Mindfulness and Education

Mindfulness and Education:

Research and Practice

Edited by

Tamara Ditrich, Royce Wiles
and Bill Lovegrove

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INTRODUCTION

With an apparent tide of mindfulness practices and programmes sweeping in to a range of academic, therapeutic and other domains, applications of mindfulness (however diversely defined and understood) have also begun to flow into educational settings. Consequently, and necessarily, research on the efficacy of various mindfulness-based interventions and practices has been increasing in the last decade. Being still in its infancy, a considerable number of fundamental research-related issues remain unresolved, untheorised or perhaps even unidentified as yet. In light of these considerations, the present volume aims to contribute to the nascent field of mindfulness research in education, exploring its practical implementations as well as theoretical concerns within a range of educational contexts.

The inspiration for this volume stems from the conference "Mindfulness, Education and Transformation" (September 2014) held in Wollongong, Australia, where valuable research papers on a variety of topics related to implementations of mindfulness in education were presented; participants from this conference have contributed to the present volume. Most chapters focus on the research and practice of mindfulness in Australia and New Zealand, reflecting the growing interest in mindfulness in the region. To reflect the diversity of approaches, the papers are divided into three sections: (1) theoretical conceptualisations of mindfulness come first, and then two sections presenting research on aspects of mindfulness interventions in (2) schools and (3) tertiary educational settings.

The first section (two chapters) discusses theoretical presentations and the current state-of-the-art research into mindfulness. In chapter one, the concept of mindfuness is introduced; the contemporary understanding of, and research on, mindfulness is compared to, linked and contrasted with its representations and models within traditional Buddhist contexts. The chapter gives an overview of traditional Buddhist and modern conceptualisations and applications of mindfulness and then discusses major methodological issues arising from the processes of the cultural de- and re-contextualisation of mindfulness from Buddhist into Western paradigms. The main foci in Western mindfulness approaches and research are outlined and linked to broader epistemological questions, stemming from the disjunctures between traditional Buddhist presentations

of mindfulness and contemporary Western conceptualisations, identifying the latter as situated within a therapeutic framework and Western constructs of knowledge, which historically exclude any category perceived as "religious." This chapter also suggests ways in which the current approaches to, and research on, mindfulness could benefit from appropriate reconnections with the source tradition(s). It suggests that the re-linking of mindfulness with values, ethics, and understanding interconnectedness of all beings, which are at the core of Buddhist discourses, could broaden current Western perceptions and applications of mindfulness programmes in education, and add a new lens for exploring current social, environmental and other issues.

Chapter two reviews current research on mindfulness interventions with children, evaluating their educational, psychological, cognitive and behavioural outcomes. A number of quantitative studies and meta-analyses are reviewed, encompassing clinical and nonclinical populations, mostly delivered in school settings among children and adolescents. The authors identify several methodological issues occurring in most studies, such as failing to use control groups and not measuring any changes in mindfulness itself. The review points out that evidence for the efficacy of mindfulness intervention programmes among children is generally weak, with only a few studies showing significant outcomes, and that many studies have poor research design. As suggested in the chapter, research on the role of mindfulness in education would need to consider the broader context of family, peers and the broader culture of the school over longer periods. The review gives several recommendations for future research directions, such as determining which groups, at which ages, are most responsive to mindfulness training; whether the efficacy of programmes varies with different mindfulness techniques applied; and what the role of teachers in mindfulness intervention programmes is. The authors conclude that there is sufficient evidence in the studies reviewed for the effectiveness of mindfulness interventions to justify further implementations and research.

The next four chapters present research on various aspects of mindfulness programmes in schools. In chapter three, the major focus is methodological issues, which are discussed through a critical evaluation of processes involved in the teaching of, and research on, mindfulness in school settings. The study is based on the research outcomes of a pilot mindfulness-based teaching programme implemented at a primary school in Adelaide, South Australia. This evaluation is particularly valuable because very few studies to date have investigated mindfulness programmes introduced in classroom settings among middle school

students. The author raises questions related to ambiguities around the definition of mindfulness, which "is commonly used as an all-encompassing or shorthand term for a complex array of theoretical constructs and associated practices and activities." The more general problem of defining mindfulness is reflected in the variety of teaching approaches and specified goals in the existing mindfulness-based programmes in education, leading to a lack of clear guidelines for their evaluation. The author insightfully links this issue to the lack of an appropriate ethical framework for implementing mindfulness-based programmes in school settings and identifies broader consequences and risks involved, such as not addressing the unacceptable social situations and circumstances of children, especially in socioeconomically disadvantaged groups. In such cases, mindfulness interventions may "deflect awareness away from underlying structural and societal factors that caused the problem behaviours in the first place." Thus, the chapter links ethical issues with those of social justice, pointing to a very important gap in current secular mindfulness programmes in schools.

Chapter four presents a long-term, whole-school approach to the implementation of a mindfulness programme applied in several primary schools in Israel since 2000. Most mindfulness-based interventions to date have only been carried out over a shorter period, in a rather fragmented manner. This study is therefore particularly valuable since it provides a model for the full integration of mindfulness into the whole school curriculum over a longer term, involving not only children but also teaching staff and parents. The authors describe the programme and present experiences of this whole-school approach emerging from sixteen years of implementation. Over the years, this programme has had several evaluations, from which the authors have drawn insights. The main benefits, as reported by children, include improved ability to relax and concentrate, a better sense of control, greater self-awareness, improved interpersonal skills, emotional intelligence, and self-healing. In addition, the authors show that this long-term whole-school approach substantially increases mindfulness scores, improves children's coping skills and enhances empowerment through their increased ability to recall meditation skills and apply them in stressful situations. It is underlined that it is only through such a long-term holistic practice that gradual transformation in children can take place, enabling them to positively change their coping habits. The authors show that a whole-school mindfulness programme over the long term influences the entire school culture and brings about better academic outcomes. The study indicates,

through the benefits evaluated, that a whole-school approach over extensive periods of time is worth implementing and researching further.

In chapter five, we move to the other side of the globe, to Aotearoa-New Zealand, where an innovative model of teaching mindfulness in schools was developed, called "Pause, Breathe, Smile," which was modified to support the New Zealand Education Curriculum and incorporate a holistic wellbeing perspective from indigenous Māori culture. The programme has been initiated, supported and promoted by the Mental Health Foundation of New Zealand, which founded Mindful Aotearoa, and has been facilitating its delivery and training of the programme's facilitators. The author outlines key developments of this programme and the results of several studies, which again point to positive outcomes, encompassing significant increases in wellbeing and improved behaviour of children involved. The programme endeavours to integrate holistic perspectives, drawing from the rich repository of wisdom in Māori indigenous tradition, which views the world as an interconnected whole, embracing humans and the natural environment in their interdependence and multiple interrelations. This model has many parallels with the Buddhist paradigm—from which mindfulness stems in the first place—such as its foundational teachings about the interrelatedness and interdependence of all phenomena. Thus, Mindful Aotearoa seems a very valuable enhancement of the prevailing, largely clinically-based "one size fits all" models of mindfulness interventions, and shows that these may be enriched by engaging meaningfully with models from culturally diverse indigenous traditions in a manner relevant to the local cultural contexts.

The role of the teacher in the implementation of mindfulness programmes in schools has received relatively scant scholarly attention to date. Therefore, the study with a focus on teachers' meditation practice, discussed in chapter six, is an important contribution to this under-researched area. In this chapter, using a qualitative approach, the author seeks a deeper understanding and effects of contemplative practices of a group of twenty-two educators across school sectors in various educational settings in Australia and New Zealand. It aims to learn about the participants' motivations and inspiration for their contemplative practices, outlines the types of meditation they have practiced, and identifies the main outcomes, as perceived by the participants in terms of their personal and professional life. One of the most significant insights from this study is that most participants view their meditation practice as having been transformative not only for themselves but also for their students. The study exemplifies, in the author's words, that for a teacher

"going within means striving to ensure that the students do not 'go without.'" The outcomes of this study signal that including contemplative practices into teacher education and professional learning could be beneficial for the entire school culture.

The final section includes five studies on mindfulness conducted in university settings. In these chapters, research focuses on student and general populations, with research approaches and methodological tools of psychology, based strongly on quantitative methods. The studies involve a mixture of cross-sectional and mindfulness intervention designs to investigate trait mindfulness in relation to various areas such as burnout, emotional regulation, self-efficacy, self-control attachment, and deautomatisation. Generally, these studies show how various psychological variables contribute both to mindfulness and to improved psychological health, thus providing some insight into psychological mechanisms contributing to higher levels of trait mindfulness.

Chapter seven addresses the growing problem of burnout commonly experienced by many work groups. In particular, it investigates the relationship between emotion regulation and burnout in university students, using a range of validated questionnaires. Importantly, it shows that students who were more mindful on the questionnaire's measures of mindfulness reported less burnout. Even though such students used adaptive emotion regulation strategies more and nonadaptive strategies less, emotion regulation only accounted for a small part of the effect of mindfulness on burnout.

The next chapter investigates the relationship between various forms of self-efficacy and trait mindfulness. The results show that attributional mindfulness was moderately positively correlated with general, coping and learning self-efficacy measures. Further investigation found significant partial mediation by mindfulness self-efficacy when the dependent variable was coping self-efficacy or general self-efficacy, but not when it was learning self-efficacy. The results suggest that there may be a reciprocal relationship between some forms of self-efficacy, and mindfulness: training on one attribute may assist development of the other.

Both chapters nine and ten investigate aspects of mindfulness and the processes of decentering and deautomatisation. Decentering refers to detaching from one's thought and is viewed to contribute to deautomatisation—a process in which one's previously established tendency to effortlessly and unconsciously engage in maladaptive behaviours—becomes conscious and controlled. Deautomatisation is a concept used in a number of theories of mindfulness to explain how

mindfulness interrupts habitual ways of thinking, feeling and behaving. In terms of its manifestation, it may be comparable (in a qualified way) to the Buddhist concepts of mindfulness, clear comprehension and equanimity. Chapter nine explores the relationship between secure attachment and different measures of mindfulness, and evaluates how well Garland, Gaylord, and Park's "mindful coping model" (2009) explains this relationship in both a cross-sectional study on university students and in a MBSR training study. Contrary to expectations, a positive relationship between trait mindfulness and insecure attachment was found, along with an inverse relationship between mindfulness and reappraisal strategies. In the MBSR study, it was found that even though the MBSR training did increase mindfulness and decentering, there was an unexpected decrease in positive reappraisal and no change in attachment. The conclusion was that cognitive positive reappraisal is antithetical to the acceptance concepts of mindfulness. It is possible that these results may be more consistent with the Buddhist notions of "simply noting" thoughts rather than trying to place different interpretations on them.

The importance of decentering is further investigated in chapter ten. In particular, this chapter investigates several predictions based on a recent model, suggesting mindfulness leads to deautomatisation. The proposal was that through decentering and nonelaborative processing, mindfulness would facilitate decreases in suppression and reappraisal, leading to lower levels of psychological distress. Results from this cross-sectional study revealed that an inverse relationship between mindfulness and psychological distress was mediated by both decentering and reappraisal, independently, suggesting that the deautomatisation model of mindfulness is promising and warrants further investigation.

Recent research has established the importance of self-control or will power for successful living on almost any criteria. Chapter eleven seeks to better understand the relationship between will power and mindfulness. Self control, which may be understood as an individual's ability to withhold a predominant response, or persevere through a situation to achieve desirable outcomes, has significant longitudinal effects on an individual's daily life, as well as on their psychological health. The study showed that self-control and mindfulness were positively related to one another and that they made overlapping contributions to psychological distress. This finding suggests that self control and mindfulness reflect some similar mechanisms or processes. In addition, this study examines the benefits of mindfulness meditation for overcoming a reduction in self-control resources, known as ego depletion (ED), in line with the strength model

of self-control. However, statistically significant support was not found for the presence of an ED effect, or the benefits of mindfulness meditation in improving performance on a self control task.

The book begins by introducing the roots of mindfulness in Buddhist teachings and ends by returning to the Buddhist framework. Chapter twelve presents the results of a study that explores the experiences of a group of participants in a contemporary insight (*vipassanā*) meditation retreat in Australia, conducted through interviews and participant observation. It aims to identify the ways in which participants in the retreat, based on mindfulness practices, learn about the underpinning teachings of Buddhism. It investigates how they understand, experientially and conceptually, mindfulness (understood to comprise bare attention, clear comprehension and nonjudgmental awareness) and how they interpret their experiences from a Buddhist perspective, through Buddhist vocabulary and frameworks. The author suggests that participation in such retreats can bring about valuable insights, and the retreat framework may be useful also for mindfulness educators and other professionals in their endeavours to implement mindfulness in educational settings. In addition, as pointed out in this chapter, the format of an intensive retreat, particularly over longer periods, may be a suitable context for future research into effects of mindfulness training.

A major theme emerging from the work reported in this book is the need to bring together the contemporary uses of mindfulness as therapy and some core Buddhist concepts originally linked to mindfulness. Perhaps the major Buddhist teaching of relevance is that mindfulness should be practiced along with living a life according to Buddhist ethics, as argued in chapter one. The research and analyses used in chapters seven to eleven lend themselves to this sort of proposed investigation, asking whether mindfulness training techniques are more efficacious when taught along with Buddhist ethics. In particular, the importance of lovingkindness, compassion, empathetic joy and equanimity in contributing to psychological health in children warrants investigation along with further investigations of mindfulness. In a similar way, the results reported in chapter nine show that positive appraisal did not operate as was expected. It would be useful to investigate whether the Buddhist strategy of simply noting thoughts and "letting them go" is a more effective strategy than either positive or negative reappraisal. Finally, the processes of decentering and deautomatisation discussed in chapters nine and ten appear to be quite similar to the Buddhist concept of equanimity. It is likely that a fuller understanding of what occurs in

mindfulness training and its effectiveness can both be enhanced by a research framework, which investigates these concepts together.

This volume attempts to reflect and capture the enthusiasm and diversity of mindfulness programmes implemented in contemporary education. The research interests and directions in evidence are equally rich and diverse, involving methods and approaches of many disciplines, with the identified outcomes offering a spectrum of findings and themes related to mindfulness and education. From the evidence adduced, we can conclude that the implementations of mindfulness programmes as well as research efforts about them are worthwhile, especially in educational contexts, involving as they do the very lives and wellbeing of new generations.

Tamara Ditrich and William Lovegrove

Wollongong, 1 October, 2016

I:

THEORISING MINDFULNESS: CONCEPTUALISATIONS AND RESEARCH

CHAPTER ONE

THE CONCEPTUALISATION AND PRACTICE OF MINDFULNESS: BUDDHIST AND SECULAR PERSPECTIVES

TAMARA DITRICH

Abstract

Mindfulness, as a component of Buddhist meditation practice, was recontextualised and popularised in the twentieth century and eventually, through the process of secularisation, entered a range of new settings, especially in therapeutic contexts. This chapter aims to discuss the conceptualisation and practice of mindfulness from two different perspectives, i.e., Buddhist and secular. Firstly, it situates mindfulness within Buddhist discourse, outlines its definition, main roles and functions, and proposes some of the main indicators that point to the establishment, progress and efficacy of mindfulness. The chapter then outlines the process of the transplantation of mindfulness from the Buddhist context (specifically the Theravāda) into Western paradigms, identifying some of the historical conditions that facilitated this transition. Some implications of the secular definitions and interpretations of mindfulness are outlined, and the main issues arising from the processes of cultural translation from ancient Asia into the global societies of the twenty-first century discussed. In the last section, the rapidly expanding modern research on mindfulness is commented upon, especially in terms of education, exploring how the different definitions and aims of mindfulness practice affect research models, methods and evaluations within the current scientific discourse.

1. Defining mindfulness

In current scholarly and popular literature, two types of mindfulness are often distinguished, Buddhist (or "Eastern"), and secular (or "Western") (Aronson 2004; Purser and Milillo 2015; Wilks 2014). This division reflects, among other determinants, the polarisation of religion

and science in Western discourses. Mindfulness is rooted in an ancient Indian contemplative tradition, with its beginnings usually situated in the fifth century BCE, transmitted within the tradition we today term "Buddhism." In old Indian cultures and languages (such as Sanskrit or Pāli) there was no specific category, word or concept for "religion" (nor was there one for "philosophy" or "psychology"). Only in the encounter with the West, during colonisation in the nineteenth and early-twentieth centuries, were various Asian traditions categorised and labelled as specific "religions," Buddhism being one of them (McMahan 2008).

The label Buddhism was applied as an umbrella term to various disparate living traditions of Asia, which (more or less) centred around the notion of the Buddha and his teachings, and thus gradually became perceived as one of the world religions. With the popularisation of mindfulness in the late-twentieth century and its introduction into a variety of secular settings, mindfulness began to be reinterpreted as a secular method, primarily applied for the development of greater attention and increased wellbeing. Consequently, its links to Buddhism, perceived as a religion, had to be sidestepped and all the components of the practise of mindfulness, which were regarded to be related to religion, stripped off (Wallace 2012). This appropriation (with associated de-contextualising) and the subsequent decanting of secular mindfulness from Buddhist mindfulness has had several implications, which have recently received some scholarly attention (Aronson 2004; Kirmayer 2015; Lutz, Dunne and Davidson 2007; Samuel 2014), and will be discussed in this chapter.

The main purpose of this chapter is to re-link contemporary treatments of, and research on, mindfulness with its extensive representations within the Buddhist tradition. The first section below presents the Buddhist approach to mindfulness, which inevitably involves the complexities of traditional Buddhist exegesis and analysis. The second part of the chapter overviews the modern conceptualisations and applications of mindfulness and discusses the main methodological concerns arising from the processes of cultural translation and recontextualisation. The current issues in Western mindfulness approaches and studies are linked to broader epistemological questions, namely the juxtaposition of two very disparate sets of categorisations, i.e., traditional Buddhist analyses and elaborations of mindfulness in therapeutic intervention, where Western constructs of knowledge have rigorously excluded "religious" categorisations. This article attempts to outline some of this disjuncture and its consequences and then identifies ways in which the current approach to mindfulness could perhaps benefit from a (necessarily critical but nevertheless

genuinely appreciative) relinking with the source tradition, as exemplified in the Theravāda canon.

1.1 Mindfulness in the Buddhist tradition[1]

1.1.1 Representations of mindfulness in the Theravāda Buddhist canon

"Mindfulness" is the translation of the Pāli term *sati*[2] (Sanskrit *smṛti*), which occurs in Buddhist texts in a range of meanings, such as "memory, recollection, recognition, mindfulness, wakefulness, alertness" (PED, *sv*). The word *sati* most frequently refers to meditative awareness, which is situated within the broader context of Buddhist soteriological goals, to be achieved through ethical and meditative training. It is commonly presented as an ethical guardian, watching with attention the cognitive processes occurring from moment to moment (Vism 464). It does not intervene with the phenomena arising, however there are other components in the process of meditation training that are to evolve together with mindfulness, such as effort and ethical or moral development, which have a more active role, aiming to prevent the arising and continuation of unskilful (*akusala*) or harmful states (e.g., anger, greed), and maintain and encourage skilful/wholesome ones (e.g., kindness, generosity).

In the Theravāda Buddhist model, mindfulness is not deemed to be practiced on its own but rather in conjunction with other mental qualities and faculties to be cultivated on the path to liberation from suffering (*nibbāna*). As "right mindfulness" (*sammā*[3] *sati*), it is an innate component of the fundamental structure of Buddhist teachings, the four truths, which: (1) expound the nonsatisfactoriness of existence (*dukkha*) or suffering, based on ignorance about the nature of all phenomena (i.e., that they are impermanent and without an intrinsic self); (2) position craving (*taṅhā*) as the precondition for the arising of suffering, explained as "thirst" or desire for ongoing pleasurable experiences and freedom from unpleasant phenomena; (3) affirm the possibility of the complete extinction of suffering (*nibbāna*); and (4) delineate the eightfold path, which leads to liberation from suffering, achieved through ethical training, meditation practice and cultivation of wisdom (S V 420–424). The components of the eightfold path are not developed in a linear manner; each of them is conditioned by, and connected to, all the other ones.

The aim of the Buddhist eightfold path is awakening, which is accomplished by the cultivation of wisdom (*paññā*). Wisdom itself has two components: right or appropriate understanding (*sammā diṭṭhi*) that all phenomena are impermanent, interlinked and without an intrinsic

permanent self (M I 46–55); and secondly, right intention (*sammā saṅkappa*), which cultivates wholesome mental states and renounces unwholesome ones (Vibh 235). The next three components of the eightfold path concern morality/ethics (*sīla*):[4] right speech (*sammā-vācā*), right action (*sammā kammanta*) and right livelihood (*sammā ājīva*), i.e., the cultivation of speech and actions that do not cause suffering to oneself or others (Vibh 235). In Buddhist teachings, there are no equivalent terms for the categories ethics and morality, as understood in Western philosophy (Keown 1992, 2–3). However, it may be argued that ethics is the foundation of Buddhist teachings, underpinning all its main theoretical representations, such as the five aggregates, the formula of dependent origination (*paṭiccasamuppāda*), and the Abhidhammic analysis of cognitive processes; these can be understood and applied only through the notion of non-self (in conjunction with impermanence and nonsatisfactoriness). The fundamental premise for cultivation of *sīla* is the notion of wholesomeness (*kusala*), meaning that moral speech and actions are grounded in wholesome mental states or, in the language of the Theravāda *Abhidhamma*, accompanied by wholesome mental concomitants (*cetasika*), which include mindfulness, kindness and wisdom. The attribute wholesome (*kusala*) refers here to those constituents implicated in cognitive processes, which are appropriate or skilful (i.e., free from delusion, desire and aversion), viewed in Buddhist teachings as essential for development of wisdom and liberation from suffering.

The last three components of the eightfold path, closely interlinked with wisdom and ethics, are concerned with meditative training, namely: right effort (*sammā vāyāma*) to cultivate wholesome (*kusala*) mental states, and avoid unwholesome (*akusala*) ones (Vibh 235); right mindfulness (*sammā sati*), presented as ethical awareness, without desires and discontent, practised towards four domains (the body, feelings, cognition and mental phenomena) (Vibh 236); and right concentration (*sammā samādhi*) on a meditation object, such as breathing, leading to deep states of meditative absorption (*jhāna*) (Vibh 236). Thus, right mindfulness (*sammā sati*) is intrinsically situated in, and linked to, all the other components of the eightfold path, leading to liberation from ignorance and suffering. As mentioned earlier, the mere presence of mindfulness protects from negatives states (such as anger, greed, envy, conceit) and conditions development of wisdom (*paññā*), which understands mental and physical phenomena as impermanent, empty of a permanent intrinsic identity. Conversely, in the Buddhist paradigm any presence of these negative states in the mind indicates the absence of mindfulness.

Thus, in the Pāli canon right mindfulness is presented as one of the essential components of the Buddhist soteriological framework. It is defined, explained and taught in several canonical texts, usually in the context of the four foundations of mindfulness (*cattāro satipaṭṭāna*), most extensively in the *Satipaṭṭhānasutta* (M I 55–63; D II 290–315; Anālayo 2010). According to this text, mindfulness is to be practiced with regard to four domains, the body (*kāya*), feelings (*vedanā*), cognition (*citta*), and mental constituents (*dhamma*), in conjunction with other qualities. The text states that the meditator is to be "diligent, clearly comprehending and mindful, having abandoned desires and discontent regarding the world."[5] Diligent (*ātāpī*) refers to energetic extinguishing of negative mental states (*kilesa*) (Ps I 244), clearly comprehending (*sampajāno*) means understanding how to cultivate wholesome and skilful qualities and abandon harmful ones (A I 13; Dhs 16), while having (temporarily) abandoned desires and discontent (*vineyya abhijjhādomanassaṃ*) concerning the world (*loke*) (Ps I 244; Vibh 195).

The Buddhist term mindfulness (*sati*) is often also understood and represented in English by the words "attention" or "awareness," especially in contemporary secular interpretations. However, in the Buddhist context, the two concepts are very clearly differentiated. The term "attention" would be a rendition of the Pāli term *manasikāra*, expounded as a cognitive component or concomitant (*cetasika*), which directs or adverts to the object (Vism 466) before it is identified and conceptualised (Bodhi 1993, 81). In cognitive processes (as analysed by the Theravāda *Abhidhamma*), attention (*manasikāra*) is present at every moment of cognition, in any mental state, either wholesome or not, whereas mindfulness (*sati*) occurs only in wholesome or skillful (*kusala*) states (Bodhi 1993, 79). The aim of mindfulness practice, as presented in the Pāli canon, is not only paying attention to phenomena occurring in the present moment, but rather the cultivation (*bhāvanā*) of wholesome, skilful, "wise attention" (*yoniso manasikāra*) (Dhs 229), which arises together with wholesome components such as mindfulness (*sati*) and clear comprehension (*sampajañña*) (A V 115). The concepts attention (*manasikāra*) and mindfulness (*sati*) from the Theravāda Buddhist perspective are two very different concomitants (*cetasikas*) in cognitive processes— attention being always present, whereas mindfulness only in connection with wholesome mental states. When both arise together, then attention is called "wise attention" (*yoniso manasikāra*) which, in conjunction with other wholesome components, facilitates cultivation of wisdom.

To summarise, mindfulness is firmly embedded in Buddhist soteriological structures (such as the eightfold path), as being one of the essential

conditions for, as well as the outcomes from, ethical training and wisdom. Consequently, within Buddhist frameworks, mindfulness cannot be presented as a meditation method *per se*, i.e., to lead on its own to liberation from suffering, but can be practised only in conjunction with other aspects of meditational and ethical training. It is an inalienable component of broader underlying premises of Buddhist teachings, which include the notion of "non-self" (*anattā*): mindfulness cannot be regarded as a permanent reference point or "witnesses," aware of the phenomena occurring from moment to moment, but is rather one of the integral constituents of cognitive processes, which are all impermanent, changing from moment to moment.

1.1.2 Mindfulness and cognition

Among different, albeit interrelated, representations and models of the Buddhist teachings, cognitive processes are most comprehensively analysed and discussed in the *Abhidhamma*, a collection of texts traditionally dated in the third century BCE, in which the main structural foundations of Buddhist discourse are systematically defined and analysed. In these texts, human cognitive processes are investigated and their "deep structure" delineated by identifying a number of fundamental components of complex, lived experiences, which (according to the tradition) are analysed at a deeper, nonconceptual level. These basic components, elements or events, called *dhammas*, surmised to be involved in, or condition the mental and physical phenomena arising moment to moment, are listed, defined and discussed (Warder 1971). The entire structure is presented under four main categories: cognition (*citta*), mental constituents (*cetasika*), materiality (*rūpa*), and *nibbāna*.

Cognition (*citta*) is defined as the "knowing" of an object (As 63); it arises every moment in conjunction with a group of mental constituents (*cetasika*), which determine *how* the object is known; for example, a visual object can be cognised with anger, restlessness and delusion, or with peace, joy and mindfulness. The *Abhidhamma* lists over fifty such mental constituents (*cetasika*), which can occur in various groupings (Dhs 9, 75–76; 87; 120). They are classified, on an ethical basis, as wholesome (e.g., trust, joy, peace, lightness, mindfulness, wisdom)[6] (Dhs 9), unwholesome (e.g., anger, greed, restlessness, delusion, conceit) (Dhs 75–87) or variable (e.g., feeling, volition, perception, attention) (Bodhi 1993, 79). The wholesome constituents always appear together in a group and are not compatible with the unwholesome ones and vice versa; for example, in a given moment of cognition, fear or greed cannot be grouped together with mindfulness or compassion. Mindfulness is listed as one of the wholesome

constituents (*cetasikas*),[7] always arising with other wholesome ones, such as trust (*saddhā*), non-greed (*alobha*), non-aversion (*adosa*), mental equilibrium (*tatramajjhattatā*), peace (*passaddhi*), lightness (*lahutā*), gentleness (*mudutā*) (Dhs 9), but incompatible with the unwholesome ones. It means that the presence of mindfulness indicates and is indicated by the other mental constituents (*cetasikas*) that arise with it, such as trust, peace, kindness, and wisdom. These wholesome constituents (*dhammas*), which include mindfulness, are considered essential for cultivation of ethics and meditation.

The foundational cognitive structures or psychological "maps," outlined in the *Abhidhamma* and other Buddhist texts, identify and discuss only those constituents of an experience that are pivotal for liberation from suffering, because the motivation and aim of the complex investigations of cognitive processes is to develop a deep understanding (in theory and practice) of the nature of physical and mental phenomena to the extent that is necessary for liberation form suffering; this is the rationale for all Buddhist teachings (Bodhi 1993, 4). Mindfulness is thus perceived as one of the components (albeit an exceptionally important one) that facilitates an understanding and insight into the "deep structure" of experiences, beyond the conceptual level, and prompts the development of wholesomeness; for example, it encourages the development of loving kindness, compassion, wisdom, while it discourages or prevents the negative components of cognition, either through understanding their harmfulness or by prompting wholesome states to develop instead. Cognition accompanied by mindfulness can condition the arising of wisdom, i.e., an insight that all constituents of an experience, including mindfulness and cognition itself, are without a permanent intrinsic nature, and that any clinging to, or identification with, any of the components of experience, stem from ignorance and craving, and only lead to conflict and suffering.

1.1.3 Indicators of mindfulness from the Buddhist perspective

As discussed earlier, the main functions and roles of mindfulness within the soteriological framework of Buddhist practice are: to protect from reacting to experiences, as they arise, with desire, aversion and other unwholesome states; to establish the right conditions for understanding as to whether mental states are wholesome or not; and, in conjunction with other wholesome mental constituents, to prepare the grounds for wisdom to arise, which, in turn, is viewed as an indispensable condition for liberation, *nibbāna*. Consequently, within Buddhist doctrinal structures and meditation "maps," the presence, progress and effectiveness of

mindfulness may be indicated through several components, aspects or variables. Below, some of these indicators are identified, which may serve as evaluation tools in research on mindfulness.

Firstly, in the Buddhist context, "progress" in mindfulness meditation may be indicated and evaluated through an ethical lens. As frequently stated in Buddhist texts, well-established mindfulness diminishes or even temporarily extinguishes the five hindrances (*nīvaraṇa*)—unwholesome mental states rooted in greed (*lobha*), aversion (*dosa*) and delusion (*moha*). These encompass: (1) sensory desires (*kāmacchanda*), seeking, craving and delighting in pleasures derived through the senses (Dhs 204); (2) ill-will (*vyāpāda*), encompassing hatred, annoyance, resentment, hostility, irritation, anger (Dhs 204); (3) sloth and torpor (*thīna-middha*), referring to dullness, rigidity, stolidity, and unwieldiness of the mind and body (Dhs 204–205); (4) restlessness and worry (*uddhacca-kukkucca*), explained as agitation, unrest, distraction, remorse and anxiety (Dhs 205); and (5) doubt (*vicikicchā*), referring to perplexity, hesitation, uncertainty, the lack of trust (Dhs 205). As noted in Buddhist teachings, the diminishment or (temporary) abandonment of these five hindrances is an indication that mindfulness and concentration have become fairly well established, and these, in turn, are a precondition for wisdom and insight to occur (e.g., A III 63–64; S V 127). Hence, diminishment or absence of these five hindrances may serve as good indicators of progress and efficacy of mindfulness meditation.

Secondly, according to the analysis expounded in the *Abhidhammattha Saṅgaha*, mindfulness is a mental constituent (*cetasika*) that is always accompanied by eighteen other wholesome mental constituents (*cetasika*), comprising: trust (*saddhā*), mindfulness (*sati*), reluctance at doing wrong (*hiri*), regard for consequences (*ottappa*), absence of greed (*alobha*), absence of hatred (*adosa*), mental balance (*tatramajjhattatā*), tranquility of mental body (*kāyapassaddhi*) and cognition (*cittapassaddhi*), lightness of mental body (*kāyalahutā*) and cognition (*cittalahutā*), malleability of mental body (*kāyamudutā*) and cognition (*cittamudutā*), wieldiness of mental body (*kāyakammaññatā)* and cognition (*cittakammaññatā*), proficiency of mental body (*kāyapāguññatā*) and cognition (*cittapāguññatā*), and rectitude of mental body (*kāyujukatā*) and cognition (*cittujukatā*) (Bodhi 1993, 79). These mental constituents, which arise together with mindfulness as a group at every moment of wholesome cognition, may serve as indicators for presence of mindfulness; for example, tranquillity, lightness, confidence, absence of greed or anger may indicate that mindfulness is present or well established.

Furthermore, understanding the supporting nature of certain mental constituents for the development of wholesome mental states is a significant insight from the traditional exegesis. According to the *Abhidhamma*, mindfulness is compatible with, and mutually enhancing for, the arising and strengthening of both loving kindness (*mettā*) (Dhs 188–189), and compassion (*karuṇā*); these are wholesome mental constituents and therefore, meditation on loving kindness and compassion are important (perhaps vital) components of Buddhist meditative practice. Loving kindness meditation (*mettā*)—literally "friendliness"—is included in the group of the so-called four immeasurables or sublime states (*brahmavihāras*), i.e., loving kindness (*mettā*), compassion (*karuṇā*), appreciative joy (*muditā*) and equanimity (*upekkhā*) (Vibh 272–284; Aronson 1980).[8] The practice of the four sublime states may be followed by mindfulness meditation or, alternatively, mindfulness can be practised in conjunction with meditation on loving kindness and other sublime states (S V 119–120). According to the traditional analysis of mental states, loving kindness and the other three sublime states are (by definition) accompanied by mindfulness, since all of them are wholesome mental constituents (Bodhi 1993, 79). Hence, the practice of loving kindness and compassion conditions and enhances the development of mindfulness and vice versa. From a Buddhist perspective, an increased kindness, compassion, appreciative joy and equanimity may be good indicators for progress and positive effects of mindfulness meditation.

Thirdly, as discussed above, mindfulness can facilitate and condition the arising of wisdom (*paññā*), which, according to the *Abhidhamma,* can only arises together with mindfulness; however, the converse does not hold—i.e., the presence of mindfulness does not necessarily mean that wisdom has arisen (Vibh-a 311). Wisdom is presented as one of the wholesome (*kusala*) mental constituents (*cetasika*), it understands or has an insight into the three marks (*ti-lakkhaṇa*), i.e., impermanence, non-satisfactoriness and non-self of all mental and physical events and processes (Vism 436–438). The progress of mindfulness may be indicated by an increased occurrence of wisdom, usually manifested as an insight into impermanence, which is regarded as one of the first stages of insight into the nature of changing physical and mental phenomena (Vism 639–640).[9] Many Buddhist texts (e.g., S IV 142–143; A III 2) put forward that seeing the momentary arising and passing away of all phenomena leads on to the final soteriological goal of Buddhist practice, liberation from suffering. Thus any insight into impermanence indicates the presence of wisdom, which in turn points to a solid establishment of mindfulness as its precondition.

Fourthly, another key aspect of wisdom (*paññā*) is an insight into the absence of permanent, intrinsic self (*anattā*), as often reiterated in the Buddhist teachings (e.g., S IV 147–156; Vism 632–634). This insight, which is manifested as freedom from clinging to, or identifying with, physical and mental phenomena or events, yet again, strongly indicates a solidly founded mindfulness and usually occurs when meditation practice is well established (Vism 628–629). This insight reduces the sense of "I" and consequently reduces polarisation between "myself" and "other," which is signalled by an increased freedom from conflicts, both inner (i.e., within oneself) and outer (i.e., with other people or circumstances). Therefore, a diminished experience of conflicts may be a good indicator of wisdom, which in turn signals a well-established mindfulness.

In summary, the aspects and indicators related to the presence of mindfulness presented above, which are based on, and draw from, the Buddhist understanding of the structure and dynamics of cognitive processes, may be considered variables in constructing new theoretical models of mindfulness and may serve as indicators to be included in research about the functioning and efficacy of mindfulness.[10]

1.2 Modern interpretations of mindfulness

1.2.1 Mindfulness and modern Buddhism

As Buddhism expanded over centuries across Asia, new interpretations, schools of thought and practices evolved, but as far as the roles and interpretations of mindfulness are concerned, the most significant changes seem to have occurred only in the last hundred years, initiated by the historical events in the late-nineteenth century (Ditrich 2016a). This was the time of the colonisation of Asia and the encounters between Buddhist traditions and European paradigms, resulting in the birth of "modern" Buddhism, which was reinvented by both Westerners and Asian Buddhists with an aim to represent Buddhism as a world religion and a philosophical system compatible with European ideas of the time. The main parameters, reflected and involved in the formation of modern Buddhism were: encounters with Christianity (McMahan 2008, 67–73); European science and rationalism (Lopez 2002, xi–xii; Sharf 1995, 252); European Romanticism, which particularly influenced the positioning of meditative experience at the forefront (Sharf 1995); and more recently psychology, significantly impacting on the interpretation of meditation through a psychological lens (McMahan 2008, 48). In addition, particular historical developments during the colonial period in Burma (current day Myanmar) greatly contributed to situating mindfulness at the centre of Buddhist

teachings. The Burmese responded to colonisation by moving to strengthen their Buddhism, which was no longer under patronage of the kings, and turned to the lay population for support. In this process, Buddhism was reinterpreted; meditation, traditionally practised only by a small number of monastics, was positioned as one of the most important Buddhist practices for the lay population (Braun 2013, 150–155).

In this shift, mindfulness came to be the most appropriate element of meditation to be practised by the laity in everyday life and consequently, the methods had to be simplified; for example, the time dedicated to formal meditation was significantly shortened, and the expectations of quick results greatly increased (Sharf 1995, 256). With growing popularisation of mindfulness in Burma, the first meditation centres for laity were established, and several noted teachers, among them Mahasi Sayadaw (1904–1982) and U Ba Khin (1899–1971) and, later on, his disciple Goenka (1924–2015), were subsequently instrumental in popularising mindfulness meditation worldwide; their methods constitute a large part of today's contemporary mindfulness applications in secular contexts. Though Burmese teachers modified their approaches to practice of mindfulness, meditation remained embedded in the Buddhist discourse.

In the twentieth century, revitalised and simplified mindfulness meditation was spreading rapidly among the laity, firstly in Burma, then in other Asian Buddhist countries, and in the postcolonial period, particularly from the 1970s onwards, this movement gradually expanded across the globe. Initially, meditation courses that were offered in the West followed the methods and structures developed in Burma, such as the ten day meditation retreat, facilitated by Goenka, which still remains one of the most popular Buddhist meditation training models. Already, early on in the late 1970s, and more so in the 1980s, mindfulness programmes in the West, especially in the US, started to draw from and integrate different meditation methods from other Buddhist and non-Buddhist traditions (Braun 2013, 162–64) as well as include psychotherapeutic approaches. Subsequently, mindfulness practice started to be increasingly viewed as a training in attention, with the aim to improve psychological wellbeing, and thus prepared the grounds for its secularisation.

1.2.2 Secularisation and new representations of mindfulness

The introduction of the programme "Mindfulness-Based Stress Reduction" (MBSR) in the late 1970s may be viewed as a major milestones that greatly contributed to the secularisation of mindfulness. This (by now well-known) eight-week programme was developed by Kabat-Zinn and initially introduced at the Mindfulness Based Stress

Reduction Clinic at the University of Massachusetts in 1979; in subsequent decades, it expanded worldwide. MBSR typically consists of weekly meditation classes, a one day retreat, and regular home practice in daily life. Mindfulness meditation, largely extracted from modern Burmese methods, especially those developed by Mahasi Sayadaw and U Ba Khin, incorporates formal sitting meditation, "body scan," some *yoga* postures and mindfulness in daily activities. The MBSR programme has also been modified and incorporated into various types of psychotherapy, one of the most prominent among them being "Mindfulness Based Cognitive Therapy" (MBCT), which was developed as an intervention for prevention of depression relapse (Segal, Williams and Teasdale 2002). In addition, mindfulness is applied in dialectical behaviour therapy (DBT) (Lineham 1993), acceptance and commitment therapy (ACT) (Hayes, Strosahl, and Wilson 1999) and many others, addressing a wide range of disorders (both clinical and sub-clinical), such as anxiety, depression, pain management, eating disorders, substance abuse, and relationship enhancement, to name a few. Mindfulness has also entered other new environments, such as the corporate world, schools, prisons, the military, wellness industries, and is used as a tool for enhancement of wellbeing at work (Follette, Palm, and Pearson 2006; Germer 2016). In these contexts, it is often promoted as another self-help method or attention-enhancing tool, promising improved focus and productivity, better decision making and greater acceptance of given situations.

The secularisation of mindfulness and its introduction into new domains has inevitably been reflected in new conceptualisations and practices. Most commonly, secular mindfulness is defined as a bare awareness that "emerges through paying attention on purpose, in the present moment, and nonjudgmentally to the unfolding of experience moment to moment" (Kabat-Zinn 2003, 145), or "nonelaborative, nonjudgmental, present-centred awareness in which each thought, feeling or sensation that arises in the attentional field is acknowledged and accepted as it is" (Bishop et al. 2004, 232). It is necessary to highlight here that the presentation of mindfulness as "bare attention" does not stem from Buddhist traditional teachings, but seems to have been introduced in the 1960s by Ñāṇapoṇika, the author of enormously influential pioneering work *The Heart of Buddhist Meditation* (1962), and since then it has strongly influenced the modern definitions of mindfulness (Gethin 2011, 267). The attribute "nonjudgmentally" does not originate from the Buddhist traditions; instead it seems to have been coined by Kornfield (1977, 13). Some authors translate/interpret mindfulness as encompassing two aspects, awareness and attention, i.e., being aware of an experience, paying attention to it and