



Embodied Mindfulness for Performers: Cultivating Embodied Awareness

Laura Haughey^a, Deborah Middleton^b

^aUniversity of Waikato/ University of Huddersfield (Corresponding author)

^bUnaffiliated, Ireland.

KEYWORDS

Mindfulness
Embodiment
Performer Training
Interoception
Proprioception
Awareness

ABSTRACT

This paper explores some of the ways in which a mindfulness-based performer training can enable performers to cultivate embodied awareness. Recent science is used to develop a discussion which builds from body awareness into the cultivation of states of 'embodiment'. In particular, Khoury et al's 'Embodied Mindfulness' schema (2023) is used to develop a model of embodied mindfulness training for performers. The practical applicability of these ideas is explored through examples drawn from practical performance research.

Introduction

A key concern of performing arts practitioners is the cultivation of body awareness. Enhanced body awareness not only enables performers to move with ease, precision, and expressivity, but also underpins effective spatial and relational awareness, emotion regulation, and presence. Yet, as Lorna Marshall states, 'most of the time, we are totally unaware of what our body is doing' (Marshall, 2001, p.

11). Phillip Zarrilli notes that this 'forgetfulness of the body' was recognised by Stanislavsky as 'a fundamental problem in both acting and everyday life' (Zarrilli, 2009, p. 51).

In the training studio, working with both student and professional performers, the authors have observed this lack of bodily awareness as part of a larger and more fundamental pattern relating to awareness and attention regulation in

general. As both authors have a background in mindfulness practices, and an interest in the science of mindfulness, we conceived a research project designed to apply mindfulness modalities to performance training contexts¹.

In this paper we will explore some of the ways in which a mindfulness-based performer training can counter forgetfulness of the body. We will draw on recent science to develop a discussion which builds from body awareness into the cultivation of states of 'embodiment'.

In particular, we will build on Khoury et al's 'Embodied Mindfulness' schema (2023) to develop a model of embodied

mindfulness training for performers whilst demonstrating the practical applicability of the model through examples drawn from Haughey's practical research. The practice aims to encourage the development of particular modes of attention, and to cultivate present-moment body awareness.

From Forgetfulness to Re-membering in Actor Training

As Francisco Varela et al have pointed out,

It is a matter of simple experience that our mind and body can be dissociated, that the mind can wander, that we can be unaware of where we are and of what our body or mind are doing. (Varela et al, 1991/1993, p. 28)²

Why this should be the case, and its implications for the work of the actor, have been discussed in detail by Zarrilli (2009)

¹ Laura Haughey is the Principal Investigator in a Marie Skłodowska-Curie Fellowship to develop an embodied mindfulness performer training practice that is designed to be accessible to both Deaf and hearing performers. Deborah Middleton is a Mindfulness advisor to the project. This project has received funding from the European Union's Horizon 2020 research and innovation programme under the Marie Skłodowska-Curie grant agreement No. 896657. The practical work was undertaken at the University of Huddersfield and the University of Waikato.

² For a fuller explanation of Varela et al's position with regard to the complex question of the relationship between mind and body see pages 27 - 31. Our own perspective, which aligns with theirs, is more fully explicated in Section C: Effects of Long-term Training.

who draws, in part, on Drew Leder's *The Absent Body* (1990). Leder identifies two realms of bodily experience and absence - the 'surface body' and the 'recessive body'.

The surface body, as Zarrilli explains, is 'characterized primarily by *exteroception*', and oriented through the senses toward the outer world (2009, p. 51); thus, 'we experience *from* the body' (p. 53) but the body itself is forgotten. That our basic sensorimotor activities, once learned, do not demand our attention is given as a further reason why 'the body disappears' (p. 53-54).

Leder's 'recessive body' refers to the 'deep, inner, visceral body of corporeal depths' and 'is characterized by interoception'. As Zarrilli notes, 'visceral sensations are [...] often vague and anonymous' and therefore 'we experience this body as recessive, i.e., going or falling into the background' (Zarrilli, 2009, p. 54).

Thus, Zarrilli tells us, 'intensive body training must first awaken in the participant an awareness of the body which has been missing from his or her experience' (Zarrilli, 2009, p. 31).

For Varela et al, such bodily forgetfulness is a 'habit of mindlessness' that 'can be changed' through processes of mindfulness. They write,

We can develop habits in which body and mind are fully coordinated. The result is a mastery that is [...] visible to others - we easily recognize by its precision and grace a gesture that is animated by full awareness. We typically associate such mindfulness with the actions of an expert such as an athlete or musician. (Varela et al, 1991/1993, p. 28)

The trajectory from mindlessness and bodily dissociation to mindfulness and full body-mind coordination is pursued here through a mindfulness-based approach to the actor's embodiment.

Defining Mindfulness for Performers

At the heart of all classical systems of Buddhist meditation is a particular discipline that has come to be known as mindfulness. (Bhikku Bodhi, 2013, p. 20)

There are multiple definitions of the word 'mindfulness', coming out of a range of contexts, including both traditional and contemporary Buddhist (and other) systems of self-cultivation, and various forms of secular mindfulness intervention that have been developed in the past 40 or so years (see, for example, Gethin, 2011). Our approach aspires to acknowledge the roots of mindfulness in Buddhist meditation whilst also drawing on our respective yogic experiences, and on the science of mindfulness as developed largely in relation to secular Western applications.³

In the latter context, the most widely-cited, basic definition of mindfulness is from Jon Kabat Zinn's Mindfulness-Based Stress Reduction (MBSR) programme: 'Mindfulness means paying attention in a particular way: on purpose, in the present moment, and non-judgmentally' (Kabat-Zinn, 1994, p. 4). This definition, and indeed the appropriation of mindfulness from an ethical to a secular and clinical context, have been much discussed. Rupert Gethin notes that,

The MBSR [...] conception of mindfulness derives in significant part from a particular modern Buddhist tradition of mindfulness. From the perspective of the account of *sati* found in early Buddhist sources, this modern conception does seem to centre on something of a minimalist definition of mindfulness [...] Yet this may in part simply be a consequence of the succinct *definitions* of mindfulness

³ Middleton is a long-term meditator, trained in body-based meditation practices from the Tibetan Buddhist tradition, and a Kripalu yoga teacher. Haughey is a level 2 iRest Yoga Nidra meditation teacher, in training to be a certified teacher. She has been developing present-centred embodied performance training modalities for 20 years.

Published under Creative Commons Attribution License 4.0
University of Huddersfield Press unipress.hud.ac.uk

2 iRest Yoga Nidra meditation teacher, in training to be a certified teacher. She has been developing present-centred embodied performance training modalities for 20 years.

highlighted in the context of MBSR [...] That is, in its application in a clinical context, further aspects of mindfulness may well manifest and be relevant. (2011, pp. 275 - 276)

This does, in fact, seem to be the position held by Kabat-Zinn who speaks of using the word 'mindfulness' as a 'place-holder for the entire dharma' (2011, p. 290). Whilst our intention in developing a model of mindfulness for use in performer training contexts is not to transmit the dharma, nor is it the intention to reduce mindfulness modalities to instrumental ends. For the purposes of her research, Haughey has taken Kabat-Zinn's definition as a working example of an approach to mindfulness that emphasises its relevance and accessibility to ordinary people in a secular context. She has, however, elaborated on Kabat-Zinn's definition and emphasised four core aspects of mindfulness that are also foundational skills for performers:

1. *Intentionality*: Kabat-Zinn's sense of 'paying attention on purpose' describes an ability to maintain a chosen focus of attention volitionally, even in the presence of distractions. For performers, on stage, such distractions may include intrusive thoughts such as self-doubt, criticism of an error that has just occurred, or anticipation of a cue that has not yet happened. Intentionality describes the performer's ability to direct their thoughts and attention as per their choices and designs for the performance.

2. *The development of particular modes of attention*: In performance, the capacity to sustain and direct attention underpins the performer's ability to move fluently between competing and simultaneous domains of awareness.

3. *Awareness* (of both internal and external experience): The domains of the performer's awareness include body awareness, spatial awareness, and inter-relational awareness.

4. *Presence*: The performer's capacity to be fully immersed in, and responsive to, all that is arising (internally and externally) in the present moment. The performer's 'stage presence' (charisma) is intrinsically connected to their capacity to sustain present-moment awareness.

Thus, our working definition here is:

Mindfulness is a process of intentionally bringing one's attention, non-judgmentally, to the internal and external experiences occurring in the present moment.

In describing mindfulness as a process we are emphasising its dynamic, evolving and non-static nature, and signifying our interest in cultivating mindfulness as a transient state which, with practice and repetition, can develop into an ongoing trait.

The Body in Mindfulness

[T]he full benefits and fruition of meditation cannot be experienced or enjoyed when we are not grounded in our bodies (Reginald Ray, 2008, p. 5).

This perspective, from Vajrayana Buddhist teacher Reginald Ray, may seem counter-intuitive given the apparent emphasis in

much meditation practice on watching the mind, learning to interact with thought processes, and generally subduing the body through practices of sitting still. Yet, 'mindfulness of the body' is the first of the four *satipaṭṭhānas* - the 'Four Foundations' or 'Four Objects of Mindfulness' - in the *Satipaṭṭhāna Sutta* (Nyanaponika, 1962), and awareness of the breath is a common starting point in much secular mindfulness meditation (Carmody, 2014, p. 50). Further, insofar as mindfulness-based interventions emphasise present-moment awareness as an antidote to being lost in thought, they imply the prioritisation of sensory - somatic - modalities.

Despite this, as psychologist Paul Verhaeghen has pointed out, the role of the body in mindfulness has been under-researched (Verhaeghen, 2017, p. 105), and only recently has there been a shift away from what Schmalz et al describe as

'predominantly disembodied and computational views of the mind' to more 'embodied and situated views of the mind' (Schmalzl et al, 2014, p. 1).

A key study that reflects this shift was carried out by clinical psychologist Bassam Khoury. Khoury and his team set out to identify commonalities across a wide range of approaches to mindfulness in traditional Buddhist, Western Buddhist and secular contexts. They established that 'present moment awareness' was central to all the approaches they surveyed, and that the body was key to such awareness. Further, they suggest 'that *embodied mindfulness* is a primary change mechanism underlying the effectiveness of mindfulness-based psychotherapeutic interventions' (Khoury et al, 2017, p. 1168) [our emphasis].

Khoury et al's notion of 'embodied mindfulness' was further developed in a

2023 paper which outlines a measurable model. Their approach is based on the theory of embodiment introduced by Varela et al, (1991) and Thompson and Varela (2001), which acknowledges a 'two-way reciprocal relationship between the brain and the body' (Khoury et al, 2023, p. 459). Reflecting this, Khoury and team define embodied mindfulness as a 'skill/ability that includes elements of attention, awareness and acceptance involving the mind, body and mind-body associations' (p. 459). Khoury et al's work is pioneering in emphasising embodiment in mindfulness in a theoretical construct, and its publication allowed the Embodied Mindfulness for Performers research to adopt an existing foundation from which to build.

Embodied mindfulness is conceived as 'a multidimensional construct with a set of independent or sequentially trained

skills' (Khoury et al, 2023, p. 474), given as:

1. detachment from automatic thinking.
2. attention and awareness of feelings and bodily sensations
3. connection with the body
4. awareness of the mind-body connection, and,
5. acceptance of feelings and bodily sensations.

(Khoury et al, 2023, p. 458)

Thus, Khoury et al have elevated the physical aspects of mindfulness training, refocused the core elements of attention, awareness and acceptance⁴ in relation to the body, and made 'the body, and mind-body interaction, central in the definition [...] of mindfulness' (2023, p. 479). Their approach is thus particularly pertinent when considering body-based per-

formance practices. Further, viewing embodied mindfulness as an inter-related skill-set facilitates the process of applying mindfulness in the context of skill-based performer training.

Embodied Mindfulness for Performers

In what follows, we build on Khoury et al's schema to outline and discuss our model of Embodied Mindfulness Training for Performers. We use Khoury's five skill dimensions as our basis, re-organise the order of their presentation, and add an additional dimension which is specific - though not exclusive - to performers. We have also opted for a slightly different articulation of Khoury's fourth dimension (our sixth). In each skill dimension, we outline practices drawn from Haughey's practice-led research. In the studio, these practices do not solely address a single dimension, but are offered as vehicles

⁴ Attention, awareness and acceptance are core elements of most definitions of mindfulness. In our working definition on p. 6, they appear as follows: Mindfulness is a process of intentionally bringing one's **attention**, non-judgmentally [ie., with **acceptance**], to the internal and external experiences occurring in the present moment [inner and outer **awareness**].

through which to cultivate both sequential and simultaneous skills. Here, the practices serve to illustrate and illuminate each dimension of the model.

	Embodied Mindfulness (Khoury et al, 2023)	Embodied Mindfulness for Performers (Haughey & Middleton, 2024)
A: Mindfulness Aspects	1. Detachment from Automatic Thinking	1. Detachment from Automatic Thinking
	2. Attention & Awareness of Feelings & Bodily Sensations	2. Acceptance of Feelings & Bodily Sensations
		3. Attention & Awareness of Feelings & Bodily Sensations
B: Embodiment Aspects	1. Connection with the Body	1. Connection with the Body
	2. Awareness of Mind-Body Connection	2. Interpersonal Performance
C: Effects of Long-Term Training	1. Acceptance of Feelings & Bodily Sensations	1. Awareness of Mind-Body Integration (Mehling)
		↓↓↓ ↓↓↓ Emergent Embodiment

Figure One: Chart showing how Embodied Mindfulness for Performers maps against Khoury et al's Embodied Mindfulness Dimensions.

Foundational Mindfulness Practices

Detachment from Automatic Thinking (A1)

Khoury et al's model of embodied mindfulness is founded on the capacity to detach from 'automatic thinking' - a capacity which is central to mindfulness

practices, and has been the focus of much mindfulness theory (2023, p. 459). By 'automatic thinking' the researchers mean 'thoughts that are not intentional or grounded in the body' (p. 459).⁵

An experiment conducted by psychologist Norman Farb et al (2007) sheds light on the contrast between automatic thinking and thoughts that are 'grounded in the body'. Farb et al demonstrated that there are two neurologically distinct modes of attention; one in which we have an 'experiential focus' - awareness of present-moment experience - and one in which we have a 'narrative focus' - the running of inner scripts and stories, independent of engagement with outer experience (Farb,

⁵ Intentionality is not further discussed in Khoury et al's model, but it is explicit in Kabat-Zinn's definition of mindfulness, in the phrase 'paying attention, on purpose'. As we shall see, intentionality guides each dimension outlined by Khoury et al, and is embedded in all of our practical examples.

2007, p. 314).

Narrative focus is associated with what neuroscientists call the 'default mode network' - a brain system that is highly adaptive for pre-planning and strategising but is anti-correlated with present-centred modes of being and doing. The neuroscientist, Amishi Jha, describes default mode as 'simulation mode' because of its capacity to represent past and future, and notes that,

We need to be able to shift out of a simulation mode into a mindful one so we can open our eyes and see what is actually around us vs. the virtual reality of our making. (Jha, 2021, p. 201)

Farb's experiment provided some important insights into the shift that Jha is advocating. The study showed that in the absence of training, people over-rely on the narrative mode, and have difficulty accessing and sustaining the non-

narrative, present-centred mode of awareness that is at the heart of mindfulness and is also foundational for performers. Conversely, mindfulness meditators were seen to have greater fluency in detaching from default mode and entering into experiential awareness (Farb et al 2007, p. 320).

It is precisely this enhanced capacity to shift between modes that Khoury's earlier research had identified as the crucial mechanism in mindfulness (Khoury 2017, p. 1167). His later research posits that,

the ability to detach from (or inhibit) automatic thinking is the first building block of the notion of "embodied mindfulness"; unstrapping attentional mechanisms allows for flexible attention that can be directed towards the body or external stimuli at will. (Khoury et al, 2023, p. 459)

In the performance training studio,

Haughey uses an opening exercise which aims to introduce the shift from automatic thinking to intentional thinking, and from narrative focus to experiential focus.

Indicative Practice: 'Eyes Scan The Room'

This practice encourages trainees to detach from the stream of automatic thoughts by bringing their attention first to what they can see, and then also to sounds, sensations and other sensory stimuli occurring in the present moment⁶.

Participants begin sitting or standing and slowly moving their gaze from left to right, allowing the eyes to take in visual information. They are then guided to walk

around the room with this more focused, intentional mode of attention, looking for things they hadn't seen before and noticing details. The exercise can be layered to include listening to sounds and perceiving other incoming sensory stimuli.

Whilst detachment from automatic thinking can be trained through any volitional practice of watching the mind, 'Eyes Scan The Room' emphasises experiential awareness through heightening sensory awareness. Participants are oriented through the senses toward the outer world, but attention is continually drawn to the experience of the body in those perceptions. In this way, awareness can be 'grounded in the body', and the 'sensorimotor surface body' starts to be remembered.

The exercise uses incoming sensory information as the anchor with which to stabilise attention. If attention

⁶ Much mindfulness practice begins with watching the breath, but we have favoured this alternative for three reasons: we recognise the spatial and relational context within which performers operate; we recognise the observation from trauma-informed practice that breath work can be challenging for some populations (Joss & Teicher 2021); we observe that paying attention to the environment helps to facilitate a sense of grounding and 'safe space'. This practice therefore gives trainees a 'place to return to' if the later breath work is challenging.

wanders, trainees are gently encouraged to bring it back to the task at hand. The goal here, and with the practices that follow, is not to resist distraction, but to become aware of it and to practise gently re-directing attention at will. According to Gard et al, such fostering of stable attention actively inhibits the specific brain regions responsible for processing 'internally generated contents of our attention (eg default mode network DMN)' (Gard et al, 2014, p. 7). Thus stabilising attention goes hand-in-hand with facilitating present-centred sensory processing.

Throughout the exercise, trainees are also encouraged to notice their experience without judgement - an attitude which is discussed in the next section.

Acceptance of Feelings and Bodily Sensations (A2)

Khoury et al's category 'Acceptance of Feelings and Bodily Sensations' incorporates the element of non-judgement. Khoury et al conceptualise acceptance - or 'non-avoidance' - as a complete and non-defensive embrace of all internal states, whether they are experienced as pleasant or unpleasant. This skill is acknowledged as being complex and difficult to cultivate and as such is placed last in Khoury et al's model (2023, pp. 460 - 461). In practice, attitudes of non-judgement and acceptance are central to the concept of mindfulness, and are embedded throughout all of the Embodied Mindfulness for Performers practices. We have, therefore, included 'Acceptance' as the second item in our model.

Haughey uses Kabat-Zinn's term 'without judgement' to invite the quality of acceptance in trainees. This means letting

go of the automatic judgements that can spontaneously arise and accepting experiences - and oneself - as they are. When trainees notice experiences they may label as negative, they are encouraged to meet those experiences with a gentle openness and curiosity, rather than trying to suppress them or push them away.

In performance practice - particularly in improvisation contexts - the performer's openness, availability and acceptance of what is occurring in the space is highly prized. Lecoq described this as 'disponibilité', and as Murray and Evans tell us,

The disponible actor is [...] open and receptive to the human and material environment with which they engage on stage [...] always in the moment and aware of the theatrical possibilities of the moment [...] Disponibilité: deeply embodied. (Murray and Evans, 2020, p. 517)

In practices such as improvisation (see below), this quality translates to being open to what is emerging, accepting offers and cues, and going with the flow of momentum. In the context of mindfulness practice, non-judgemental acceptance goes beyond this outward disposition and entails the arguably more challenging concept of self-acceptance. Thus, this dimension of the embodied mindfulness model entails non-reactive acceptance of one's own thoughts, feelings, and bodily sensations. There are no dedicated practices for the skill of acceptance, rather this foundational attitude is encouraged in all the practices, and is conveyed through practice instructions and side-coaching.

Attention and Awareness of Feelings and Bodily Sensations (A3)

Awareness of bodily feelings and sensations (Khoury et al, 2023, p. 460) is a

'core component' of Khoury's embodied mindfulness model and is also central to much performer training. Indeed, some performance practitioners see awareness of the body as a form of mindfulness in itself. In *Dancing with the Dharma: Essays on Movement and Dance in Western Buddhism*, Harrison Blum writes, 'movement and dance training foster continuous mindfulness of the body. Artists in these fields spend decades fine-tuning their awareness and control of subtle sensations and movements' (Blum, 2016, p. 3). Similarly, meditation teacher Shinzen Young describes how *Samadhi* (the state of intense concentration achieved through meditation) can be accessed through the performing arts, highlighting dance, martial arts and playing the piano as examples (Young, 2019, p. 63). These practices certainly demand present-centred awareness, presence, heightened responsivity to

stimuli from both self and others, increased body awareness, and proprioceptive acuity. Research suggests, however, that there may be some important distinctions to be made between the various kinds of body awareness that are practised in artistic contexts.

Interoception

In the embodied mindfulness model, Khoury et al's 'awareness of bodily feelings and sensations' incorporates both proprioceptive and interoceptive processes. Whilst proprioception is the sense by which body position is tracked, and is important to performers who require advanced levels of balance and fine motor skills, interoception is 'the sense of signals originating within the body (Farb et al, 2015, p.1). It is the sense with which we are able to access and explore what Leder calls the 'recessive body'.

In mindfulness practices, interoceptive awareness plays a key role, and is trained through participants paying (non-judgemental) attention to the breath, and/or to other feelings and sensations within the body. The distinction between interoceptive and exteroceptive approaches to body awareness is an important one that lies at the heart of our discussion. Farb tells us that 'interoception is critical for our sense of embodiment, motivation, and well-being' (Farb et al, 2015, p. 1). A recent expansion of the definition of interoception by Chen et al (2021) can help us to see why this might be the case. They write that 'interoception includes the processes by which an organism senses, interprets, integrates, and regulates signals from within itself' (Chen et al, 2021, p. 4). That interoception implies processes of 'integration' may explain its criticality to embodiment and is a theme that we shall

explore below.

A 2015 study by Bornemann et al looked into the self-reported aspects of interoceptive awareness after contemplative training in Body Scan and Breath Meditation. They found that 3 months' daily practice in both exercises led to statistically significant changes, with the study indicating that,

these practices strengthen participants' abilities to direct attention toward their bodies (attention regulation), and that they make use of these abilities to regulate distress (self-regulation) and to gain insight into their emotional-motivational state (body listening). (Bornemann et al, 2015, p. 9)

These capacities are of benefit to performers in several ways: supporting those working with emotional performative material, in terms of both generating and managing heightened states; providing insight into the performer's own emotional-motivational states, thereby enabling more

adaptive responses to the challenges of creative process; and enabling performers to make use of bodily signals for creative intuition and decision-making in improvising, devising and rehearsing.

Bornemann et al also report an increase in participants 'developing a higher sense of trust in their own body', and hypothesise that 'one may assume that focusing on body sensations, at least as long as one is healthy, transmits a quality of peace and tranquility... and puts the organism into a grounded, calm and present-focused mode of being (2015, p. 9). Developing trust in the body is of particular note for performers, who use their bodies not only to process, but also to transmit and express emotion. Mindfully focusing on body sensations with a resulting calmness is also useful as a potentially rich tool for managing a variety of performance concerns such as

performance anxiety, navigating creative blocks and recovering equanimity following emotionally or energetically challenging scenes (both in rehearsal and performance).

In the arts, however, the explicit development of interoceptive awareness may be less prevalent than the focus on exteroceptive and proprioceptive acuity. For example, whilst there are certainly dance and other movement practices that cultivate interoception, much professional training in dance focuses on more surface and external aspects of the body - muscle tone, alignment, body position in space. In a study exploring body awareness, emotion and internal 'coherence', dancers were compared with Vipassana meditators and control subjects (Sze, Gyuruk & Levenson, 2010). Jake Davis and Evan Thompson note that the study showed that 'Mindfulness meditators were more aware

of their visceral responses' than either the dancers or control subjects 'and thereby more aware of their emotions' (Davis and Thompson in Brown et al, 2015, p. 55).

It could be argued that actors have a greater necessity than dancers to attend to visceral sensations, and a study by Peter Sokol-Hessner et al (2022) hypothesised that because of their work with emotion, actors should have greater levels of interoceptive accuracy than non-actors. The study, however, did not find this to be the case.⁷

Whilst actor-training in general may not emphasise interoception, there are, of course, numerous examples of specific approaches which recognise the benefits of interoception. One such is Phillip

Zarrilli's psychophysical approach to actor training in which the interoceptive dimension is crucial. Zarrilli foregrounds the cultivation of 'heightened, extra-daily, non ordinary "inner states" of attention and sensory awareness' (Zarrilli, 2015, p. 126), and tells us that,

Opening these modes of subtler sensory awareness [...] attunes the practitioner to the types of heightened sensory awareness that can be discovered in psychophysical training, which is crucial to full embodiment in their work as actors. (2015, p. 133)

Interoceptive awareness, then, is seen to have professional as well as intra-personal benefits for the performer, enabling the development of higher levels of embodiment and presence.

In the studio, Haughey builds on the sensory awareness introduced in her opening exercise ('Eyes Scan The Room') with two practices which aim to intensify interoceptive awareness by inviting

⁷ The study found that actors had greater metacognitive awareness than the control group, but no greater accuracy of interoception. However, this study used heartbeat detection as its measure, and this may not be an appropriate device - see, for example, Jennifer Daubenmier et al, 2013.

trainees to intentionally and non-judgementally place, sustain and stabilise attention in bodily sensations. As with many of the exercises that follow, these practices seek to facilitate a shift away from *experiencing from* the sensorimotor surface body to *experience of* and *within* the recessive body.

Indicative Practice:

Mindfulness of Breathing

Although seemingly simple, the 'Mindfulness of Breathing' practice is foundational in almost all mindfulness traditions and secular approaches. It is seen as the first step in focusing and stabilising attention on a bodily process whilst simultaneously cultivating interoceptive awareness.

Seated, standing or lying down in a comfortable position, trainees are invited to close their eyes (or use soft gaze) and



Figure Two: Mindfulness of Breathing Practice. Photo: Megan Goldsman.

focus attention on the breath and breath-related sensations. They are reminded that wandering attention is normal; the point of the practice is not to achieve a non-wandering mind, but to notice when attention moves away, and to practise bringing it back.

For performers, this introductory exercise also provides a solid base from which to approach technical breath work and voice training. Its main function here, however, is to cultivate the performer's sensitivity to their inner dimensions. Haughey uses it as a warm up exercise,

and to end the day when training or rehearsing. It is also useful, pre-show, to centre and stabilise attention before going on stage.⁸

Indicative Practice: Body Scan

The Body Scan further extends interoceptive awareness, with trainees learning to sustain and rotate attention through the whole body. In a comfortable position (sitting or lying down), trainees are guided to place their attention on different body parts, often starting with the head and working down to the feet. They are guided to spend time at each location, sensing into the body part and how it feels - *experiencing within* the body. More time

is spent sensing into areas which have more nerve receptors.⁹

Haughey often closes a rehearsal or training session with a Body Scan as a way of consolidating the day's work, 'grounding' trainees for completion, and leaving them with a 'fragrance' of the qualities of calm, peace and tranquility to continue into their 'daily' lives.

Towards Embodiment

Connection with the Body (B1)

'Connection with the Body' is the first of two skills which represent, for Khoury et al, a departure from traditional conceptions of mindfulness by 'integrating skills related to embodiment' (2023, p. 459).

⁸ If trainees find it uncomfortable to focus on the breath, an alternative practice is to focus on the sensation of the palms of the hands touching each other, or on the sensation of the feet when shifting body weight through the sole of each foot in turn.

⁹ As understood in line with the sensory homunculus; 'The sensory homunculus is a map along the cerebral cortex of where each part of the body is processed. The sensations occur all along the body. The impulses from the body will be sent into the spinal cord and eventually back to the brain to be processed' (Nguyen and Duong, 2023, p. 1).

As they explain, this skill goes beyond 'attention and awareness of feelings and bodily sensations' since it involves 'not only noticing or being aware of sensations, but also sustaining attention and awareness to foster a natural feeling of connection with the body' - this as opposed to being 'detached, removed, distanced and separated from the body' (Khoury et al, 2023, pp. 460, 462). They suggest that this skill builds sequentially on the earlier skills and is 'fundamental to the notion of embodied mindfulness' (2023, p. 459).

Sustaining attention at will - either on a particular area of the body or on the body as a whole - involves the capacities to inhibit the mind's natural tendency to move; to withstand distraction; and to become absorbed in bodily sensation. In the practices described below, these inter-related capacities are cultivated through

working with the body *in movement*, including both proprioceptive and interoceptive stimuli as points of focus. Movement practices are introduced not only because they play a vital part in a performer's skill base, but also because they represent effective vehicles for fostering a sense of connection with the body. Practices of mindfulness-in-movement are, paradoxically, both challenging to, and supportive of, sustained bodily attention and awareness. They are challenging because of the greater range of incoming stimuli involved, but as Clark et al suggest, 'the changes in somatosensation [...] [that movement brings] may be easier to detect than wanderings of abstract thought' (Clark et al, 2015, p. 7). Clark et al explain that movement provides 'concrete, readily observable phenomena' (Clark et al, 2015, p. 7) which may support trainees to

maintain their attention on, and prioritise their connection with, the moving body.

Learning to sustain awareness and connection whilst adding layers of activity and complexity moves trainees into exercises which more closely resemble the complexities of practising mindfulness onstage. Over time, the capacity to sustain one's sense of connection with the body becomes less a task-specific state, and more of an ongoing personal trait.

Indicative Practice:

'Guided Mindful Range of Motion Practice'

Starting in a lying or seated position, with eyes closed or in soft gaze, trainees are invited to slowly and gently articulate each body part in turn. Akin to a Body Scan in motion, the practice invites participants to mobilise each body part, moving through each specific joint's range of motion. As they practise, they are encouraged to

detach from automatic thinking, direct and stabilize attention on the moving body part and how it feels whilst in motion, and to notice how each body part connects with each other and how the joint moves directionally.



Figure Three: Guided Mindful Range of Motion Practice. Photo: Andy Duggan.

Trainees are guided to explore their range of motion at each joint separately, before combining movements at a particular body part. For example, the practice will often start by moving each finger on the left side of the body separately, then moving all fingers together, then the hand as a whole, then the wrist and elbow, before starting on the

right side. More detail is explored in body parts where there are more joints - for example, within the hand - whereas range of motion at the wrist may just explore flexion, extension, lateral movement, and rotation.

Depending on starting position, the facilitator may use step-by-step guidance to not only explore each body part in motion, but also to combine movements and body parts; for example, in order to move from lying to sitting, and from sitting to standing. In this way, the exercise can start from any position, following what has come before, and can finish in a position from which to start the next exercise.

As Zarrilli has pointed out, familiar movement protocols in daily life do not require our focused attention;

The individual's proprioceptive sense allows one to make subtle, minor adjustments to the very act of placing the foot without thematizing the adjustment, i.e., one's bodymind

"intuitively" adjusts as one moves. In this sense, the body disappears (2009, p. 54).

The 'Guided Mindful Range of Movement' practice aims to re-awaken the participant's awareness of proprioception and the detail of fine motor adjustments whilst also extending their 'body listening' into the depths of the body. At regular intervals throughout, trainees are encouraged to find moments of stillness between the movements, and to notice any emergent sensations, or 'echoes' of sensations, in the stillness that follows movement. As they get more familiar with the exercise, they are encouraged also to notice breath responses, and global sensations arising as they work with a specific body part, thereby layering up complexity of both attention and movement.

When orientated and familiar with the exercise, the mover is also encouraged

to modulate and extend their attention from focused attention on a particular body part, to 'open monitoring' - a more global, 'non-reactive monitoring of the content of experience' (Lutz et al, 2008, p. 163).

In meditation contexts, open monitoring is often introduced after focused attention practice has developed a certain degree of stability (Lutz et al, 2008: 164). In the highly dynamic context of performance, however, Zarrilli tells us that, 'it is essential to learn to direct attention while *simultaneously* keeping a completely "open" awareness to anyone/everything in that environment' (2015, p. 128). He therefore suggests that training in states of focused attention and open awareness 'are in some ways 'progressive' whilst also being developed simultaneously' (2015, p. 127).

Indicative Practice:

'Mindful Solo Movement Practice'

'Mindful Solo Movement Practice' is designed to cultivate intentional connection with the body whilst in self-directed motion. The move from guided to self-directed practice is significant as it represents more chance to be distracted into default mode and is also an opportunity to practise mindfulness in a more performative context. The trainee is encouraged to pay close and particular attention to the body whilst it is *in motion*. Silently asking themselves, 'where does the body want to move next?' is a simple cue to allow the body to lead and to practise focusing attention on how the movement *feels in the present moment* or, as Japanese actor Yoshi Oida suggests, to 'taste the sensation' (Oida, 2007).

These practices are thus vehicles which, building on the foundational skills,

help to reprioritise the body, develop fluency in directing and maintaining both focused and open attentional strategies, cultivate a sustained sense of bodily connection, and initiate processes of fuller embodiment.

Interpersonal Performance Dimension (B2)

This category has been added by us to Khoury et al's model, as it represents an important aspect of performance. As Zarrilli outlines:

One of the most crucial dimensions of the actor's work that differentiates it from meditation is that actors must not only become sensorially attuned within themselves, but must do so inter-subjectively. (2015, p. 133)

We have inserted this skill dimension into the area of our model related to embodiment, because the practices we will share here are movement practices and

also - more importantly - because the relational realm is itself a realm of embodiment, since relations play out between bodies and through the sensory and communicative powers of bodies.

Indicative Practice: 'Passive Mindful Movement Duet'

The 'Passive Mindful Movement Duet' introduces an interpersonal dimension through a dyad exercise in which one partner is the facilitator and the other is the experiencer. The experiencer works with closed eyes; the facilitator gently moves one body part, then waits for the experiencer to return to their starting position before offering another passive movement to a different body part.

Movements can be gross, involving multiple joints (an arm being lifted to an outstretched position), or fine (the curling



Figure Four: Passive Mindful Movement Duet Practice. Photo: Andy Duggan.

of the smallest finger) at one joint level.

The passive nature of this exercise supports the moving partner with the element of surprise, combined with increased proprioceptive and interoceptive stimuli. That the moving partner does not know how the facilitator will interact next contributes to the relational experience being the priority in the field of awareness. Sensitivity to the partner, and trust in the interaction are key aspects of the training.

Indicative Practice: 'Contact Improvisation

Duets' & 'Group Improvisation'

Contact Improvisation (CI) duets are a

form of movement practice that involve dyads making physical suggestions to each other that materialize as continuous movement improvisations. The point of contact between the performers is the starting point for the movement exploration. Requiring present-centred awareness as a foundation, confident contact improvisers who have high levels of embodied awareness and interpersonal sensitivity can respond instantaneously with touch and weight transfer, and can even improvise into complex lifts working with momentum.



Figure Five: Contact Improvisation Duet Practice. Photo: Megan Goldsman.

The exploration into relational processes can be further expanded in larger group improvisations, with or without touch, which can also include the generation of sound, exploration of rhythm and other sensorial inputs.

Both the CI duets and the group improvisation exercises provide an opportunity for trainees to practise mindfulness in an interpersonal context. As with any relational practice, there is potential for attention to become fixed on the other (partner, the ensemble, external stimuli), and for embodied awareness of self to be forgotten. As Zarrilli notes, drawing on Leder:

Such forgetfulness is not 'restricted to moments of higher-level cognition,' but equally characterizes our engagement in activities such as sports, physical labor, or the performing arts—dance, acting, live performance, etc. When 'engaged in a fierce sport, muscles flexed and

responsive to the slightest movements of my opponent . . . it is precisely upon this opponent, this game, that my attention dwells, not on my own embodiment' (Leder, 1990, p. 1). (Zarrilli, 2009, p. 51)

The inter-relational aspects of the CI Duets and the group improvisation practices thus provide a rich opportunity for trainees to become aware of thoughts, feelings and sensations as they play out in the presence of the other, or in the dynamics of a group. A trainee might become aware of their patterns of, perhaps negative, self talk; their beliefs about their role in the group; or their difficulties in relaxing with a partner or trusting the unfolding experience. Within these practices, if there are any psychological blocks present, they often manifest as a visible and palpable lack of fluidity and momentum, or as moments of becoming 'stuck'; in the group improvisations they can manifest as trainees becoming visibly distracted,

perhaps dropping out of, or seeking to dominate, the creative flow within the group.

Training Pathways

Haughey often structures training sessions by offering starting points and gentle ‘side coaching’ that encourage shifts between various modes of attention and awareness, and between intra- and inter-personal dimensions. One common structure is to follow a pathway through the practices, using each practice as a ‘gateway’ to a different quality of attention or awareness. For example, one pathway starts with a Mindfulness of Breathing practice, and develops (by way of side coaching) to a Self-directed Mindful Movement Solo, to Solo Movement around the space, to CI Duets, to a full Group Improvisation where the structure drops away to allow

discovery, openness and exploration. The training pathways allow for incremental progression through the foundational skills. Once trainees have a grounding in each of the foundational skills, the improvisational exercises act as vehicles through which trainees can practise the combined skill-set.

The responsive and often fast nature of the improvisation practices support trainees to **Detach from Automatic Thinking**. There is no time for pre-planning and reliance on the Default Mode Network, instead the exercises directly move trainees into present-centred experiential awareness. Participants are required to respond spontaneously to offers and stimuli, and this provides a rich terrain in which to practice **Acceptance** of both self and other.

The practices depend upon the

trainees' capacity to have present-centred **Attention and Awareness of Feelings and Bodily Sensations**, including awareness of proprioception and interoception, and expanding to include exteroception as trainees learn to navigate spatial and topological considerations and respond to touch. Performers can use interoceptive acuity to access the body for insight and decision making in regard to force, flow, momentum and spatial concerns.

The practices offer a vehicle in which to develop **Connection with the Body** by providing more present-centred, movement-generated stimuli, and represent an opportunity to practise sustained present-centred awareness over time. Trainees can use the exercises as a vehicle for practicing focused attention on touch and the initiation of movement cues,

and simultaneously widening to a more global awareness or 'open monitoring' of not only their own bodyminds, but their partners also. This open monitoring and awareness can also extend to include the room and other performers working in duets in the same space, thus bringing mindfulness into an **inter-relational** context.

We propose that this model and indicative training programme both introduce and cultivate the separate and combined skills of embodied mindfulness for performance, and facilitate the emergence of what Khoury et al call 'Awareness of the mind-body connection'. This is Khoury et al's fourth skill dimension (the second relating to embodiment); for us, it is a quality that emerges over time, and as such we have included it in a third category - **'C: Effects of Long-term**

Training'. In the following sections we discuss the theoretical premise by which we see long-term training in embodied mindfulness resulting in a condition of heightened emergent embodiment.

Effects of Long-term Training:

Emergent Embodiment (C)

Khoury et al's 'awareness of mind-body connection' builds on the more fundamental 'sense of connection with the body'. To *connect with* the body suggests that the participant is separate from their body - an experiential duality seems to be present. In 'awareness of mind-body connection', however, this dualism appears to have given way to a new non-dual orientation in which mind and body are presented as conjoined - 'mind-body'. Implicit then in the 'embodied mindfulness' model is the progressive cultivation of a

non-dual experience of intra-personal unity, which itself becomes a focus of awareness. For Khoury et al, this skill dimension -

comprises 'noticing' the bidirectional associations between elements of the mind (e.g., thoughts such as negative judgements, emotional labels such as sadness, anger, and anxiety) and elements of the body (e.g., physical sensations such as heaviness, tension, discomfort, and tiredness). (2023, p. 462)

Mehling et al (2019) outline a very closely related concept, 'Awareness of mind-body integration', which they say can be experienced as -

the awareness that certain physical sensations are the sensory aspect of emotions... (e.g., 'I notice that my breathing becomes shallow when I get nervous'), or as an overall felt sense of an 'embodied self', representing a second-order perception of sensations that contains within it a felt sense of the interconnectedness of mental, emotional, and physical processes. (Mehling et al, 2019, p. 12)

For our purposes, we prefer Mehling et al's term 'awareness of mind-body *integration*' since we wish to emphasise the ways in which body aspects and mind aspects can become better integrated through practice over time.

Earlier, we described Farb et al's experiment which established two distinct attentional strategies - narrative focus and experiential focus. Responding to this research, Dan Siegel wrote,

Farb et al's study illuminates an important step in how the mind can come to be trained to discern dissociable streams of awareness into differentiated components of mental experience. When we link differentiated parts we create an integrated state [...]. (Siegel, 2007, p. 262)

Siegel is particularly interested in Farb et al's study precisely because it demonstrates a process of intra-personal integration, and, for Siegel, integration is of central importance to health and well-being

(2012, p. 336). He continues,

[...] the creation of such an integrated state enables a system to move toward 'maximizing complexity' which has the described features of being flexible, adaptive, coherent, energized and stable. (Siegel, 2007, p. 262)

The idea that a practitioner can become, not only more *aware of* the inter-related nature of mind and body, but actually more *integrated* as a mind-body unity, has been discussed by the Japanese philosopher, Yuasa Yasuo. T.P. Kasulis tells us that Yuasa 'argues that the integration of mind and body is only partial in the average human being. Full integration is the result of prolonged, assiduous cultivation' (Yuasa, 1987, p. 9).

The Embodied Mindfulness for Performers model represents a process of cultivating mind-body integration. In fact, Yuasa himself invokes the trainee actor when he describes the journey toward

'body-mind oneness',

At the beginner's stage, whether in a theatrical performance, dance, or sport, the student tries to move his or her body first by thinking, as it were, through the head [...] the body does not move as one's mind wishes [By contrast,] the ideal state can be referred to as 'body-mind oneness.' There is no gap between the movement of the mind and that of the body in the performance of a master, for the master's mind and body are one. (1993, p. 26)

This conception of 'the ideal state' is echoed by Zarrilli who writes, 'The bodymind ideally operates as an integrated whole' (2015, p. 136). He describes the actor's cultivated bodymind as the 'aesthetic inner bodymind' and notes that,

This body is that realm of extra-daily perception and experience associated with long-term, in-depth engagement in certain psycho-physical practices or training regimes — yoga, the martial arts, butoh, acting/performing per se, or similar forms of embodied practice which engage the physical body and attention (mind) in cultivating and attuning both to subtle levels of

experience and awareness. (2009, p. 55)

The cultivation process which we have tracked and described here involves discerning and differentiating between attentional strategies, and between fields of awareness, allowing for a greater range of both, and re-prioritising:

- experiential focus
- sensory awareness of the body
- interoception
- awareness of the interplay of psychophysical dynamics within the bodymind system
- awareness of the interplay of psychophysical dynamics within the interpersonal fields of duets and groups

Over time, through training, the performer may extend their capacity to move between and link these differentiated 'streams of awareness', creating within themselves an 'integrated system' and moving toward 'maximising complexity'.

As Zarrilli has pointed out, such a bodymind condition is the actor's ideal, and, as he tells us,

[N]umerous modes of traditional as well as contemporary actor/dancer training such as Japanese noh, LeCoq, Meyerhold's biomechanics, Grotowski-based work, butoh, Suzuki training, kathakali dance-drama, etc. provide practitioners with modes of deep, assiduous training in which the practitioner has the potential to develop an aesthetic inner-bodymind. (2009, p. 57)

Since our particular approach incorporates and is informed by mindfulness practice, the integrated bodymind and its attentional strategies and streams of awareness are themselves seen to be held in a further layer of awareness. Unlike other strategies of paying close attention, mindfulness is generally seen to incorporate *meta*-awareness.

As Parker et al write,

Mindful awareness [...] involves in its essence an awareness of an

observing self as it witnesses the direct experiencing self in the present moment - not as reflections on the past, interpretations of the present, or anticipations of the future - but with an attunement of the observing capacity of the perceptual system with the experiencing capacity of the self. (Parker et al, 2005, p. 227)

Such 'awareness of awareness' enables the practitioner to manage multi-faceted and dynamic experiences with skillful deployment of the bodymind's resources. As Parker et al make clear, this is not a detached and disembodied observation, but rather the heightened capacity of the bodymind system to observe itself.

Meta-awareness is a state of deliberate attention towards the contents of consciousness, which is often cited as a process that allows the individual to uncouple sensory experience from the 'narrative' self (Gard et al, 2014, p. 7). Meta-awareness can support trainees to

experience the transient and subjective nature of thoughts and beliefs rather than identifying with and reifying them. The perspective that meta-awareness brings ‘increases the likelihood of behavioural change’ (Critchley et al in Gard et al, 2014, p. 7). As Compton et al outline, ‘such awareness has been shown to ‘facilitate prediction of error detection and correction, and as a result, more rapidly improve behavioural correction processes when regulating emotional responses to stress’ (Compton et al in Gard et al., 2007, p. 7).

With the emergence of meta-awareness, performers can more easily identify psychophysical habits which may be impeding their performance, by prioritising observation of actual incoming sensory information, rather than the ‘virtual reality’ constructed by their cognition. This may manifest in noticing limiting habits, both physically (such as excessive tension

or postural imbalances), and psychologically (becoming more aware of how their judgements, thoughts and opinions may be impeding performance capabilities).

	Embodied Mindfulness for Performers	Indicative Practices/ Training Modalities
A: Mindfulness Aspects	1. Detachment from Automatic Thinking	<i>Eyes Scan The Room</i>
	2. Attention of Feelings & Bodily Sensations	<i>Practice instructions and side - coaching</i>
	3. Attention & Awareness of Feelings & Bodily Sensations	<i>Mindfulness of Breathing Body Scan</i>
B: Embodiment Aspects	1. Connection with the Body	<i>Guided Mindful Range of Motion Practice Mindful Solo Movement Practice</i>
	2. Interpersonal Performance	<i>Passive Movement Duet Contact Impro Duet Contact Impro Duet</i>
C: Effects of Long-Term Training	1. Awareness of Mind-Body Integration (Mehling)	Ongoing training over time

Figure Five: Chart showing the relationship between the Embodied Mindfulness dimensions and the training practices.

Conclusion

This article started by acknowledging the problem of the ‘absent’ or ‘forgotten’ body, and consequently highlighted body

awareness as a key priority for performers.

A mindfulness-informed approach was proposed to be of service, and we presented research that clarified the centrality of the body and the role of interoception in mindfulness practice, and outlined the concept of embodied mindfulness.

Building on Khoury et al's embodied mindfulness scale, and informed particularly by Phillip Zarrilli's detailed approach to psychophysical actor training, we presented a model for an embodied mindfulness training designed specifically for performers. Our model goes beyond improving body awareness by providing a pathway to the cultivation of mind-body integration.

The model incorporates the incremental, and then increasingly simultaneous, development of the following

skills and emergent capacities and bodymind conditions:

- Intentionality - paying attention on purpose.
- Non-judgement.
- Sensory awareness - which is used as a means by which to introduce detachment from automatic thinking; to shift participants from Default Mode Network to present-centred experiential awareness.
- Focused attention - these practices aim to develop, regulate and stabilise attention, and to improve interoceptive awareness.
- Interoception - the sense with which we access, interpret, integrate and regulate signals from inside the body. Intentional focus on interoception provides a foundational step for coherence between mind-body processes.
- Open awareness - which extends beyond the body to include multisensory, external and relational stimuli.
- Awareness of the rich bi-directional nature of mind-body processes - which supports emotional regulation, and psychophysical decision making.
- Attentional fluency in moving between and modulating dif-

ferent modes of attention and awareness (e.g., interoceptive and exteroceptive) - this fluency leads to coherence and integration.

- Sustained sense of connection with the body. Over time and with practice in shifting between focused and open attentional strategies within increasingly complex and dynamic training exercises, a sustained sense of connection to the body is cultivated.
- Meta-awareness - the capacity for awareness of awareness, and the consequent capacity for habit change.
- Increased integration and coherence between mind and body aspects.

It is through increased coherence and integration that a condition of enhanced, 'extra-daily' embodiment can emerge. This is the state of mastery, implied by the term 'bodymind' (or 'oneness of bodymind') which Zarrilli has so eloquently described,

The bodymind ideally operates as an integrated whole, as one dialectically engages, attending to and aware of what one is doing as it

is done. In achieving heightened attention there is equally an "attending 'with' and attending 'to' the body," and [an attending] to the body in the act of its deployment of attention and awareness. Over time, this heightened mode of somatic inhabitation can become a form of tacit, practical knowledge informing how one utilizes attention and awareness in performance. (2015, p. 136)

This interplay of attentional and awareness skills, 'with' and in relation 'to' the body lies at the heart of mindfulness. Practices and understandings of mindfulness, derived from both meditation traditions and from science, can help us to shed light on the details of the performer's journey from forgetfulness to re-membling the body, and from the daily disembodiment of the beginner to the extra-daily 'oneness of bodymind' of the master. Beyond professional training, embodied mindfulness practices offer a pathway into new and transformative terrains of embodiment

and awareness. In this way, mindfulness practices in the performance studio can power profound shifts in the participant's lived experience, not only on stage but in the wider circles of their life.

References

Bodhi, Bhikku (2013) 'What Does Mindfulness Really Mean?' in Mark G. Williams & Jon Kabat-Zinn, *Mindfulness: Diverse Perspectives on its Meaning, Origins and Applications*. London & New York: Routledge, pp. 19 - 39.

Bornemann, B., Herbert, B. M., Mehling, W. E., & Singer, T. (2015). 'Differential changes in self-reported aspects of interoceptive awareness through 3 months of contemplative training'. *Frontiers in psychology*, 5, 1504.
<https://doi.org/10.3389/fpsyg.2014.01504>

Blum, Harrison (2016) *Dancing with the Dharma: essays on movement and dance in western Buddhism*. Jefferson, North Carolina: McFarland & Company, Inc.

Brown, K.W., Creswell, J.D. & Ryan, R.M. (2015) *Handbook of Mindfulness: Theory, Research, and Practice*. New York: The

Guilford Press.

Carmody, James (2014) 'Eastern and Western Approaches to Mindfulness' in Le, Ngnoumen, and Langer, *The Wiley Blackwell Handbook of Mindfulness*. John Wiley & Sons pp.48-57.

Chen, W. G., Schloesser, D., Arensdorf, A. M., Simmons, J. M., Cui, C., Valentino, R., Gnadt, J. W., Nielsen, L., Hillaire-Clarke, C. S., Spruance, V., Horowitz, T. S., Vallejo, Y. F., & Langevin, H. M. (2021). 'The Emerging Science of Interoception: Sensing, Integrating, Interpreting, and Regulating Signals within the Self'. *Trends in Neurosciences (Regular Ed.)*, 44(1), pp. 3–16.
<https://doi.org/10.1016/j.tins.2020.10.007>

Chin, Jason & Schooler, Jonathan. (2010). 'Meta-Awareness'. *Encyclopedia of Consciousness*. pp. 33-41. 10.1016/B978-012373873-8.00051-7.

Clark D, Schumann F, Mostofsky S.H. 'Mindful movement and skilled attention'. *Frontiers in Human Neuroscience*. 2015 June 29;9:297. doi: 10.3389/fnhum.2015.00297. PMID: 26190986; PMCID: PMC4484342.

Daubenmier, J., Sze, J., Kerr, C. E., Kemeny, M. E., & Mehling, W. (2013). 'Follow your breath: Respiratory interoceptive accuracy in experienced meditators'. *Psychophysiology*, 50(8), pp. 777-789.
<https://doi.org/10.1111/psyp.12057>

Davis, Jake H. & Thompson, Evan (2015) 'Developing Attention and Decreasing Affective Bias: Toward a Cross-Cultural Cognitive Science of Mindfulness' in Brown, K.W., Creswell, J.D. & Ryan, R.M. (2015) *Handbook of Mindfulness: Theory, Research, and Practice*. New York: The Guilford Press.

Farb, Norman A.S., Segal, Z.V., Mayberg, H., Bean J., McKeon, D., Fatima Z., & Anderson, A.K. (2007). 'Attending to the present: Mindfulness meditation reveals distinct neural modes of self-reference'. *Social Cognitive and Affective Neuroscience*, 2(4), pp. 313–322. 10.1093/scan/nsm030

Gard, T., Noggle, J.J., Park, C.L., Vago, D.R., Wilson, A. (2014) 'Potential self-regulatory mechanisms of yoga for psychological health'. *Frontiers in Human Neuroscience*. 2014 Sep 30; 8:770. doi: 10.3389/fnhum.2014.00770. PMID: 25368562; PMCID: PMC4179745.

Rupert Gethin (2011) 'On Some Definitions of Mindfulness'. *Contemporary Buddhism*, vol. 12, issue 1 (May 2011) pp. 263-279

Kabat-Zinn, J. (1994). *Wherever You Go. There You Are: Mindfulness Meditation in Everyday Life*. London: Piatkus.

Kabat-Zinn, J. (2011). 'Some Reflections on the Origins of MBSR, Skillful Means, and the Trouble with Maps'. *Contemporary Buddhism*, vol. 12, issue 1 (May 2011) pp.

Kabat Zinn, J (2018) 'Homunculus'. *Mindfulness* (2018) 9:1974–1978 <https://doi.org/10.1007/s12671-018-1027-8>

Jha, A. (2021) *Peak Mind: Find Your Focus, Own Your Attention, Invest 12 Minutes a Day*. Harper Collins Publishers Inc.

Joss, D., & Teicher, M. H. (2021) 'Clinical effects of mindfulness-based interventions for adults with a history of childhood maltreatment: A scoping review'. *Current Treatment Options in Psychiatry*, 8(2), 31-46.

Khoury, B., Knauper, B., Pagnini, F., Trent, N., Chiesa, A., Carriere, K. (2017) 'Embodied Mindfulness'. *Mindfulness*. Vol. 8. pp.1160-1171.

Khoury, B. (2018) 'Mindfulness: Embodied and Embedded'. *Mindfulness*. Vol 9. pp 1037-1042.

Khoury B, Vergara RC, Sadowski I, Spinelli C. (2023) 'Embodied Mindfulness Questionnaire: Scale Development and Validation'. *Assessment*. 30 (2), pp. 458-483. doi: 10.1177/10731911211059856.

Lutz, A., Slagter, H. A., Dunne, J. D., & Davidson, R. J. (2008). 'Attention regulation and monitoring in meditation'. *Trends in cognitive sciences*, 12 (4), pp. 163–169. <https://doi.org/10.1016/j.tics.2008.01.005>

Marshall, L. (2001) *The Body Speaks*. Methuen Publishing Ltd. London.

Mehling, W.E., Gopisetty, V., Daubenmier, J., Price, C.J., Hecht, F.M., et al. (2009) 'Body Awareness: Construct and Self-Report Measures'. *PLoS ONE* 4 (5) e5614. doi:10.1371/journal.pone.0005614

Mehling, W. (2016). 'Differentiating attention styles and regulatory aspects of self-reported interoceptive sensibility'. *Philosophical transactions of the Royal Society of London. Series B, Biological sciences*, 371(1708), 20160013. <https://doi.org/10.1098/rstb.2016.0013>

Nguyen, J. D., & Duong, H. (2023). 'Neurosurgery, Sensory Homunculus'. *StatPearls*. StatPearls Publishing. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK549841/>

Nyanaponika, Thera (1962) *The Heart of Buddhist Meditation*. London: Rider & Co.

Oida, Y. (2007) Workshop, *Physical Fest*, Liverpool, UK.

Parker, Suzanne C., Benjamin W. Nelson, Elissa S. Epel, and Daniel J. Siegel (2005) 'The Science of Presence: A Central Mediator of the Interpersonal Benefits of Mindfulness' in Brown, K. W., Creswell, J. D., & Ryan, R. M. (2015). *Handbook of mindfulness: Theory, research, and practice*. The Guilford Press.

Siegel, Daniel J. (2007). 'Mindfulness training and neural integration: Differentiation of distinct streams of awareness and the cultivation of well-being'. *Social Cognitive and Affective Neuroscience*, 2(4), pp. 259-263. <https://doi.org/10.1093/scan/nsm034>

Siegel, Daniel J. (2012) *The Developing Mind: How Relationships and the Brain Interact to Shape Who We Are*. New York, London: The Guilford Press.

Simon Murray & Mark Evans (2020) 'Play, Complicité, Disponibilité: a dialogue between Mark Evans and Simon Murray at the National Theatre in London, November 2018', *Theatre, Dance and Performance Training*, 11:4, pp. 515-518, DOI: 10.1080/19443927.2020.1824857

Schmalzl, L., Crane-Godreau, M. A., & Payne, P. (2014). 'Movement-based embodied contemplative practices: definitions and paradigms'. *Frontiers in Human Neuroscience*, 8, 205. <https://doi.org/10.3389/fnhum.2014.00205>

Sokol-Hessner, P., Wing-Davey, M., Illingworth, S., Fleming, S.M., Phelps, E.A. (2022) 'The actor's insight: Actors have comparable interoception but better metacognition than nonactors'. *Emotion*. 2022 Oct; 22(7) pp.1544-1553. doi: 10.1037/emo0001080.

Thompson E., Varela F. J. (2001). 'Radical embodiment: Neural dynamics and consciousness'. *Trends in Cognitive Sciences*, 5(10), pp. 418–425.
10.1016/S1364-6613(00)01750-2

Varela F. J., Thompson E., Rosch E. (1991). *The Embodied Mind: Cognitive science and human experience*. MIT Press.

Verhaeghen, P. (2017) *Presence: How Mindfulness and Meditation Shape Your Brain, Mind and Life*. Oxford University Press.

Young, S (2019) *The Science of Enlightenment. How Meditation Works*. Sounds True Publishing.

Yuasa, Yasuo (1987) *The Body: Toward an Eastern Mind-Body Theory*. New York: SUNY Press.

Yuasa, Yasuo (1993) *The Body, Self-Cultivation, and Ki-Energy*. New York: SUNY Press.

Zarrilli, Phillip B. (2009) *Psychophysical Acting: an intercultural approach after Stanislavski*. London. Routledge.

Zarrilli, Phillip B. (2015) "'Inner Movement" between Practices of Meditation, Martial Arts, and Acting: A Focused Examination of Affect, Feeling, Sensing, and Sensory Attunement' in Bull, M., & Mitchell, J.P. (Eds.) (2015) *Ritual, Performance and the Senses* (1st ed.). London: Routledge.