

UC Berkeley

UC Berkeley Previously Published Works

Title

The Emperor's Clothes: A Look Behind the Western Mindfulness Mystique

Permalink

<https://escholarship.org/uc/item/8c461669>

ISBN

9781493922628

Author

Rosch, Eleanor

Publication Date

2015

DOI

10.1007/978-1-4939-2263-5_19

Peer reviewed

encounter with
ire and the limits
ersity Press.
reat Perfection:
es to Dzogchen
chen Nyingtig.

osa-Bhasya of
hidharma and its
oussin & Lodrö
tilal Banarsidass

lution: Unlocking
Boston: Wisdom

ikarma (pp. 203–
the Institute of

Routledge.
dhist ethic and the
1 from [http://www.
the-buddhist-ethic-](http://www.the-buddhist-ethic-)

The Emperor's Clothes: A Look Behind the Western Mindfulness Mystique

19

Eleanor Rosch

Mindfulness is a word. It is currently a very popular word. As the other papers in this volume amply document, mindfulness has become a magnet for research in psychology, neuroscience, and medicine, and it is a hot topic in clinical psychology. Many Buddhist groups have joined in the enthusiasm, taking the research to be proof that “meditation works” (“Shambhala Sun,” 2012) and/or that society is undergoing a “mindfulness revolution” (Boyce, 2011). With enthusiasm, however, can come confusion. Having a word may make us think there is a “thing” that is the word’s meaning; having definitions for the word (even if they are multiple and divergent) may lull us into thinking we (or someone) knows that meaning; having trainings with that word in the title reassures the researcher that the thing the word means is now at hand; and once researchers can design measurement instruments that vary with the training, the whole process may become sacrosanct and largely closed to further questioning.

It is time to reopen all of this to scrutiny. Why are people not already mindful? Might Buddhism, the origin of mindfulness practices, have anything illuminating to reveal about its Western uses? Where does mindfulness fit into Buddhist

training of attention or of other virtues? What specific practices are taught in Mindfulness Based Stress Reduction (MBSR, Kabat-Zinn, 1990) and similar trainings, and what clues do we have about how the people who go through these programs use what they are taught? This is an especially important question not only because MBSR is the prototype for Western therapeutic uses of mindfulness but also because the most frequent de facto operational definition of mindfulness (verbal definitions aside) is that subjects in an experiment have taken some form of the 8-week MBSR program. In regard to the measurement of mindfulness, what specific items make up the mindfulness measurement scales; what do the items ask, and what are they measuring? I believe that it is only by this kind of examination of the specifics of what is going on that we can wake from the spell cast by the word *mindfulness* and gain clearer understanding of it. This could result in new and more grounded research questions and simpler, more individually targeted therapies—ideally perhaps even to shifts in our understanding of body and mind.

To this end, the rest of the chapter presents: (a) A brief overview of mindfulness (and attention generally) in Buddhism. (b) An examination of the contents of the 8 week MBSR program and how participants use those contents. (c) A template of the basic components that make up a therapeutic program of this nature and an account of some alternative ways these components could be

E. Rosch (✉)
Department of Psychology, University of California,
Berkeley, CA, USA
e-mail: rosch@berkeley.edu

instantiated. Such a template could be used to generate more focused research questions and to design interventions to fit specific individual or population differences. (d) A critique of the present mindfulness measurement scales. (e) Predictions of some major changes in our views of both body and mind that could occur in the future and cast a broader perspective on all this work.

Attention and Mindfulness in Buddhism

Western therapeutic mindfulness is not Buddhism. It may use some techniques borrowed from Buddhism, but it uses them in a different manner and towards different goals. Buddhism itself is not unitary. It is divided into three major world forms, called *yanas* (paths/vehicles) in Buddhism—Theravada, Mahayana, and Vajrayana—each of which treats the domain in which mindfulness functions, attention to the present, rather differently. There are also a number of newly emerging social activist forms of Buddhism that at times lay claim to the status of a fourth *yana*. Psychologists should be wary of using citations from one of the *yanas* (usually Theravada) as though they represent Buddhism as a whole; not only does this obscure diversity, but it tends to be less than appreciated by Buddhists from the non-cited *yanas*. The following review emphasizes psychologically relevant factors and is based on the ways Buddhism is taught and practiced in contemporary Buddhist centers as well as on historical reconstructions of its past. Thus the review is not in any way a substitute for the detailed accounts of particular periods, trends, and texts provided by Buddhist Studies scholarship.

Theravada

Theravada (The Speech of the Elders) is the one surviving school of early Buddhism (that began in India around 500 BCE) and the primary Buddhism of Southeast Asia: Thailand, Myanmar (Burma), Sri Lanka, Laos, Cambodia, and parts

of Vietnam. I will discuss it in some detail because the meditation portion of MBSR is derived from Theravada meditations. (For more material on the early Buddhism to be covered in this section see Buddhaghosa, 1976; Byrom, 1993; Kornfield, 1977; Nyanaponika 1973; Rahula, 1959.) Theravada teachings contain the basis of Buddhist psychology: an explanation of why we are not happy when that is what we wish for, and an account of the practices that can be done to remedy that. The format in which this is often presented is the Four Noble Truths: life is marked by *dukkha* (suffering/unsatisfactoriness); there is a cause of suffering; by extinguishing the cause, suffering will cease; and there is a path by which this can be accomplished. It sounds simple and upbeat, but there is a catch. To see any of this personally—the pervasiveness of suffering as well as its cause and cure—requires looking deeply into one's experience. In the words of the Dhammapada (The Saying of the Buddha), "He [the master practitioner] looks deeply into things/ And sees their nature" (Byrom, 1993, p. 108). This is something that we don't ordinarily do and in fact cannot do as long as we have a wild mind that "like a monkey, leaps from branch to branch" (common simile for the untamed mind in Eastern cultures). That is where Buddhist meditation enters and where we find the initial introduction of mindfulness.

There are two aspects to early Buddhist meditation: peaceful abiding (Pali: *samatha*, Sanskrit: *shamatha*, Tibetan: *shine*) and clear seeing (Pali: *vipassana*, Sanskrit: *vipashyana*, Tibetan: *lhagthong*). Shamatha, which literally means *peace*, is generally viewed as a preliminary practice whose purpose is to calm and stabilize the mind. Calming the mind includes what in the West we call *relaxation*, but it is an alert relaxation. This pacified mind provides a platform from which the meditator can direct close enough attention to moment-to-moment mental occurrences (breathing, sensations, perceptions, feelings, thoughts) to see into their nature. To make the initial shamatha practice simple, the meditator is generally taught to hold his mind (more realistically to keep returning his mind) to a single object of attention, such as his breath or a visual object

(*kasina*)—a task that necessitates focus on an object but an inability to focus on other objects. This is not necessarily different from meditation and in attention to mental phenomena, though a probing contemplative discipline.

Where in all this is the problem? It is to enter a thicket of terminology and dispute. Scholars generally agree that the word *mindfulness* began with the Pali term *sati* (Sanskrit agreement, both ancient and modern) what in the meditation process in general) *sati* was an issue is that meditation on human activities, do not rather in meaningful context of kind of context and how the meaning of the word mindfulness refer only to the mind can return to an object (one of a cluster of memories always present in a moment of Buddhist systematization the *Abhidharma*) or show a particular kind of meditation early Buddhist suttas? If bare attention alone (and not to close attention to time alone; or to close memory of Buddhist teachings plus memory plus discursive actions; and so on? (For disputes see "Contemporary Sharf, 2015). Since the history of any of this is well being made about different those are what we will

When the meditator directs close attention and clearly see? Early Buddhism's view of Existence: impermanence, suffering, *Impermanence* changes such as the impermanence) but to moment arising and falling one's perceptions and

(*kasina*)—a task that necessitates not only close focus on an object but an inhibition (or a release) of focus on other objects. The quality of attention is not necessarily different in single object meditation and in attention to moment-to-moment mental phenomena, though it can be if directed in a probing contemplative direction.

Where in all this is mindfulness? Here we enter a thicket of terminological and interpretive dispute. Scholars generally agree that the English word *mindfulness* began life as a translation for the Pali term *sati* (Sanskrit *smṛti*), but there is disagreement, both ancient and modern, about just what in the meditation process (or in consciousness in general) *sati* was intended to include. At issue is that meditation practices, like other human activities, do not occur in a vacuum but rather in meaningful contexts. In dispute is what kind of context and how much of it to include in the meaning of the word mindfulness. Does mindfulness refer only to the power by which the mind can return to an object of concentration (one of a cluster of mental factors said to be always present in a moment of experience in the Buddhist systematization of mental factors called the *Abhidharma*) or should it be used to name a particular kind of meditation as was done in two early Buddhist suttas? If the latter, does it refer to bare attention alone (and is there such a thing?); or to close attention to present experience over time alone; or to close attention combined with memory of Buddhist teachings; or to attention plus memory plus discernment regarding ethical actions; and so on? (For an exploration of these disputes see “Contemporary Buddhism,” 2011; Sharf, 2015). Since the importance for psychology of any of this is what claims were (and are) being made about different mental processes, those are what we will look at as we continue.

When the meditator develops the capacity for close attention and clear seeing, what does he see? Early Buddhism speaks of the Three Marks of Existence: impermanence, egolessness, and suffering. *Impermanence* points not only to obvious changes such as that people die (called gross impermanence) but to the subtler moment-to-moment arising and falling, birth and death, of one's perceptions and thoughts. This is relevant

to MBSR because MBSR contains some meditation, and when a person begins to meditate, impermanence is usually the first thing noticed, albeit in the form of an active, wandering, uncontrollable-seeming mind. *Egolessness* raises the question: who is it that observes that mind? This is also relevant to the MBSR meditator because the *I/me* who he assumes is the observer is illusive, never in direct sight, and frustratingly never quite in control. What the more experienced Buddhist meditator also sees is that this illusive supposed self is the center of his motivation, emotions, and actions. *Suffering* is understood in Buddhism to be inherent in a life of struggle to grasp what is felt to be good for that imagined self, to avoid or attack what is felt bad for it, and to ignore what is judged irrelevant. One is trapped in the struggle because getting what one wants increases rather than assuages desire (the basis of addiction; watch what happens the next time you bite into something delicious), and, similarly, acting out fear, aggression, or ignoring augments rather than relieves oneself of those emotions. What the beginning mindfulness meditator will see of all this is that when she attempts to remain present with the simplest experience, either in meditation or daily life, although the first moment or two might be entertaining, shortly the tension begins to build; boredom, irritation, even fear, may increase; seductive thoughts intrude, and she is again gone. In short, there is no contentment.

This constant cycling from one unsatisfactory mode of being to another is called *samsara*, traditionally thought of as composed of actual realms into which a sentient being could be born as well as mental states. The goal of meditation was to be liberated from *samsara*. How? In early Buddhism the logic is that since it is desire, aggression and ignorance in the mind that forge the chains of cause and effect (*karma*) keeping one imprisoned, those three poisons need to be eliminated from the mind. There were two basic methods: (a) One could allow the impulse toward actions arising from both wholesome (*kusala*) and unwholesome (*akusala*) mind states to rise and fall without response. This eliminates karmic seeds and does not replace them with new ones.

it in some detail
ion of MBSR is
tations. (For more
n to be covered in
sa, 1976; Byrom,
/anaponika 1973;
chings contain the
: an explanation of
at is what we wish
actices that can be
nat in which this is
oble Truths: life is
unsatisfactoriness);
y extinguishing the
d there is a path by
ed. It sounds simple
1. To see any of this
ss of suffering as
—requires looking
In the words of the
f the Buddha, “He
s deeply into things/
om, 1993, p. 108).
t ordinarily do and
ve have a wild mind
m branch to branch”
ned mind in Eastern
ddhist meditation
: initial introduction

arly Buddhist medi-
: *samatha*, Sanskrit:
nd clear seeing (Pali:
ana, Tibetan: *lhagth*-
ally means *peace*, is
inary practice whose
stabilize the mind.
what in the West we
alert relaxation. This
form from which the
enough attention to
occurrences (breath-
, feelings, thoughts)
make the initial sha-
neditator is generally
more realistically to
o a single object of
th or a visual object

That was considered the only way to conclusively eliminate the three poisons and gain liberation. But it requires renunciation, dedication, restraint of the senses, and protracted close mindfulness meditation to implement and was thus the province of monastics. (b) One could counter unwholesome states such as greed, hatred, and aggression with other more wholesome mind states such as nonviolence or loving kindness (*metta*). This method creates good karma, and was appropriate for both monastics and the lay community. Note that the momentary periodic checking in with what is happening in the present that is needed to be functional in everyday life—and that everyone does to some extent—was taken for granted and not considered mindfulness. The ultimate goal in early Buddhism and in present Theravada is to attain nirvana (Pali: *nibbana*), a state from which, after death, one would not again be reborn.

Theravada teachings in their seminal form do not transfer well to the West. The question for Westerners is usually not, “How can I wake from delusion and free myself from samsara?” but, “How can I use meditation to calm down, feel better, and become more successful?” With that change of context, the nature and implementation of meditation and mindfulness also change radically, as we will see.

Mahayana

Mahayana (Great Vehicle) Buddhism is estimated to have begun around 100 CE in India and eventually spread throughout East Asia: China, Korea, Japan, and parts of Vietnam. (For more material on the Mahayana Buddhism to be discussed in this section see, Demoulin 2005; Nhat Hanh, 1987; Santideva, 1995; Sprung, 1979; Suzuki, 1970; Trungpa, 1993.) Indian Mahayana added two major teachings to early Buddhism: emptiness (*shunyata*) and compassion (*karuna*), which are said to be inseparable “like the two wings of a bird.” This is a vast topic, but what is relevant for present purposes is to note that in Mahayana there is a type of functioning of the mind beyond the motivations of samsara. When a

practitioner realizes the openness and release of *shunyata* and his own inherent compassionate good will towards others, he can live with his senses and thoughts in an enlightened way in this very life. In fact, Mahayana practitioners may take Bodhisattva vows to be reborn in life after life in order to be of benefit to others.

In the Buddha nature schools appearing in later Mahayana, further assertions are made; sentient beings already have an enlightened nature (Buddha nature, *tathagatagarbha*), and the goal of practice is to fully realize it. The path to that is seen as: a) removal of the obstacles that obscure the enlightened nature and b) breaking through to the nature itself. The classic dispute between the gradual and sudden enlightenment schools occurred when these two steps were judged to conflict rather than to mutually support one another.

What happens to mindfulness and the training of attention in this context? The deliberate mindfulness of early Buddhism tends to be replaced by a fierce concentration—for example, on a koan (Loori, 2006)—that enables the practitioner to shatter his conceptual mind and emerge into the vast interdependent universe in which there is no separate observer to observe or mind to be mindful. This is called non-duality. It directly cuts into the sense of a self with its projects, so that, even in the practice of “just sitting” (*shikantaza*), it is eventually necessary to simply let go into one’s original mind (Suzuki, 1970). Alone among Buddhist teachers, the influential Vietnamese peace activist, poet, and Zen teacher Thich Nhat Hanh employs the English word *mindfulness* to refer to the entire path—its ground, path, and fruition (Nhat Hanh, 1975, 1987), a usage that can potentially blur the distinctions that Nhat Hanh makes in other ways when that single word enters the context of science.

Vajrayana

The Vajrayana (Diamond Vehicle) became prominent circa 800 CE in India. Early forms of it moved into China and Japan, later ones to Tibet. Because it is the Tibetan forms that are most

known and practiced in discussion to those. (For Vajrayana to be discussed see Fremantle 2001; Poni Snellgrove, 1987; Sogy Tsoknyi, 1998.) Vajrayana is to the Buddhism tradition as a variety of methods of Tantra and in pre-Buddhism is that there is work beyond samsara and knows the primordial timeless, complete, a ground radiates the presence. Known with the ordinary world of experience, grasping, aggression, it is seen to actually consist of that radiance. (In contemporary outgrowth Shambhala (Trungpa, passed by the term “buddhism”)

Where is mindfulness practice, Vajrayana mindfulness (Tibetan: connection with an object of sight or one’s breath *sheshin*), the broader that can, for example, longer attending to or (The closest Western William James’ contrast to focal Various analogies of relationship between mindfulness and awareness to the graph, book, or method embedded (Trungpa and awareness are not mindfulness were to the practitioner a practice *tudro*), not a happy human; with only enlightenment could be understood awareness is broadening, the quality of the also transformed. It

openness and release of inherent compassionate qualities, he can live with his enlightened way in this yana practitioners may be reborn in life after death to others.

schools appearing in assertions are made; sense an enlightened nature (*tagarbha*), and the goal to realize it. The path to that is the obstacles that obscure the path. b) breaking through to the basic dispute between the enlightenment schools. c) steps were judged to mutually support one

mindfulness and the training. c) The deliberate mindfulness tends to be replaced by, for example, on a koan practice the practitioner to find and emerge into the process in which there is no separate or mind to be mind-ful. It directly cuts into the projects, so that, even in "being" (*shikantaza*), it is simply let go into one's awareness (1970). Alone among influential Vietnamese Zen teacher Thich Nhat Hanh word *mindfulness* to its ground, path, and fruition (1987), a usage that can distinguish that Nhat Hanh from that single word enters

Vehicle) became prominent in India. Early forms of it appeared, later ones to Tibet. In the forms that are most

known and practiced in the West, I will limit discussion to those. (For more material on the Vajrayana to be discussed in this section see, Fremantle 2001; Ponlop, 2003; Rosch 2008, Snellgrove, 1987; Sogyal, 1992; Trungpa, 1991; Tsoknyi, 1998.) Vajrayana adds two new teachings to the Buddhism that came before it as well as a variety of methods originating in Indian Tantra and in pre-Buddhist Tibet. The new teaching is that there is wisdom awareness (*rigpa*) beyond samsara and beyond emptiness that knows the primordial ground of being: pure, timeless, complete, and all-good. From that ground radiates the phenomenal world of experience. Known with pure vision (*dag snang*), the ordinary world of experience—samsara with its grasping, aggression, ignorance, and suffering—is seen to actually consist of the wisdom energies of that radiance. (In the simpler language of a contemporary outgrowth of Vajrayana called Shambhala (Trungpa, 1984), all this is encompassed by the term "basic goodness.")

Where is mindfulness in this? For a beginner's practice, Vajrayana makes a distinction between mindfulness (Tibetan: *trenpa*), the mind's simple connection with an object of perception such as a sight or one's breath, and awareness (Tibetan: *sheshin*), the broader knowing that surrounds it that can, for example, recognize that one is no longer attending to one's breath (Mipham, 2003). (The closest Western analog of awareness may be William James' concept of fringe attention in contrast to focal attention—James, 1890.) Various analogies may be used for the relationship between mindfulness and awareness; for example, mindfulness is likened to a single word and awareness to the sentence, grammar, paragraph, book, or meaning in which the word is embedded (Trungpa, 1976). Both mindfulness and awareness are necessary. If only a pointillist mindfulness were to be developed, it would make the practitioner a plodding ignorant animal (a *tudro*), not a happier or a more enlightened human; with only expanded awareness, the practitioner could be ungrounded and imprecise. As awareness is broadened and deepened with training, the quality of the moment of being present is also transformed. Eventually that flash of pres-

ence can be experienced as brilliant, self-knowing, and self-liberating. There is more to be said about the practicalities of Vajrayana, but the topics that are relevant to MBSR, such as the role of the physical body, will emerge later when we discuss those aspects of MBSR.

What have we learned about mindfulness and attention to the present moment from this whirlwind tour of Buddhism? The minimal meaning of mindfulness appears to be close moment-to-moment attention to one's experience as it is happening over a period of time. The purpose is to enable the mind to penetrate to the nature of experience. People in the usual state of mind called *samsara* flee the present moment because they find it painful or boring, and it is disconfirming of the fantasy self. As greater mindfulness and/or awareness develop through practice and through input from the yana in which the meditator is practicing, obstacles to realization are diminished or drop away; the fruition of realization (which differs in the different yananas) begins to manifest, and the nature of the present moment is understood to be itself transformed in ways well beyond mindfulness.

Mindfulness Based Stress Reduction (MBSR)

We now have the background to look into some of the factors in Western therapeutic and research oriented uses of mindfulness. I am going to do this by means of an examination of MBSR, since it was the first and has become the prototype for such uses. In fact, most of the studies that meet scientific standards that use "eight weeks of mindfulness training" as their de facto operational definition of mindfulness turn out to have been done on MBSR or some close variant. The impression given is that subjects were intensively practicing mindfulness meditation, or at least mindfulness, however defined, for 8 weeks. This is not the case. MBSR is a potpourri of practices and teaching that develop beneficial life skills that include some meditation but also much else. My account of what is in MBSR (although preceded by my study of written protocols for the

training such as those in Kabat-Zinn, 1990 and Stahl & Goldstein, 2010) is based primarily on participant observation (the anthropological technique that includes recordings and interviews) that I have carried out over the last 2 years.

Data for the following account was obtained as follows: I attended three complete MBSR 8-week trainings. In the first training, I stayed within the role of participant, taking on-site notes only during teacher talks and group discussions and not conducting formal interviews. During the second two trainings, I did the same on-site observations, but in addition interviewed all participants who were willing to schedule the extra time to speak with me, a total of 17 people. Fourteen of these people were interviewed twice, once during the course of the training and once after its conclusion. Three people were interviewed only once; two of them after the training had ended. The interviews were primarily naturalistic; I posed initial topics, but subsequent questions and conversation stemmed from the interviewee's responses. Because my intent was to elicit what was salient to the participants, not all participants spoke about all of the topics. An exception to this was that at the end of the final interview (when participants had already completed the MBSR program), I posed specific questions directed at their understanding and experience of the mindfulness aspects of the training. My overall purpose was to study how MBSR was presented and how participants reacted to the various exercises.

Introductory Context and Motivation Setting

In the first session, all three teachers in the groups that I observed enthusiastically introduced MBSR as a scientifically proven course that can improve/change people's lives. Participants (10–15 in a group was the norm) introduced themselves, said why they had come to the program, and were asked to talk about an attribute that they liked about themselves, a technique that turns attention toward the positive, an approach used in positive psychology (Seligman, 2011). It also generated a

friendly group atmosphere. Context and motivation were provided by a lecture on the destructive effects of stress and the benefits of reducing it, and participants were told that the method they would learn for reducing stress was *mindfulness*. Although mindfulness was defined as in Kabat-Zinn (1990)—attention to the present, on purpose, and without judgment—that abstract formulation was not specifically referenced again in any of the groups. (This is the usual fate of definitions in natural language—Rosch, 2011.) The pleasures to be provided by enhanced attention were demonstrated by an exercise consisting of the slow, guided, eating of three raisins. In closing, a workbook was given to participants with sections for each week of the training, and Kabat-Zinn (1990) was recommended as optional reading. This entire context differs from that in Buddhism, and we will see how that affects participant response to the meditations.

The Meditations

Two guided meditations are part of the program: a body-scan and what was called a sitting meditation. For home practice, CDs of the guided instructions, spoken by the teacher of the group, were provided to each participant. Teachers of MBSR are trained and authorized by the University of Massachusetts Center for Mindfulness, and although the three teachers had different personal styles in their talks and in discussions with participants, their presentation of the meditations were very similar.

The body-scan. The body-scan appears to have been created by a Burmese Buddhist meditation teacher of the late 19th-early 20th century named Ledi Sayadaw, and is now taught in the West primarily by the Indian teacher S.N. Goenka (1987). It is an idiosyncratic variant of Theravada Buddhism. The premise of the body scan is that the basic body-mind units of experience are sensations. When we desire, fear, or abhor something external, what we really want or do not want, are particular kinds of sensations. Through explicit Theravada teachings and through intense,

prolonged, and unwave sensations, including the sitting immobile for months. Goenka's intensive 10 days are meant to realize that transient vibrations, thereby desire and aversion from

Not surprisingly, the done differently. It is lying down, either on a session or at home in a choice, usually his bed. tral tones, the voice of student to notice any s and slowly, with pauses dent to notice points all tion of transient vibratio A single scan is done in

What do participants? Overwhelmingly partic relaxation (for 85 % it v natural assumption giv reduction program and lying down with clo roughly half said that t relaxing for them and work at least part of th said that it helped the them to sleep, some r had never stayed awak the group sessions, a accompanied the bod they augmented their relaxation techniques t The other half of the g siastic to negative, th boring, uncomfortable participants who mentio present as a purpose f beginning meditator's thought rather than st directed. Almost all th probing, reported hav their body or their re they had not been p was at the level of in surprisingly, particip body scan were less

Context and motivation are on the destructive benefits of reducing it, and that the method they used to reduce stress was *mindfulness*, as defined as in Kabat-Zinn (1990), the present, on purpose, without abstract formulation or attachment to any of the usual definitions in the literature (e.g., Kabat-Zinn, 2011.) The pleasures to be derived from attention were demonstrated to consist of the slow, steady, and pleasant sensations. In closing, a workgroup of participants with sections for reading and Kabat-Zinn (1990) and other material. This entire section is in Buddhism, and we will discuss participant response to

are part of the program: as called a sitting meditation, CDs of the guided meditation by the teacher of the group, and a participant. Teachers of the program are authorized by the Massachusetts Center for Mindfulness, and the three teachers had been mentioned in their talks and in discussions, their presentation of the program is very similar.

body-scan appears to have been an early Buddhist meditation practice named *vipassana* in the early 20th century named by the teacher S.N. Goenka (1987). The basic variant of Theravada Buddhism is that the purpose of the body scan is that the pleasures of experience are sensory, pleasant, and we really want or do not want them. Through changes and through intense,

prolonged, and unwavering attention to body sensations, including the pain that comes from sitting immobile for many hours at a time in Goenka's intensive 10 day retreats, participants are meant to realize that sensations are mere transient vibrations, thereby hopefully eliminating all desire and aversion from their minds.

Not surprisingly, the body-scan in MBSR is done differently. It is performed comfortably lying down, either on a yoga mat in the MBSR session or at home in a place of the participant's choice, usually his bed. Eyes are closed. In neutral tones, the voice of the teacher instructs the student to notice any sensations in his left foot and slowly, with pauses in between, leads the student to notice points all over his body. (No mention of transient vibrations or desire and aversion.) A single scan is done in a 45-min session.

What do participants make of this practice? Overwhelmingly participants talked about it as relaxation (for 85 % it was their first comment), a natural assumption given that this was a stress reduction program and that the practice is done lying down with closed eyes. In this group, roughly half said that the body scan actually was relaxing for them and that they did it as homework at least part of the time. Many of these also said that it helped them to sleep or actually put them to sleep, some reporting happily that they had never stayed awake for the entire CD. (During the group sessions, a chorus of snores typically accompanied the body scan.) Four people said they augmented their relaxation by adding other relaxation techniques they had previously learned. The other half of the group varied from less enthusiastic to negative, the latter finding the practice boring, uncomfortable, or pointless. The two participants who mentioned learning to be in the present as a purpose for the exercise had the usual beginning meditator's concern about drifting into thought rather than staying with the sensations as directed. Almost all the participants, upon further probing, reported having noticed something about their body or their relationship to their body that they had not been previously aware of, but this was at the level of information not intimacy. Not surprisingly, participants who did not like the body scan were less likely to do it at home.

Sitting mindfulness meditation. This is a common mindfulness meditation, often used as a bridge to vipassana exercises although not in MBSR. Participants are led first to attend to their breath, then to sensations, feelings, emotions, thoughts, and finally to awareness itself. The practice is done sitting in a chair with eyes closed. Participants' reactions to the practice were more varied and less classifiable than with the body scan, but it was clear that relaxation was still a strong concern. Some participants who had not found the body scan relaxing did relax with attention to their breath and vice versa. Over half mentioned the wildness of their minds, some with surprise or interest, but others concluding from it that the meditation was something they couldn't do. With probing, some participants voiced confusion about what in their minds they were supposed to look at (for example, what is the difference between a feeling and an emotion, and what does looking at awareness mean?), however all could easily identify the difference between sensations and thoughts. Three participants expressed worry that the meditation, either because of negative content or difficulty, was making them more stressed, and they, as well as others who didn't like it or who felt they were too busy to spend 45 min on it, did not do the home practice.

What participants are and are not getting out of the meditations. Participants who participated actively in the program appeared to be deriving three main benefits from the meditations. Most obvious was relaxation. The second was discrimination of bodily sensations (and to some extent feelings) from mental thoughts and stories. While this is a distinction that functional adults can easily make, at least at the cognitive level, these practices provided a platform in which the two could be brought into a more focal juxtaposition. Finally, there were precursors and perhaps glimpses of mindful present moment functioning. Relaxation and discrimination are clearly beneficial, but not of themselves present moment presence, and the greater development of such presence seemed not in the forefront of participant concerns; e.g., only two participants mentioned it without probing. By the end of the initial

weeks of training, which was the period devoted to the meditations, MBSR participants were still confused about what constituted being present as well as having difficulty doing the meditations as instructed, even those that provided them a measure of relaxation. (This is what can be expected with an introduction to mindfulness meditation in any setting.) As the course proceeded, other practices became the focus of the training and of participants' interest. In addition to shifting the focus, these practices interacted with people's understanding of the meditations; for example, some participants reinterpreted the meditations as information gathering.

It should be noted that none of this would be surprising to long-term Buddhist practitioners. To develop an alert, present oriented attention that is stable over a noticeable period of time goes against the habits of a lifetime and disrupts people's ordinary sense of themselves. To nurture such requires time and motivation.

I will return to all of these issues in later discussions.

Hatha Yoga

Practice of simplified and relatively undemanding hatha yoga movements and poses is given equal time with meditation in MBSR, both in the group sessions and in the recommendations for home practice. In fact some participants who liked the yoga and did not like the meditations, did only the yoga at home thus giving it close to full time. (Guided CDs for the poses were provided for home use.) Research on MBSR might well be enriched by a fuller consideration of this highly physical aspect of the program.

The practice was described as "mindful yoga" and "the practice of moving presence," the point being that it was attention to the movements, rather than trying to perfect them, that was important. Many participants, however, reported just trying to learn what to do, a task performance mind-set rather than an orientation to being present. Some participants who liked the yoga reported becoming caught up in trying to stretch further. Some said that as the practice got more

familiar, they tried to follow their movements as they did them, but, although they saw this could be pleasurable, it was difficult to maintain (also reported by participants who already had a yoga or other movement based home practice and did that instead). Some participants found the yoga physically difficult or painful. Over half said they did little or no home practice of it. Note that there is mounting research evidence that hatha yoga is of itself beneficial (Broad, 2012; Fields, 2012), so we can assume that the MBSR participants who did the yoga were deriving those benefits from it whether they did it attentively or not.

Explicit Stress Reduction Practices

Interruption and alleviation of stressful situations. These skills were central to what many participants said they got out of MBSR. Participants were given a series of assignments. The first was to notice one or more pleasant events and record the feelings, sensations and thoughts they had during the event. This served as preparation for the following week when participants were to do the same for unpleasant, stressful events. In the third week participants were encouraged to be vigilant [my word] to detect their bodily feelings of stress, particularly changes in breathing, so that they could catch the stressful feelings before they escalated out of control and thus have a choice of what to do next. Teachers varied in how much and what kind of further advice they gave: for example, pause, breath, see what your body is doing, stay with awareness, be kind/compassionate to yourself, look reasonably at what is happening, remember this situation will not last, etc. All the participants worked with these exercises to some extent, were animated in the group discussions of them, and, in some cases, came up with their own interesting or heartfelt solutions of what to do. Just staying with awareness was given little or no attention (another unexpected finding to be addressed later), but the exercise as a whole made sense to them, and they went at it in full problem solving mode.

Catching and correcting distortions of thought. This is a mainstay of cognitive therapy (Beck, 2011). Distortions discussed here included: all or

none thinking, overgeneralization, over-responsibility, labeling with thoughts and spoke agreed that they sometimes giving humor emotions and the they were treated in the world a combination of stimulation as had the apply remedies. Non-existential in nature) to in Buddhism were

Changing habits. H their own, however the same as in world Instructions were: be the habit comes into have traction; stop a

Interpersonal Re

Metta. MBSR contains kindness practice. to wish good for safety, peacefulness this would be done one, friend, neutral easily understand after an initial success wish well to oneself ing it. There is research of loving kindness self and other people Chapter 10), and, of MBSR would be by researchers. (In practice of this trying of a grateful foray into the Ros communication training something different

Human interaction both with their

w their movements as
gh they saw this could
icult to maintain (also
ho already had a yoga
home practice and did
ipants found the yoga
ful. Over half said they
ce of it. Note that there
ence that hatha yoga is
1, 2012; Fields, 2012),
he MBSR participants
deriving those benefits
t attentively or not.

tion Practices

m of stressful situations.
o what many participants
. Participants were given a
first was to notice one or
record the feelings, sensa-
ad during the event. This
the following week when
the same for unpleasant,
rd week participants were
[my word] to detect their
, particularly changes in
ld catch the stressful feel-
d out of control and thus
do next. Teachers varied in
of further advice they gave:
th, see what your body is
ss, be kind/compassionate
ably at what is happening,
vill not last, etc. All the par-
se exercises to some extent,
p discussions of them, and,
with their own interesting or
at to do. Just staying with
tle or no attention (another
e addressed later), but the
de sense to them, and they
solving mode.

ng distortions of thought.
: cognitive therapy (Beck,
ussed here included: all or

none thinking, overgeneralization, focusing on the negative, thinking feelings are facts, perfectionism, over-responsibility, labeling oneself, and identifying with thoughts and emotions. Participants who spoke agreed that they did all of these things, sometimes giving humorous examples. Distressing emotions and the thoughts that went with them were treated in the workbooks and teacher talks as a combination of stressful event and distorted thought and received the same instructions for alleviation as had the stressful events: notice early, apply remedies. None of the (admittedly more existential in nature) distortions of thought pointed to in Buddhism were ever mentioned.

Changing habits. Habits were given a week of their own, however the technique was virtually the same as in working with stressful events. Instructions were: be attentive to situations where the habit comes into play; catch it early enough to have traction; stop and do something else.

Interpersonal Relations

Metta. MBSR contains a section on metta loving kindness practice. The essence of the practice is to wish good for people: for example, health, safety, peacefulness, happiness, joy. Traditionally this would be done first for oneself, then a loved one, friend, neutral, and finally an enemy. People easily understand what to do in this practice and, after an initial surprise at how difficult it is to wish well to oneself, they generally reported liking it. There is research showing that an attitude of loving kindness and compassion toward oneself and other people is beneficial (Keltner, 2009; Chapter 10), and, as with hatha yoga, this aspect of MBSR would seem ripe for increased attention by researchers. (In two groups, a taste of another practice of this type was added: in one the keeping of a gratefulness diary, in another a brief foray into the Rosenberg (2003) nonviolent communication training.) Remember that metta is something different from mindfulness.

Human interaction. MBSR participants interact both with their teacher and with each other.

Teachers are screened, trained, and certified by the University of Massachusetts Center for Mindfulness. (The need for a certification procedure became apparent when MBSR began to be taught by people without background, and under those conditions reportedly did not work.) The teachers I observed all had prior meditation background; two were therapists, and all had people skills. Interaction within the group included periodic dialogs between participants and group discussion periods during each session. The atmosphere was pleasant and upbeat, focusing on what had been discovered or had worked for the participants when performing the exercises. Although the sessions had some aspects of a support group, MBSR is not a place to discuss personal pathologies. The one person I observed who appeared to be in crisis left after the third week to seek individual therapy. Almost all participants, including those who reported themselves too busy to do most of the homework, said they liked their teacher, their group, and the classes.

Poetry

Teachers periodically read poetry of their choice to the participants. The poetry introduced a touch of imagery and feeling beyond rationality into the proceedings, a dimension understandably not present in the training per se—also humor.

The Template

Now that we've seen what practices and trainings comprise MBSR and have at least some information on how participants use them, it is possible to construct a template of the factors at work in this kind of therapeutic program. There are alternative ways that each of the factors can be instantiated, and such alternatives could be used when they are judged more appropriate for an individual or a target population. Even religions could use the factors by substituting methods for achieving them based on their own beliefs. One or more of the factors can be combined with other kinds of

therapies or interventions. Such an analysis should also bring up many research questions that are obscured if everything is called by the name *mindfulness*.

Origin Story

MBSR uses stress and its evolutionary explanation as an origin story for the reversible aspects of much human distress. In contrast, the origin story of dysfunction in psychoanalysis is in terms of childhood material that is unconscious. The origin story of suffering in Buddhism is contained in how the mind of *samsara* functions, of Christianity in sin and redemption, and so on. Simply having an origin story satisfies people's need for explanation, and the belief systems in which these stories are embedded set the stage for how the other factors will be used.

Relaxation

Relaxation has its own potent research history. It is generally defined as the absence of (or opposite of) the stress response, which, to oversimplify physiologically, is carried by the action of the parasympathetic, as opposed to the sympathetic, nervous system (Benson & Proctor, 2010). Books and websites listing techniques for relaxation abound, some citing research showing the effectiveness of each technique (Davis, Eshelman, & McKay, 2008). Virtually all of them list meditation and/or mindfulness meditation, as one of those techniques. Once one realizes that relaxation and mindfulness are not enemies and that relaxation may contribute to the success of MBSR and similar programs, it opens the door for creative changes.

People differ in what does and does not relax them. Neither the body scan nor the sitting mindfulness meditation of MBSR were designed for relaxation, though they allowed it, but by no means all of the MBSR participants found both, or either, relaxing. In early Buddhism an alert peaceful-abiding practice would generally precede and lead into mindfulness meditation, and

there were options among such practices. Even meditative attention to breath can be performed in different ways with attention directed towards: breath at the nostrils, the rise and fall of the abdomen, whole body breathing, the outbreath only, alternate nostril breathing, extending the outbreath, thinking a relaxation-inducing word such as *peace* on the outbreath, and so on. Some relaxation methods can be performed quickly on the spot, a present day virtue. When we add other yogic or modern relaxation methods that do not use meditation, there are a cornucopia of possibilities to suit particular needs.

With respect to research, the reader might consider what role relaxation may play in the various findings, including effects on attention, that are reported in this volume. In addition, there may be more to relaxation of the body than is contained in the opposite-of-stress model, and the maps of an inner energy system in various Eastern yogic practices may offer clues about where to look (see next section). There may also be levels and subtleties to relaxing the mind; for example, Vajrayana *shamatha* designates nine levels of resting the mind, and teachings on Vajrayana awareness may use relaxation imagery such as a Brahman housewife whose work is done or the uncoiling of a knotted snake. And with respect to therapy, relaxation is surely the Type-O blood that could facilitate almost anything.

Bodily Movement Practices

Simple hatha yoga is a prominent part of MBSR. Like mindfulness, yoga has its enthusiastic supporters and an ever-mounting research literature demonstrating its benefits (Broad, 2012; Fields, 2012). And like relaxation, once one admits that yoga may be a factor in the benefits of MBSR, the door opens to variations that might be more beneficial or better tailored to individual needs; for example, twists are believed helpful for alleviating depression, and there are cooling poses to engender relaxed calm and heating poses to stimulate energy flow.

As we saw, not everybody in the MBSR groups liked or could do the yoga or did it attentively as

instructed. Fortunately, the body is composed not only of flesh, but also of an internal energetically described as channels of energy vortices called *chakras*. In Hatha yoga, movement of energy is seen as an origin of mental states; for example, wild mind. Chinese exercises like the *qigong*, like the hatha yoga designed to adjust the mind as well as provide exercise accumulation of meditation research showing the benefits (Hong, 2008). For older people, limited movement capacity *chih*, a simple system of benefits, is available at senior centers (Stone, 1999). Mindfulness inspired programs of breath (Wangyal, 2008) are appropriate. Among Westerners, yoga may supply yogic awareness to the bilateral continuity of mind and legs.

There are research programs to take these maps of energy as seriously as the maps of yoga or acupuncture to subject such channels to scientific investigation for therapy; imagine teachers of therapeutic practices to work simultaneously.

Sleep

Both relaxation and yoga can reduce insomnia and improve sleep. Sleep deprivation leads to effects on body and mind (Vaughn, 1999). In MBSR, there have been identified categories of mental

such practices. Even hatha can be performed in a direction directed towards: the rise and fall of the abdomen, the outbreath only, the inbreath only, extending the outbreath, and so on. Some relaxation practices can be performed quickly on the spot. When we add other relaxation methods that do not require a cornucopia of possibilities, the reader might conclude that the various practices on attention, that are in addition, there may be more body than is contained in the model, and the maps of an inner energy system, various Eastern yogic practices about where to look (see also the levels and sub-levels of mind; for example, the nine signates nine levels of teachings on Vajrayana visualization imagery such as a visualization of work is done or the body is naked. And with respect to the Type-O blood that is anything.

Practices

As a prominent part of the MBSR program, yoga has its enthusiastic and ever-mounting research literature on its benefits (Broad, 2012; like relaxation, once one has become a factor in the benefits of the program to variations that might be better tailored to individual practitioners. It is believed helpful for attention, and there are cooling and heating poses as well. The body in the MBSR groups is not a yoga or did it attentively as

instructed. Fortunately, there are alternatives. All across Asia, the body is understood to be composed not only of flesh, blood and internal organs, but also of an internal energy system, metaphorically described as channels—and in some cases energy vortices called *chakras*—through which the energy flows. In Hindu, Buddhist and Taoist yoga, movement of energy in the subtle body is seen as an origin of mental as well as physical states; for example, wildness versus stability of mind. Chinese exercises, such as tai chi and chi gong, like the hatha yoga used in MBSR, are designed to adjust the internal energy body as well as provide exercise. There is already an accumulation of medical and psychological research showing the benefits of these systems (Hong, 2008). For older people or those with limited movement capacity (or limited time), *tai chi chih*, a simple system designed for its medical benefits, is available and increasingly used in senior centers (Stone, 1992). For Buddhist mindfulness inspired programs, Tibetan yoga and use of breath (Wangyal, 2011) may be particularly appropriate. Among Western exercises, walking may supply yogic as well as aerobic benefits due to the bilateral continuous movement of the arms and legs.

There are research implications. It is surely time to take these maps of an inner energy physiology as seriously as we do the effects of the yoga or acupuncture based on them, and to find ways to subject such conceptions of the body to scientific investigation. There are also implications for therapy; imagine if psychotherapists and teachers of therapeutic movement formed teams to work simultaneously with a given patient.

Sleep

Both relaxation and yoga have been shown to reduce insomnia and improve the quality of sleep. Sleep deprivation leads to a cascade of negative effects on body and mind that are endemic in our severely sleep deprived society (Dement & Vaughn, 1999). In addition, sleep disturbances have been identified as comorbid factors for all categories of mental illness (Harvey, Watkins,

Mansell, & Shafran, 2004). A number of MBSR participants reported improvement in their sleep. The life benefits afforded by adequate sleep are of the same sort as found for MBSR and other such programs. Thus sleep may be an amplifying or mediator variable between practices such as yoga and relaxation and their beneficial effects, and, by extension, the benefits of MBSR.

Familiarity with Body and Mind

Any endeavor to “know thyself,” surely involves becoming more familiar with one’s body and mind. The emphasis of MBSR is on the body. The body scan, breathing, sensations, yoga, vigilance for changes in the body signaling stress, the use of breathing or good bodily memories to calm stress and offset habits—all produce greater familiarity with the body (even in cases where it is only at the conceptual level) and more tendency to check in periodically with the state of one’s body. In this respect MBSR is closely allied with the growing field of somatic psychology and the upsurge of somatic therapies (Barratt, 2010). In fact, with the self improvement task oriented attention that MBSR participants bring to the body, MBSR appears closer to somatic psychology than to Buddhist “mindfulness of body,” one of the four foundations of mindfulness taught in early Buddhism (Silananda, 2002). MBSR also offers participants the opportunity to become more familiar with their minds, or at least the contents of their minds, but that is less prominent. There are other meditation derived uses of attention to the body—for example, the transformation of intractable chronic pain into sensations of heat or light made possible by prolonged penetrating concentration on the pain (Young 2004)—that the interested researcher or therapist can look into.

Discrimination Between Sensations, Feelings, Emotions, Thoughts

One aspect of clinical disorders such as anxiety or depression is the automatic leap from negative

bodily sensations and feelings to thoughts and stories about the meaning of those bodily states, which then perpetuates further negative sensations and feelings. This applies to the miseries of ordinary people in nonclinical populations as well. Discrimination between sensations, feelings, and thoughts is necessary if one is to develop an early warning system to interrupt the automaticity of this feedback loop. However, there are simpler and more explicit ways of teaching people such discrimination than are afforded by MBSR or mindfulness meditation. Carmody's paper (this volume) provides a clear description of the logic and implementation of this process.

Vigilance and Interruption of Habitual Patterns

Humans are already vigilant for threats and opportunities (however defined by the person) and for information relevant to present concerns. In fact it is the capacity for vigilance and its misuse that lead to stress in the first place. To interrupt the escalation of stress, negative emotions, and unwanted habits, vigilance is needed in order to catch the early stages of these patterns. MBSR teaches this, and any therapeutic work aimed at explicit direct change of feelings and behavior will probably need to incorporate some version of it. (Note: the term *vigilance* is mine and was not used in MBSR.)

Correctives for Habitual Patterns

Vigilance for warning signs is not enough. "Here I go again!" often precedes simply going there again. At the point of noticing, one must insert something different. The options of "just being" or of hanging out with enlightened awareness are possible only if one has access to such states. Likewise for "not identifying with negative emotions," which was largely opaque for MBSR participants. On the other hand, breathing (even if just "taking three deep breaths") made sense to them, as did looking at themselves with kindness and compassion—or at least having that inten-

tion. Other strategies were to think of a favorite memory or to try to reason with oneself. A number of people reported bringing to mind what appeared to be the larger purpose for which they were engaged in the stressful activity, usually having to do with their loved ones. It was as though some participants were spontaneously coming up with their higher order commitments, a fundamental aspect of Acceptance and Commitment Therapy (Hayes, Strosahl, & Wilson, 1999).

Identification and Correction of Thought Distortions

This is a particular kind of corrective. Participants who identified one of the thought distortions, usually self-criticism, as a stressor and became vigilant of it, then made efforts to substitute a more positive or more reasonable alternative. Correction of thought is important as a factor in its own right. Note that origin stories and the belief systems in which they are embedded all have their own versions of true versus mistaken forms of thought and methods for correcting the mistaken.

Attention Directed to What Is Positive and What Works, Not to What Doesn't

All of the discussions were led in a way consonant with this principle, even though it was not explicitly taught as such. It is noteworthy as a separate factor because it is the basic principle of positive psychology, another input to MBSR of a Western therapeutic system that has growing research demonstrating its effectiveness (Seligman, 2011; Snyder, Lopez, & Pedrotti, 2011).

Sense of Agency

Working with vigilance and finding antidotes to counter stress appeared to impart a sense of agency to people. It put them into an animated

problem-solving state of *fulfulness* has been used for contrast to passive or active (1989). But the reason why retreats are repetitious activities is that complicity to make things better that suck a beginner's patience, not those that lead to problem solving are good, on a different dimension than mindfulness.

Loving Kindness a

Humans are social animals directly connected to what the practice is a to do it without a barrier relaxes and softens people on which other practitioners Buddhist teachers use the basic introductory method the practice as simple people choose what good on themselves and on is not a mindfulness

Missing Factors

There are three "known" MBSR. (1) First is giving things up—*renunciation* or *surrender*; and in order to change anything about what one was or is, the elephant in the room, self-improvement. The second dimension is knowing. Openness to non-conscious concepts is a sea of not knowing. Without acknowledgment, one never learns anything

re to think of a favorite
on with oneself. A num-
bringing to mind what
purpose for which they
ressful activity, usually
r loved ones. It was as
nts were spontaneously
gher order commitments,
t of Acceptance and
(Hayes, Strosahl, &

Corrections

of corrective. Participants
the thought distortions,
as a stressor and became
de efforts to substitute a
re reasonable alternative.
is important as a factor in
at origin stories and the
ch they are embedded all
ns of true versus mistaken
methods for correcting the

What Is Positive Not to What Doesn't

s were led in a way conso-
le, even though it was not
such. It is noteworthy as a
se it is the basic principle of
another input to MBSR of a
system that has growing
rating its effectiveness
nyder, Lopez, & Pedrotti,

ince and finding antidotes to
pared to impart a sense of
t put them into an animated

problem-solving state of mind. The word *mindfulness* has been used for this kind of activity in contrast to passive or automatic actions (Langer, 1989). But the reason why Buddhist mindfulness retreats are repetitious and stripped of complex activities is that complexity and mental manipulation to make things better are the very activities that suck a beginner away from mindful presence, not those that lead to it. Agency and problem solving are good, even essential, but they're on a different dimension of mental functioning than mindfulness.

Loving Kindness and Compassion

Humans are social animals, and metta practice is directly connected to that. People can understand what the practice is and the instructions for how to do it without a background in meditation. It relaxes and softens people and provides a ground on which other practices can flourish. Some Buddhist teachers use such practices as their basic introductory material. It is prudent to keep the practice as simple as possible and to let people choose what good things they will be wishing on themselves and others. Remember that metta is not a mindfulness practice.

Missing Factors

There are three "known unknowns" missing from MBSR. (1) First is the dimension of releasing, giving things up—what in religions is called *renunciation* or *surrender*; in religious studies *kenosis*; and in ordinary language *change*. To change anything about oneself, one has to let go of what one was or is. This can be the unacknowledged elephant in the room in any kind of therapy, self-improvement regimen, or in MBSR. (2) The second dimension is the experience of not knowing. Openness to experience is predicated on openness to non-experience. Without this, the conscious conceptual mind thrashes anxiously in a sea of not knowing rather than swimming in it. Without acknowledging the unknown, we could never learn anything...or have science. (3)

Finally there is the dimension of beyond the known, the longing or reaching out toward beyondness, whether that is pictured as a depth of experience, as is common in Buddhism, or as a height, as is the tendency in Western religious language. The practical side of this is noted by common expressions such as "outside the box" and "inspiration that seems to come from nowhere." Lest that seem beyond the useful, notice how in Dialectical Behavior Therapy (DBT) (Linehan, 1993), even borderline patients can be guided to a remarkable prescience that is neither familiarly intellectual nor emotional (see also examples in Baer, 2006).

In Short

Results of this inquiry into the specifics of MBSR might appear somewhat like Leeuwenhoek's first glance through a microscope into a drop of pond water. What had been assumed just water was found teeming with life. MBSR, normally treated as just mindfulness, on closer inspection is revealed as a cornucopia of potentially beneficial practices, each of which has possible applications in research and therapy. That leaves the role of mindfulness itself as a question rather than an assumption. This issue will be addressed further in the final discussion.

Measurement of Mindfulness

The Scales

Five self-report scales for measuring mindfulness have been in common use for some time. Since Ruth Baer (this volume) has, with great clarity, reviewed the scales and her own work regarding their psychometric properties, I will present only a brief reminder here. The scales are: the Mindful Attention Awareness Scale (MAAS), the Freiburg Mindfulness Inventory (FMI), the Kentucky Inventory of Mindfulness Skills (KIMS), the Cognitive and Affective Mindfulness Scale (CAMS), and the Mindfulness Questionnaire (MQ). Baer and her collaborators (Baer, Smith,

Hopkins, Krietemeyer, & Toney, 2006), in a comprehensive factor analytic study of the properties of these scales, have convincingly demonstrated them to be measuring five separate factors in the construct rather than a unipolar factor. My concern in this chapter is: what are the factors in these scales actually measuring? Let's look at the bottom line definition of mindfulness and then at the factors derived from Baer's analysis.

The minimum component in definitions of mindfulness, past or present, is that one's mind is present with one's experience as the experience occurs over successive moments of time. Variations in definitions consist either of debates over the subcomponents of that process or the addition of other attributes to the process. Mindfulness training consists of doing a practice designed to produce such presence. If a researcher wants to study the effects of mindfulness, then mindfulness itself needs to be measured separately from the effects; that is, the ability to maintain attention to present experience with some degree of stability (at least sometimes) would be the independent variable and hypothesized outcomes of that kind of attention would be the dependent variables. But none of the scales, or the factors in the scales, measures that kind of attention.

There is only one factor in the scales aimed at attention, a factor that loads almost entirely on items from Brown and Ryan's MAAS (Brown & Ryan, 2003). It is composed of items that ask about extremes, in fact pathologies, of attention, not about mindful presence. For example, a high endorser of these items admits to behaviors such as driving places on automatic pilot and then wondering why he went there. A normal person muddling through in our usual non-mindful way would be a relatively low endorser and be classified as mindful. A second problem with this factor is that all of the items have to be answered in the negative to be scored as mindful; but research has shown that items with the same content requiring negative answers get different results from those phrased for positive answers (see Grossman & Van Dam, 2011, for an extended review and discussion of this issue). Finally note that this is a self-report measure, and except for

the extremes of dysfunctional "spacing out," most people have no idea whether they're present or not.

A second factor measures strong self-criticism; a high endorser says that she makes judgments about whether her thoughts are good or bad and gets angry with herself for having distressing thoughts or images. But this is a measure of the contents of experience not of whether a person can be, or ever actually is, present with those contents while they occur. (To turn attention to the contents rather than nature of experience is a natural shift that, as we have seen, was also made by the MBSR participants.) One might hypothesize that being mindfully present with negative self-judgments will reduce their frequency of occurrence, but such a hypothesis remains inherently untestable as long as the completed outcome is contained in the definition. That is, if the dependent variable is already contained in the independent variable, then a positive experimental result can be nothing but a tautology. It is medieval, not scientific, logic to include outcomes in one's definitions (as in Molière's famous parody, "Opium puts people to sleep because of its dormative power"). The fact that MBSR may produce this kind of outcome will not help, since MBSR teaches many techniques (apparently employed by participants far more vigorously than mindfulness) that are aimed explicitly at replacing negative mental contents (self criticism is high on the list) with more positive ones.

A third factor measures moderation in emotion, e.g., an ability to modulate affective states and not get carried away by thoughts; it correlates positively with the first two factors (provided that one considers the inability to modulate affective states as the high end of the scale). All the objections to the second factor also apply to this one. In fact, if we were to actually take the third factor seriously, there would be no need for this book—of course self-regulation and mindfulness go together if they are part of the same definition. Again appeal to the effect of MBSR is not germane. The heart of MBSR practical training for most participants was the set of exercises designed to explicitly prevent emotional,

even conceptual, deregulation. One must be vigilant for signs of deregulation and apply a corrective. For some, access to more awake states is not that awareness to the present, but for MBSR participants was to actively manipulate the present instead. Finally, there are techniques such as relaxation, yoga, and meditation known to calm body and mind, but done mindfully or not.

The fourth factor is the ability to describe with words. Verbalizing is a necessary ability in mindfulness, but not mindfulness. In fact, the ability to label and describe is a necessary beginning for meditators. The complex verbal apparatus is the object of one's meditation.

A possible fifth factor is the ability to take items from the present and what is usually called present, i.e., the observation of the present. It did not correlate with the other factors for people who were meditators, thus offering no help in mindfulness and observation of things to those who were not meditators (Grossman & Van Dam, 2011).

But these existing research results, one might ask, I believe that the psychology knows how to deal with general mental health and how to correlate with each other. The correlation of health versus pathology in the brain correlates; even the correlation of health and pathology is has brain correlation of mindfulness.

What to Do Instead

How then should mindfulness be taught? It is not a simple question. The meditation instructor should be able to deal with sullen teenagers

tional "spacing out," whether they're present

measures strong self-reports says that she makes her thoughts are good herself for having dis- s. But this is a measure of presence not of whether a person actually is, present with an event occur. (To turn attention to the nature of experience, as we have seen, was the point for participants.) One might think that being mindfully present with an event will reduce their frequency but such a hypothesis is not testable as long as the combined variable in the definition. If the variable is already covarying with a positive event, it is nothing but a tautology. It is not scientific logic to include conditions (as in Molière's play "The Miser" puts people to sleep with "golden power"). The fact that a certain kind of outcome will be achieved by many techniques used by participants far more frequently (mindfulness) than by negative mental contents (the list) with more posi-

quires moderation in emotion to modulate affective states by thoughts; it correlates with the first two factors (pro- bably the inability to modulate emotion at the high end of the scale). All the other factors also apply to the same extent were to actually take the time to use self-regulation and so on if they are part of the overall appeal to the effect of the heart of MBSR practice. The heart of MBSR practice for participants was the set of practices that explicitly prevent emotional,

even conceptual, deregulation. The guidelines: be vigilant for signs of deregulation, stop and apply a corrective. For someone already having access to more awake states of awareness, bringing that awareness to the situation is enough, but for MBSR participants what seemed meaningful was to actively manipulate mental content instead. Finally, there are practices in MBSR—such as relaxation, yoga, and loving-kindness—known to calm body and mind and prevent deregulation and escalation of emotions whether done mindfully or not.

The fourth factor is an ability to label and describe with words. Verbal facility is an increasingly necessary ability in our civilization, but it is not mindfulness. In fact, a mind busy with verbal labels and descriptions is a prime obstacle for beginning meditators. One does not need an elaborate verbal apparatus to distinguish what is the object of one's meditation from what is not.

A possible fifth factor consisting entirely of items taken from the FMI and KIMS, dealt with what is usually called psychological mindedness, i.e., the observation and labeling of internal states. It did not correlate with any of the other factors for people who were not experienced meditators, thus offering more evidence that mindfulness and observation mean different things to those with and without training (Grossman & Van Dam, 2011).

But these existing mindfulness scales get research results, one might protest; what is happening? I believe that the scales are measuring what psychology knows how to measure: factors of general mental health and wellbeing. Naturally they correlate with each other and with other measures of health versus pathology. And naturally they have brain correlates; everything a living person does and is has brain correlates. The whole area of measurement of mindfulness needs serious rethinking.

What to Do Instead

How then should mindfulness be measured? This is not a simple question. Buddhist teachers and meditation instructors (and therapists who work with sullen teenagers) well know how difficult it is

to find out what is going on in someone's mind when that person himself doesn't know. Someone with even occasional experience of being mindfully present is more likely to report herself hopelessly not mindful than a person without any such experience. Long-term Buddhist practitioners reminisce with each other about times they believed they understood or realized one or another teaching but were then disabused by experience more to the point. This is not optimal territory for the use of self-report scales. Probing interviews are highly impractical. At this point I believe it would be most useful for psychologists to turn their attention away from the how-to of measurement and towards prior questions about what there is to be measured. An extensive landscape of states of mind related to being present lies currently uncharted by Western psychology. Some examples of near neighbors of close mindfulness are:

Absorptions. These are states where the mind becomes sufficiently absorbed in the object on which it is focusing that it loses clear awareness of itself and the situation. For example, some MBSR participants who liked the breathing described themselves as relaxing or sinking into their breath, or as feeling their minds get blurry or fuzzy, or of feeling themselves slipping, sliding or falling slowly asleep. Here the mind is present in the sense that it is not wandering elsewhere yet not alert enough to be cognizant of the whole situation. Another kind of absorption that three MBSR participants offered as an experience of mindfulness was becoming intensely focused on a task and shutting out everything else, including, for one person, bodily needs. Again the mind is not wandering (or not as much as usual), but one is not present with oneself.

Human realm states. This is the most important category with respect to the Western understanding of mindfulness. In Buddhism, states of mind can be classified into different aspects of the core motivations of desire/passion, aversion/aggression, and ignorance. Traditionally these were taught as realms into which a sentient being could be born for a lifetime as well as mental states. Human realm is considered the most

auspicious because (at least in early Buddhism) it is the only realm or state of mind in which one can hear and practice the Dharma. That is, one cannot practice mindfulness meditation, clear seeing, loving kindness or, some practices of the later forms of Buddhism if one's mind is dominated by a hellish state of aggression, a hungry ghost mentality of desperate neediness, the automaticity and plodding ignorance of an animal, the competitiveness of a jealous god, or the drugged-like, ignorant absorptions of "god realm." (For a detailed description of the realms in terms of states of mind, see Trungpa, 1976.)

The predominant mental state of human realm is one of intelligent desire. The human sees that she is not satisfied and seeks what will make things better. If what she does doesn't work, she tries to understand why not, and experiments with doing or getting something else. In a human realm state of mind, a person intermittently checks his environment and himself to monitor how he's doing and is wary of losing that monitoring by becoming too spaced out, angry, critical, or emotional. He develops skills such as language fluency in order to have better relationships with the people, objects, and situations in his environment in order to better get what he wants and avoid what he doesn't want. A person who spends a reasonable amount of time in human realm states of mind—and is able to return relatively quickly to them when she slides into extremes of ignorance, greed, depression, aggression, or competitiveness—will likely be judged mentally healthy and is likely to score as mindful on the mindfulness measurement scales since that is what the scales are measuring. Within this framework, the basic aim of psychotherapies might be described as trying to help patients towards greater human realm functioning. This is also the state of mind that 20 years ago and without input from Buddhism, Langer (1989) called mindfulness, by that meaning using the mind actively (rather than automatically) and with a sense of efficacy. To guide people into such a mode of functioning is also the predominant thrust of the second half of the MBSR training; it was also what was most described by participants when they spoke during the final class or final interview about what they

felt they had gotten out of MBSR. (Relaxation was a close runner-up.) In short: what psychology measures under the name mindfulness is basically human realm functioning. Rather than quarreling over a word, perhaps we should just distinguish it as a separate species of mindfulness, naming it *Human Realm Mindfulness* or *Humanist Mindfulness*. (And if it came to it, we could also have *Relaxation Absorption Mindfulness* and *Task Absorption Mindfulness*.)

Awareness. In awareness, the alert, stable, present oriented attention of mindfulness becomes increasingly expansive. Walking meditation provides an example. Under Theravada mindfulness instructions (minimally introduced towards the end of MBSR), the practitioner walks slowly, barely moving, with instructions to pay close attention to each detail of change in pressure on the foot from heel to toe, the lifting, lateral movement, and lowering of the other foot, etc. Under awareness instructions, the walk is more normally paced with attention on the whole body moving in space including a sense of the space surrounding the body (along with what is in it, such as other people), the enclosure of the room if it's taking place indoors, the functioning of one's senses, the vastness of the space outside the room, and so on. Walking in this way is considered a bridge to maintaining awareness during the activities of daily life.

Non-dual awareness. Here experience knows itself without a separation of observer and observed. One is present because there is no separate mind to wander elsewhere. The senses, including mental states such as thoughts, arise freely in their "natural brilliance." From this point of view, judging an experience or wanting it to be some other way will seem irrelevant, and the laborious mindfulness of the beginner appears a fiction, an artificial and unstable exaggeration of the confused mind's assumption of duality between an experiencing me and an object of experience.

Non-duality is understood to be a portal into the further realizations in Mahayana and Vajrayana, but why bring it up here? The issue is that Kabat-Zinn's original mindfulness instruc-

tion to be present without attention on which MBSR is based. In this sense within the context of the human realm where one is understood to be of a nature which, "does not free from accepting and rejecting," (common tropes in Zen Buddhism) the problem is that the typical stress reduction or therapy that follows instructions based on the mind of samsara cannot be followed more than she can follow an instruction to "love herself unconditionally without judgment" was interpreted as a criticism of MBSR participants with a view.) It takes a path of awareness to uncover the truth that is a creatively helpful way of better picking and choosing what to discuss with researchers and will be the final discussion.

Discussion, Propriety, and the Emperor's Clothes

MBSR works; it can measure mindfulness. It can useably measure a pathology as well as a state of mindfulness that is *mindfulness* we measure with the present oriented attention, suggests that the role of mindfulness is as obvious as previous measures of such attention. It is problematic what the MBSR participants compared to the other participants were the participants' mindfulness by the time they had been taught the instructions (of the close to the hatha yoga practice) to be it mindfully? A number of participants at work, each interacting with others.

of MBSR. (Relaxation short: what psychology mindfulness is basically . Rather than quarreling should just distinguish it mindfulness, naming it *illness* or *Humanist* came to it, we could also *on Mindfulness and Task*

is, the alert, stable, pres- f mindfulness becomes Walking meditation pro- Theravada mindfulness introduced towards the actioner walks slowly, structions to pay close of change in pressure on the lifting, lateral move- ae other foot, etc. Under the walk is more nor- tion on the whole body ing a sense of the space along with what is in it, ae enclosure of the room oors, the functioning of is of the space outside the ng in this way is consid- aining awareness during e.

Here experience knows ration of observer and t because there is no sepa- elsewhere. The senses, s such as thoughts, arise rilliance." From this point erience or wanting it to be m irrelevant, and the labo- ie beginner appears a fic- istable exaggeration of the option of duality between l an object of experience. rstood to be a portal into ons in Mahayana and ng it up here? The issue is ginal mindfulness instruc-

tion to be present without judgment—the inspira- tion on which MBSR is based—only makes full sense within the context of these later teachings where one is understood to have an original nature which, “does not pick and choose,” and “is free from accepting and rejecting, hope and fear” (common tropes in Zen and Vajrayana). The problem is that the typical person who comes for stress reduction or therapy cannot understand or follow instructions based on such qualities (the mind of samsara constantly judges) any more than she can follow an instruction to just be or to love herself unconditionally. (In fact “without judgment” was interpreted as some variant of “I shouldn’t criticize myself so much” by most MBSR participants when asked in the final inter- view.) It takes a path that aims toward non-dual awareness to uncover it, and MBSR is not that; it is a creatively helpful path towards more and bet- ter picking and choosing. This disparity confuses researchers and will be addressed further in the final discussion.

Discussion, Prophecies, Buddhism, and the Emperor's Clothes

MBSR works; it can improve people's lives. The mindfulness measurement scales also work; they useably measure a relative absence of mental pathology as well as some positive traits. But is it mindfulness that is behind such results? If by *mindfulness* we mean close, stable, present-oriented attention, the analysis in this chapter suggests that the role of mindfulness may not be as obvious as previously assumed. There is no measure of such attention in the scales, and it is problematic what role it played in the minds of the MBSR participants I studied, at least in comparison to the other aspects of the training. Why were the participants not experiencing more mindfulness by the end of the study given that they had been taught two mindfulness medita- tions (of the close ongoing attention genre) and a hatha yoga practice with instructions to perform it mindfully? A number of factors would appear at work, each interacting synergistically with the others.

Why Was There Not More Mindfulness?

1. Mindfulness is challenging. It goes against the grain. The habits of a lifetime reinforce a mind that moves constantly, ever building and rebuilding the sense of oneself, one's past and future, successes and failures, plans and projects, whatever momentarily maintains a sense of meaning to one's life. Present oriented, close attention cuts through all that. It is stark. It requires letting go rather than acquiring. In addition to these affective issues, mindfulness is hard to conceptualize. One doesn't know quite what it is or how to do it. It takes time and effort to develop.
2. Easy familiar practices supersede new chal- lenging ones. In MBSR, mindfulness is taught in a context with other practices, such as vigi- lance, interrupting stress, and replacing nega- tive emotions with positive ones that are easy to understand and that fit into the familiar motivations of getting what you want and avoiding what you don't want. It is natural that people will replace what is difficult, unknown and new with a familiar, easier, and more understandable alternative when that is offered.
3. Goals. Goals determine how cognition and attention will be deployed (if you're walking to a shoe store, you may suddenly notice everyone's shoes). A goal also provides the rationale and motivation for performing activ- ities that will lead to that goal. Close, continu- ous attention to the present is a necessary practice in early Buddhism because it enables one: (a) to see impermanence, no self, and that acting on the basis of desire, aversion, and ignorance never lead to satisfaction, and (b) to gradually empty oneself of the habits (karma) of lifetimes; this is brought about by not responding to the content of each moment as it arises. When this kind of attention is taught as an initial practice in later Buddhism, the further purpose is to bring the practitioner to the point where she is able to uncover, awaken, recognize, or receive transmission of the basic enlightened nature already there, in the light

of which the present moment is transformed. Given such purposes and views of the mind, we can see how instructions in the mindfulness meditations to "just notice," "just see it," "no need to do anything about it," "just stay with the experience," and so on make sense. But if one's purpose, as in MBSR, is to reduce stress, thereby having fewer negative and more positive experiences in one's life, these instructions would be obvious only if "just seeing it" were immediately rewarding (pleasurable, peaceful, or at least a relief). However to an ordinary mind "in samsara," that isn't necessarily the case.

Purpose effects the actual mindfulness meditations in many ways. For example, try doing a brief portion of the body scan with the intention to "just notice" the sensations at each point, then a second time with the intention to use the noticing to relax, and a third time with the intention to gain information about your body. Purpose also influences one's motivation to stick with a practice. If one has a stress reduction mind-set and finds the meditation boring or disturbing, why grit your teeth and stick with it? Upon realizing one is getting stressed, if one has never experienced that staying with an experience can be transformative, why not quickly use some other remedy instead?

Purpose also seemed to effect how the MBSR classes were taught. For example, the existential questions with which Buddhism deals (and which mindfulness meditations were designed to arouse) were never talked about in the discussions, even on occasions when participants brought up something that would have triggered such discussion in a Buddhist setting. To illustrate: impermanence was treated only as a comforting reminder that painful situations don't last, and participants were not steered away from concern for the contents of their experience towards inquisitiveness about the nature of the experiencer. This is understandable, even skillful. Given the place MBSR occupies in our society, it is important to keep it science and medicine based and away from anything interpretable as religion. Furthermore

opening the Pandora's box of such questions would have disrupted the structure, flow, and ambience of the program.

One final thought: is mindful, close attention actually needed to achieve MBSR stress reduction or is the intermittent strategic noticing used in human realm monitoring sufficient?

Limitations to This Study of MBSR

There are a number of limiting factors. The number of trainings I observed was small as were the number of participants interviewed. All three trainings were commercially offered, and the participants were reasonably high functioning people. MBSR given in a hospital setting might show different patterns. The one participant in the trainings I observed who identified herself as seriously ill (not one of the interviewees), remarked one day as we were leaving, "These people act like tourists visiting their bodies; wait till they get sick and have to live there." MBSR was originally designed for chronic pain patients judged beyond medical help at the University of Massachusetts Medical Center. It is quite possible that for such people the body scan, given with the original instructions to observe without judgment (however they interpreted that), could have been a radically new and life altering experience. People with problems that might require close, protracted, present attention to unravel—addictions for example or just an inability to lose weight—might have their own relationship to MBSR.

A different set of issues with the study has to do with participants' use of language. The meditations, in fact the domain of present oriented experience in general, were new terrain for their vocabulary and thought processes. Were some participants saying what they did because they didn't know how else to identify or express what they wanted or were getting from the meditations? (The questions specifically directed at mindfulness at the end of the final interview seemed more problematic for some people in this respect than the more naturalistic parts of the interviews.) An even deeper linguistic problem is

that the words we have to express what goes on for us are limited. For example, participation may have covered more processes than either the meditators have a vocabulary to express or the questionnaire would be able to capture at a level where available to consciousness. A questionnaire would not address these concerns.

A final obvious limitation of MBSR is that it was designed to apply only suggestive techniques. Other mindfulness programs are being developed in their own ways.

The Other Benefits

The prevailing story about the benefits of mindfulness. This has led to research that has deflected from the therapeutic techniques that were the training and may be the people I studied, but the training and mind potentially have different effects. Look at what physical exercise and meditation do to sleep, discrimination, warning system for danger, what is negative, attention, sense of agency, concentration, and loving kindness. What are invoked: somatic, sleep medicine, cognitive-behaviorist therapies, therapy, empowerment, and compassion meditation. Religions and ethical

How does this work in MBSR? One of the energy amongst the factors of the AIDS cocktail we might think of more endearingly, as the mullas from which the one or more than

that the words we have may not be adequate to express what goes on for people in such meditations. For example, participants' use of *relaxation* may have covered deeper and more complex processes than either they or scientists presently have a vocabulary to express. Finally, it is possible that the meditations were affecting participants at a level where the effects were not available to consciousness. Note that use of a questionnaire would not help any of these concerns.

A final obvious limitation to this study of MBSR is that it was about MBSR and thus applies only suggestively and not necessarily to other mindfulness programs that present trainings in their own ways.

The Other Beneficial Factors in MBSR

The prevailing story about why MBSR works is *mindfulness*. This has tended to obscure and deflect research from the array of less exotic therapeutic techniques that occupy the greater part of the training and may have displaced, at least for the people I studied, the close-attention to body and mind potentially introduced by the meditations. Look at what MBSR offers: relaxation, physical exercise and yogic movement, improvement in sleep, discrimination training, an early warning system for disturbance, correctives for what is negative, attention to what is positive, a sense of agency, correction of thought distortions, and loving kindness. A range of therapies are invoked: somatic therapy, relaxation training, sleep medicine, cognitive behavioral therapy, behaviorist therapies, positive psychology and therapy, empowerment training, and the kindness and compassion embraced by all of the world's religions and ethical systems.

How does this combination of techniques work in MBSR? One hypothesis is that it is a synergy amongst the factors—as in the effectiveness of the AIDS cocktail versus earlier solo drugs. Or we might think of MBSR as a tea sampler or, more endearingly, a gift basket, of effective formulas from which MBSR participants can select the one or more that work for them. Nor can we

discount the role of the meditations. Participants who did neither the meditations nor the yoga as homework—strongly predicted by their having named some variant of “too much to do” as their predominant stressor in the first class—were also the least satisfied or enthusiastic about what they had gotten out of the program. However, these participants also did less of the homework for the stress reduction techniques, so it is difficult to untangle cause and effect. It may well be that without at least some settling, calming, and relaxation from the meditations, it would be difficult for many people to achieve even the “tourist visits” to present experience needed for the stress reduction practices. The meditations may have made such visits more frequent and/or redirected the sites visited. (Many participants said they now paid more attention to their bodies.) Buddhists might claim that introduction to the meditations could, of itself, plant a seed of realization that will bear fruit later. And, of course, belief in the mindfulness mystique could be a factor—thus can research and its wide dissemination return home to influence that which is studied. All of this is ripe for further research.

Prophecies and a Closing Note

There are present trends that may make the future context for mindfulness research a different world. Here are some predictions: Prediction 1: Research on other forms of contemplative practice will show the same kinds of beneficial results as mindfulness. This is already beginning for centering prayer in both its Christian and a secular form (Wachholtz & Pargament 2005). Centering prayer requires a very different kind of attention than mindfulness, a giving out and opening up, not a close pointillist attention. Prediction 2: The fact that the brain shows specific patterns of neural firing whenever a person does anything with his body or mind, including meditation, will no longer be a wow factor of itself; the researcher will need to show changes that are part of a more general theoretical formulation. Prediction 3: Biochemistry and biophysics will find ways to measure increasingly subtle

energy patterns in the body so that we can do serious research on inner energy bodies; for example, compare them across different yogic systems, or relate their changing forms to physical and mental health. Prediction 4: One of the sciences, perhaps physics, will find ways to measure aspects of the mind able to function apart from the brain. There are already a number of phenomena purportedly indicating this to be the case (for a compendium see Kelly & Kelly, 2007), and advances in resuscitation medicine have stimulated research interest in such matters (Parnia, 2013). A separation of mind and brain would open many questions and lines of research, and could bring to center stage the claims and meditation practices of the later forms of Buddhism, now largely dismissed as religion by psychologists.

This brings us back full circle to Buddhism and its relation to Western therapeutic mindfulness. No one would doubt that the therapies that operate under the name *mindfulness* in the West can be of great benefit to individuals. And anything that makes people more relaxed, reasonable, or kindly is truly a boon to civilization. But this is not the same as and does not negate the kinds of deep mindfulness and awareness that can be developed in Buddhist meditative and contemplative practices. That both can exist and perhaps enhance one another should go without saying.

However it apparently does need a bit of saying. Kabat-Zinn (2011) seems to now be arguing that his interpretation of mindfulness should and will replace Buddhism. The Buddhist Studies scholar John Dunne (2011) has supported the logic of this claim by taking Kabat-Zinn's definition of mindfulness, "being present without judgment," as a reference to Buddha nature, in fact as an evocation of the highest non-dual awareness of Vajrayana. Is this what MBSR actually conveys to its participants? Non-dual awareness, the self-known arising of each moment without a watcher, may be vast, brilliant and glorious, but caution! It evaporates the sense of self, the reality of time, self-referential projects—in short, life as previously known. It is the kind of awareness that allows lamas to radiate and teach from the heart

center in their death samadhi when they are brain and organ dead (Rosch, 2014). Non-dual is a serious matter. Established traditions offer not only wise teachings but also path. In my observation there was nothing whatsoever said by any of the MBSR participants or said to them by their teachers that indicated even a slight approach toward the non-dual; if anything, the meditations in MBSR evoked a heightened sense of an onlooker watching oneself from a distance. If there is a deeper awareness that might allow people who are so inclined to get out of the box altogether and perhaps remake the world for all of us, it should surely be nurtured rather than destroyed.

Back to the emperor's cloths: he is naked but also resplendently arrayed. There is no contradiction. They mutually support each other as long as you don't think one is the other. Clarity about this makes for good research, good meditation, and a good life.

References

- Baer, R. A. (Ed.). (2006). *Mindfulness based treatment approaches*. Amsterdam: Elsevier.
- Baer, R. A., Smith, G. T., Hopkins, J., Krietemeyer, J., & Toney, L. (2006). Using self-report assessment methods to explore facets of mindfulness. *Assessment, 13*, 27–45.
- Barrett, B. B. (2010). *The emergence of somatic psychology and body-mind therapy*. New York: Palgrave MacMillan.
- Beck, J. S. (2011). *Cognitive behavioral therapy: Basics and beyond* (2nd ed.). New York: The Guilford Press.
- Benson, H., & Proctor, W. (2010). *Relaxation revolution: The science and genetics of mind body healing*. New York: Scribner.
- Boyce, B. (Ed.). (2011). *The mindfulness revolution*. Boston, MA: Shambhala.
- Broad, W. J. (2012). *The science of yoga: The risks and the rewards*. New York: Simon & Schuster.
- Brown, K. W., & Ryan, R. M. (2003). The benefits of being present: Mindfulness and its role in psychological well-being. *Journal of Personality and Social Psychology, 84*, 822–848.
- Buddhaghosa, B. (1976). *The path of purification* (Vols. 1 and 2). Boston, MA: Shambhala.
- Byrom, T. (Ed.). (1993). *The Dhammapada: The sayings of the Buddha*. Boston, MA: Shambhala.
- Contemporary Buddhism*. (2011). Mindfulness: Diverse perspectives on its meaning, origins, and multiple applications at the intersection of science and dharma [Special issue]. *12* (1).
- Davis, M., Eshelman, E. R. *Relaxation and stress reduction techniques*. Oakland, CA: New Harbinger Publications.
- Dement, W. C., & Vaughn, J. W. (1968). *Sleep*. New York: Dell.
- Demoulin, H. (2005). *Zen in China (Vol. 1)*. Bloomington, IN: World Wisdom.
- Dunne, J. (2011). *Toward a new paradigm of mindfulness*. *Contemporary Buddhism, 12*, 219–23.
- Fields, T. M. (2012). *Yoga*. Xlibris Corporation.
- Fremantle, F. (2001). *Luminous: The Tibetan book of the dead*. Boston, MA: Shambhala.
- Goenka, S. N. (1987). *S.N. Goenka*. Onalasi Publications.
- Grossman, P., & Van Dam, N. L. (2011). *Transcendental meditation and other nameless traditions: A new paradigm of Western psychology*. *Buddhism, 12*, 219–23.
- Harvey, A., Watkins, E., & Strosahl, K. (2002). *Cognitive behavioral processes: A transdiagnostic approach to behavior change*. Oxford, UK: Oxford University Press.
- Hayes, S. C., Strosahl, K., & Dimmock, S. A. (2008). *Acceptance and commitment therapy: A practical approach to behavior change*. New York, NY: Guilford Press.
- Hong, Y. (Ed.). (2008). *International research on mindfulness*. Basel, SZ: S. Karger.
- James, W. (1890/1950). *The Varieties of Religious Experience*. New York: Dover.
- Kabat-Zinn, J. (1990). *Full Catastrophe Living*. New York: Dell Publishing.
- Kabat-Zinn, J. (2011). *Wherever you go, there you are: Mindfulness meditation in everyday life*. New York: Bantam.
- Kelly, E., & Kelly, J. (2007). *Inner Energy*. MD: Rowman & Littlefield.
- Keltner, D. (2009). *Being human: The new science of meaningful life*. New York: Basic Books.
- Kornfield, J. (1977). *Living Dharma*. CA: Unity Press.
- Langer, E. J. (1989). *Mindfulness*. New York: Perseus Books.
- Linehan, M. M. (1993). *Borderline personality organization*. New York: Guilford Press.
- Loori, J. D. (2006). *Sitting with Zen: A practical guide to the Zen practice of mindfulness*. MA: Dharma Communications.
- Mipham, S. (2003). *The way of Zen*. New York: Riverhead Books.
- Nhat Hanh, T. (1975). *Uplifting the mind on meditation*. New York: Parallax Press.

idhi when they are brain (2014). Non-dual is a series of traditions offer not only a path. In my observation never said by any of the d to them by their teach-slight approach toward ng, the meditations in red sense of an onlooker a distance. If there is a night allow people who t of the box altogether : world for all of us, it d rather than destroyed. s cloths: he is naked but d. There is no contradic-ort each other as long as : other. Clarity about this , good meditation, and a

Mindfulness based treatment
Elsevier.

Spinkins, J., Krietemeyer, J., & self-report assessment meth-mindfulness. *Assessment*, 13,

Emergence of somatic psychol-erapy. New York: Palgrave

Behavioral therapy: Basics
New York: The Guilford Press.
(2010). *Relaxation revolution: ics of mind body healing*.

The mindfulness revolution.

Science of yoga: The risks and
Simon & Schuster.

... M. (2003). The benefits of ss and its role in psychological of *Personality and Social* 3.

The path of purification (Vols. 1 ambhala.

The Dhammapada: The sayings
MA: Shambhala.

(2011). *Mindfulness: Diverse aning, origins, and multiple section of science and dharma*

- Davis, M., Eshelman, E. R., & McKay, M. (2008). *The relaxation and stress reduction workbook* (6th ed.). Oakland, CA: New Harbinger.
- Dement, W. C., & Vaughn, C. (1999). *The promise of sleep*. New York: Dell.
- Demoulin, H. (2005). *Zen Buddhism: A history, India & China (Vol. 1)*. Bloomington, IN: World Wisdom.
- Dunne, J. (2011). Toward an understanding of non-dual mindfulness. *Contemporary Buddhism*, 12, 71–88.
- Fields, T. M. (2012). *Yoga research*. Bloomington, IN: Xlibris Corporation.
- Fremantle, F. (2001). *Luminous emptiness: Understanding the Tibetan book of the dead*. Boston, MA: Shambhala.
- Goenka, S. N. (1987). *The discourse summaries of S.N. Goenka*. Onalaska, WA: Vipassana Research Publications.
- Grossman, P., & Van Dam, N. T. (2011). Mindfulness by any other name...: Trials and tribulations of *sati* in Western psychology and science. *Contemporary Buddhism*, 12, 219–239.
- Harvey, A., Watkins, E., Mansell, W., & Shafran, R. (2004). *Cognitive behavioral processes across psychological disorders: A transdiagnostic approach to research and treatment*. Oxford, UK: Oxford University Press.
- Hayes, S. C., Strosahl, K., & Wilson, K. G. (1999). *Acceptance and commitment therapy: An experiential approach to behavior change*. New York: Guilford.
- Hong, Y. (Ed.). (2008). *Tai chi chuan: State of the art in international research (medicine and sport science)*. Basel, SZ: S. Karger.
- James, W. (1890/1950). *The principles of psychology*. New York: Dover.
- Kabat-Zinn, J. (1990). *Full catastrophe living*. New York: Dell Publishing.
- Kabat-Zinn, J. (2011). Some reflections on the origins of MBSR, skillful means, and the trouble with maps. *Contemporary Buddhism*, 12, 281–306.
- Kelly, E., & Kelly, E. W. (2007). *Irreducible mind: Toward a psychology for the 21st century*. Lenham, MD: Rowman & Littlefield.
- Keltner, D. (2009). *Born to be good: The science of a meaningful life*. New York: Norton.
- Kornfield, J. (1977). *Living Buddhist masters*. Santa Cruz, CA: Unity Press.
- Langer, E. J. (1989). *Mindfulness*. Cambridge, MA: Perseus Books.
- Linehan, M. M. (1993). *Cognitive-behavioral treatment of borderline personality disorder*. New York: Guilford.
- Loori, J. D. (2006). *Sitting with koans: Essential writings on the Zen practice of koan introspection*. Somerville, MA: Dharma Communications Press.
- Mipham, S. (2003). *Turning the mind into an ally*. New York: Riverhead Books.
- Nhat Hanh, T. (1975). *The miracle of mindfulness! A manual on meditation*. Boston: Beacon.
- Nhat Hanh, T. (1987). *Being peace*. Berkeley, CA: Parallax Press.
- Nyanaponika, T. (1973). *The heart of Buddhist meditation*. New York: Weiser Books.
- Parnia, S. (2013). *Erasing death: The science that is rewriting the boundaries between life and death*. New York: HarperCollins.
- Ponlop, D. (2003). *Wild awakening: The heart of Mahamudra and Dzogchen*. Boston, MA: Shambhala.
- Rahula, W. (1959). *What the Buddha taught*. New York: Grove.
- Rosch, E. (2008). Beginner's mind: Paths to the wisdom that is not taught. In M. Ferrari & G. Potworowski (Eds.), *Teaching for wisdom* (pp. 135–162). Hillsdale NJ: Erlbaum.
- Rosch, E. (2011). Slow lettuce: Categories, concepts, fuzzy sets, and logical deduction. In R. Belohlavek & G. J. Klir (Eds.), *Concepts and fuzzy logic* (pp. 89–120). Cambridge, MA: MIT Press.
- Rosch, E. (2014). Tibetan dream yoga and the limits of western science. In R. Hurd & K. Bulkeley (Eds.), *Lucid dreaming: New perspectives on consciousness in sleep* (Vol. 2, pp. 1–22). Santa Barbara, CA: Praeger.
- Rosenberg, M. (2003). *Nonviolent communication: A language of life*. Encinitas, CA: PuddleDancer.
- Seligman, M. E. P. (2011). *Flourish: A visionary new understanding of happiness and well-being*. New York: Free Press.
- Shambhala Sun*. (2012). 20 (4), whole issue.
- Santideva. (1995). *The Bodhicaryavatara*. Oxford, UK: Oxford University Press.
- Sharf, R. H. (2015). Is mindfulness Buddhist? (and why it matters). *Transcultural Psychiatry*, 52(3).
- Silananda, U. (2002). *The four foundations of mindfulness*. Boston, MA: Wisdom Publications.
- Snellgrove, D. (1987). *Indo-Tibetan Buddhism: Indian Buddhists and their Tibetan successors (Vols. 1 and 2)*. Boston, MA: Shambhala.
- Snyder, C. R., Lopez, S. J., & Pedrotti, J. T. (2011). *Positive psychology: The scientific and practical explorations of human strengths*. Thousand Oaks, CA: Sage.
- Sogyal, R. (1992). *The Tibetan book of living and dying*. San Francisco, CA: Harper.
- Sprung, M. (1979). *Lucid exposition of the middle way*. Boulder, CO: Prajna Press.
- Stahl, B., & Goldstein, E. (2010). *A mindfulness-based stress reduction workbook*. Oakland, CA: New Harbinger.
- Stone, J. F. (1992). *T'ai chi chih! Joy thru movement*. Albuquerque, NM: Good Karma Publications.
- Suzuki, S. (1970). *Zen mind, beginner's mind*. New York: John Weatherhill.
- Trungpa, C. (1976). *The myth of freedom and the way of meditation*. Boston: Shambhala.
- Trungpa, C. (1984). *Shambhala: The sacred path of the warrior*. Boston, MA: Shambhala.
- Trungpa, C. (1991). *Crazy wisdom*. Boston, MA: Shambhala.

- Trungpa, C. (1993). *Training the mind and cultivating loving-kindness*. Boston, MA: Shambhala.
- Tsoknyi, D. (1998). *Carefree dignity: Discourses on training in the nature of mind*. Hong Kong, HK: Ranjung Yeshe Publications.
- Wachholtz, A. B., & Pargament, K. I. (2005). Is spirituality a critical ingredient of meditation? Comparing the effects of spiritual meditation, secular meditation and relaxation on spiritual, psychological, cardiac and pain outcomes. *Journal of Behavioral Medicine*, 28, 369–384.
- Wangyal, T. (2011). *Awakening the sacred body: Tibetan yogas of breath and movement*. Carlsbad, CA: Hay House.
- Young, S. (2004). *Break through pain: A step-by-step mindfulness meditation program for transforming chronic and acute pain*. Boulder, CO: Sounds True.

- A**
- AAQ. *See* Acceptance and Acceptance
- AAQ, 164
- ACT (*see* Acceptance (ACT))
- maladaptive frames,
- Acceptance and action c
- Acceptance and commit
- 145, 149–150, 16
- Addiction, 114, 115
- birth of, 189
- craving (*see* Cravin
- early models, 186–
- effects, 186
- literature, 185
- neurobiological me
- psychological mod
- treatment (*see* Trea
- Adrenocorticotrophic h
- Affect
- biases, 187, 188, 1
- and craving, 186,
- negative affect (*se*
- positive, 189, 191
- reactions, 187
- self-identity, 195
- tone, 186
- Anterior cingulate co
- Antisocial personaliti
- Attention
- anxiety, 240
- bodily sensation.
- breath-related se
- cycle maintainin
- distress, 242–24
- facility, 240
- metacognitive a
- mindfulness ins
- neutral sensatio
- physiological p
- self-regulation,
- sensory experie
- and working m