care students I led a meditative reflection exercise. Seated and with eyes closed, they were asked to recall a time when they were able to respond with compassion to the needs of a patient, a time this felt natural and easy. They were then asked to recall a different time when they had *not* been able to respond compassionately to a patient. This exercise helped participants to enter back in the felt, embodied sense of the interactions. Detail was

encouraged - awareness of the environment, what was said, what was done and what was felt.

In the discussion afterwards a student reported finding it emotionally difficult to recall a time that they had not been compassionate because they had felt it was their own failure for not being compassionate. But by recalling what had happened during the exercise, and then discussing their reflections with others, they came to appreciate the complexity of the situation, the different things that had influenced their experience and their capacity to be compassionate in that moment. This 'reciprocal opening' identified in Figure 3, was a reappraisal of self and world in that situation, breaking the frame of their original interpretation. Their understanding of that difficult interaction was 'reframed.' Their capacity to be compassionate was no longer understood as something that resided wholly within them but was influenced by a wide variety of factors, many of which were outside their control - self and world were no longer seen as independent from one another.

We can also draw out from this example the different aspects of wisdom explored earlier in the paper. The practice invited a sense of epistemic humility—revisiting the incident invited deeper learning in a reflective space, away from the pressure of practice. It enabled a reconnection with the body, context and complexity. I led the practice with an emphasis of kindness for oneself as this was not an easy exploration, emphasising the ethical orientation of the task. For the student mentioned above, this approach resulted in a reframing enabling them to see how different processes were at play that influenced their capacity to act with compassion. This was not simply a cognitive rearrangement of thoughts about the incident, but a shift in understanding of what it meant to be compassionate and the conditions that influence the arising of compassion in any given situation. It was the development of wisdom.

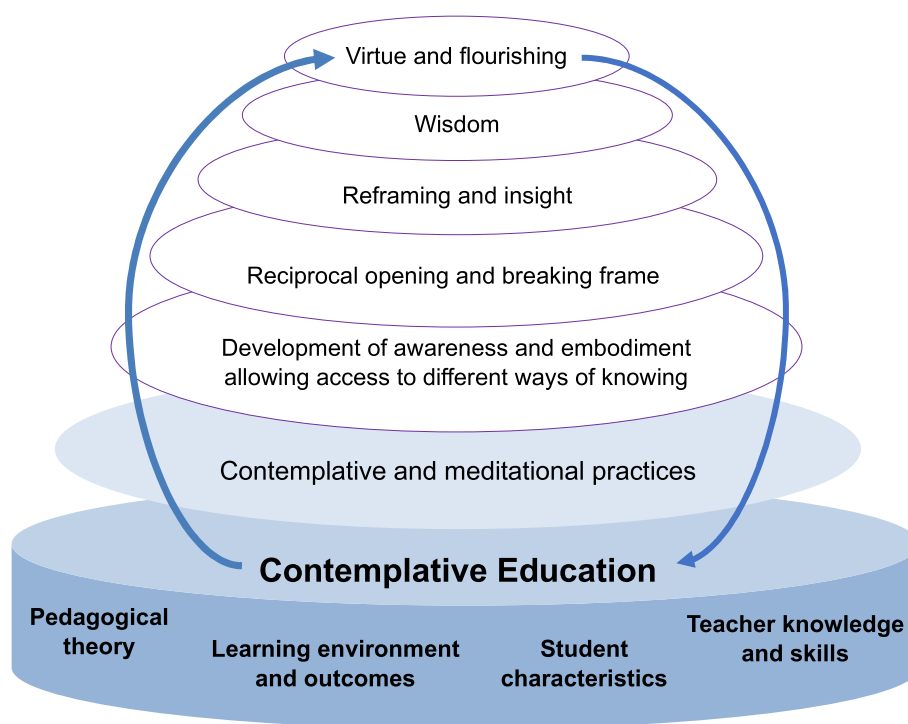


FIGURE 3
How contemplative practice leads to wisdom and human flourishing.

Broadly considered, contemplative education offers the possibility of coming to see that what is known is the result of embodied, embedded sense-making processes within contextual and ethically sensitive awareness. Using the lens of enaction, contemplative education can be seen to offer a way to wisdom, embedded within the context of how beings care for life itself. Vervaeke and colleagues outline how contemplative practices facilitate reaching down into participatory knowing, the taken-for-grantedness of 'being', in the hope of revealing the framing through which other types of knowing are consciously experienced (Vervaeke, 2022; Vervaeke and Mastropietro, 2021). Meditation and other contemplative practices can help us 'break frame' by making what was once transparent, opaque so that the lens that had previously been looked through can be 'seen'. In the example above the student had felt that they were wholly responsible for their capacity to be compassionate. This view which, prior to the reflection had not been visible, became tangible and they could see how the situation unfolded through a process of complex dynamics. This is therefore also an example of 'reframing' - the creation of *'new larger gestalts through which one can realize deeper patterns and principles... In this way contemplation affords a new framing of reality'* (Vervaeke, 2022: 196). This reframing leads to greater wisdom, virtue and flourishing made possible through this fuller understanding.

It is important to note that the context and intention with which contemplative practice is engaged in strongly shapes outcomes. The onus is on educators wanting to embrace contemplative education to understand the practices that they utilize; to be clear about the intension of their use; and realistic about their capacity to effectively hold a space in which they can be safely and effectively engaged with.

By describing the processes towards wisdom that contemplative education can set in motion, I have highlighted areas that need to be taken into account in pedagogical design and future research. Of particular importance is considering how the contemplative practices that are selected facilitate 'breaking frame' as well as the support that is needed to help students 'reframe'. There needs to be an opportunity for new understanding that makes sense of disruption to emerge. Transformative learning theory may be useful for informing this area of practice due to its emphasis on dialogue as a way of making sense of new perspectives (Mezirow, 2003). The concept of participatory sense-making (Di Paolo and Thompson, 2014) could also be useful for exploring how educators can support their students to make sense of things collectively.

It is important to note that given the challenging environment educators face, often working in resource strained and stressful workplaces with high levels of poor mental health amongst students and staff (see Sanders, 2023), the application of contemplative practices needs careful consideration. The experience of 'breaking frame' is often uncomfortable and can be distressing but this can be overlooked in contexts where the calming aspect of practice is emphasised whilst the disruptive potential is not explicitly considered. The framework suggests why students may struggle if the practices they engage in unexpectedly result in 'breaking frame' but there is nowhere to process this and 'reframe'. This discussion is worthy of a separate paper and requires more empirical study.

8 Conclusion and ways forward

By drawing upon the enactive approach and relevance realisation to develop a theoretical framework, I have suggested a model for how

contemplative practice can support students to develop wisdom. Historically, particularly in religion and philosophy, the importance of contemplative practice in the development of wisdom has been recognised but I wanted to foreground this in today's education context, connecting insights from cognitive science and wisdom studies to education research. I have sought to move away from focusing on wellbeing and academic performance to consider the deeper transformative potential of contemplative practice, contributing to a resurgence of interest in the relevance of wisdom in higher education pedagogy.

This framework provides a new perspective for contemplative education research and may support educators in effectively and safely applying contemplative approaches in their teaching. But extensive empirical research will be needed to test the theoretical proposals made here. Within higher education especially, transformative learning theory and participatory sense-making, both theories that are being explored from an enactive perspective (see Maiese, 2017), may prove useful in contemplative education research. They may also help make sense of questions of safety and appropriateness which are pertinent given the resource strained and diverse contexts that increasingly characterise higher education.

As discussion of contemplative education becomes more mainstream it increases the likelihood that it becomes another 'thing' to be defined and measured. It is important to retain connection with the possibility of transcendence that contemplative education facilitates and crucially to remember that ideas need to be treated with caution lest they be mistaken for reality. Whitehead raised concerns about this in his work on the fallacy of misplaced concreteness (Whitehead, 1925). This risk is particularly pertinent when pointing towards new ways of understanding that point to the contingent, relational nature of things.

Dubé (2023, p. 13) said that *'individuals will first need to liberate themselves from the past, from what they already know and take for granted about what education is or what it is to be educated'*. Contemplative education has much to offer in this regard, in the development of wisdom and the evolution of higher education. It invites other ways of knowing that highlight the linear and limited ways we have tried, since the 'enlightenment' to know the world and ourselves. Theoretical appreciation of groundlessness, which affords processes of on-going reciprocal opening, the conditions for wisdom and virtue, is important for empirical research in contemplative education and for addressing the educational challenges we now face. Education needs to become a place in which students become acquainted with *'...Life as it is known in the midst of the living of it'* (Whitehead, 1959, p. 163) because it is from this that wisdom can arise.

Data availability statement

The original contributions presented in the study are included in the article/supplementary material, further inquiries can be directed to the corresponding author.

Author contributions

SB: Conceptualization, Writing – original draft, Writing – review & editing.

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Conflict of interest

The author declares that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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