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
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: shramatha, Tibetan: shine') and clear seeing (Pali: vipassana, Sanskrit: vipasyaya, 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 shama-tha 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 implementation of focus on other objects. That is not necessarily different implementation and in attention to mental phenomena, though a probing contemplative di
it in some detail of MBSR is tions. (For more n to be covered in ia, 1976; Byrom, anaponika 1973; chings contain the : an explanation of sat that we wish acites that can be sat in which this is able 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 in branch to branch” need mind in Eastern meditation: initial introduction early Buddhist medi- saṃsāra, Sanskrit: 1d clear seeing (Pali: ama, Tibetan: thagshu— to 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 (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 illusory, never in direct sight, and frustratingly never quite in control. What the more experienced Buddhist meditator also sees is that this illusory 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 saṃsāra, 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 saṃsāra. 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.
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 essentially 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 cussion to those. (For Vajrayana to be discussed: Fremantle 2001; Pon Norselgrove, 1987; Sogy Tsoknyi, 1998.) Vajrayanas to the Buddhism tradition as a variety of methods Tantra and in pre-Buddhist is that there is without samsara and knows the primordial timeless, complete, a ground radiates the phenoence. Known with put ordinary world of exasperation, aggression, is seen to actually cons of that radiance. (In a contemporary outgrew Shambhala, passed by the term “b.

Where is mindfulness practice, Vajrayana is mindfulness (Tibetan: connection with an of sight or one’s breath sheshin), the broader that can, for example longer attending to (The closest Western William James’ con contrast to focal various analogies in ship between mind example, mindfulness and awareness to ti graph, book, or name embedded (Trungpa, and awareness are n mindfulness were to the practitioner a tudro), not a happy human; with only e: titioner could be ut awareness is broadening, the quality of t also transformed. I
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 presence 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 yanas) 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 tech-
nique 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 par-
ticipants 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 inter-
viewed only once; two of them after the training
had ended. The interviews were primarily natu-
ralistic; 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 com-
pleted 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 demon-
strated by an exercise consisting of the slow,
guided, eating of three raisins. In closing, a work-
book 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 medita-
tion. 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 dis-
cussions 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 pri-
It is an idiosyncratic variant of Theravada
Buddhism. The premise of the body scan is that
the basic body-mind units of experience are sen-
sations. When we desire, fear, or abhor some-
thing external, what we really want or do not
want, are particular kinds of sensations. Through
explicit Theravada teachings and through intense,
Context and motivation are on the destructive benefits of reducing it, that the method they stress was mindfulness, as defined as in Kabat-Zinn, present, on purpose, that abstract formulation need again in any of the al fate of definitions in 2011.) The pleasures to 1 attention were demonstrated consisting of the slow, as is. In closing, a workshop with sections for 2, and Kabat-Zinn (1990) a trial reading. This entire it in Buddhism, and we s participant response to 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 laying 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 laying 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 didn'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 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, negative, thinking feelings over-responsibility, labeling with thoughts and having spoken that they times giving human emotions and thoughts as had the st time apply remedies. Not existentially nature) is in Buddhism were

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none thinking, overgeneralization, focusing on the
negative, thinking feelings are facts, perfectionism,
over-responsibility, labeling oneself, and identifi-
ing with thoughts and emotions. Participants who
spoke agreed that they did all of these things, some-
times 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 alle-
viation 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 lik-
ing it. There is research showing that an attitude
of loving kindness and compassion toward one-
self 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 keep-
ing 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 pro-
dure became apparent when MBSR began to be
taught by people without background, and under
those conditions reportedly did not work.) The
teachers I observed had all prior meditation back-
ground; two were therapists, and all had people
skills. Interaction within the group included peri-
odic dialogs between participants and group dis-
cussion 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 sup-
port group, MBSR is not a place to discuss per-
sonal pathologies. The one person I observed
who appeared to be in crisis left after the third
week to seek individual therapy. Almost all par-
ticipants, including those who reported them-
seves 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 informa-
ton how participants use them, it is possible to
construct a template of the factors at work in
this kind of therapeutic program. There are alter-
native ways that each of the factors can be instan-
tiated, 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 across Asia, the body is posed not only of flesh, but also of an internal energy called energy vortices called chi, the energy flows. In Hindu yoga, movement of energy is seen as an origin of mental states; for example, with mind. Chinese exercises gong, like the hatha yoga practices designed to adjust the as well as provide exercise and accumulation of meditative research showing the benefits (Hong, 2008). For older treatment movement capacity chih, a simple system of movement benefits, is available in senior centers (Stone, 2008). A simplicity inspired program of movement (Wangyal, 2008) is appropriate. Among Westerners, yoga may supply yogic ways as well as the bilateral continua of the mind and legs.

There are research time to take these mapology as seriously as yoga or acupuncture ways to subject such all scientific investigations for therapy; imagine teachers of therapeutic to work simultaneously.

Sleep

Both relaxation and reduce insomnia and improve sleep effects on body and mind severely sleep deprivation (Vaughn, 1999). In this chapter, I have been identified categories of mental
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 yogenic 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 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 aligned 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 intention. 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 bodily fullness has been used for contrast to passive or a 1989). But the reason why retreats are repetitious activities is that compulation to make things be that such a beginner sentence, not those that lelem solving are good, on a different dimensions than mindfulness.

**Loving Kindness**

Humans are social animals and directly connected to what the practice is a to do it without a ba relaxes and softens people on which other practices, a basic introductory model the practice as simple choose what good on themselves and o is not a mindfulness

**Missing Factors**

There are three “knob” MBSR. (1) First is giving things up—renunciation or su kenosis, and in on change anything ab of what one was or i edge elephant in apy, self-improvev The second dimen kno. Openness on openness to non-conscious concept a sea of not knowi Without acknowledgment, never learn anything
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.

In Short

Results of this inquiry into the specifics of MBSR might appear somewhat like Leeuwenoek'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 endorsing 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 soporific 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, deregulate be vigilant for signs of apply a corrective. For to more awake stating that awareness to the for MBSR participants was to actively manifest instead. Finally, there are such as relaxation, yoga known to calm body deregulation and escalate done mindfully or not.

The fourth factor is describe with words. Very long necessary ability is not mindfulness. In fact labels and descriptions beginning meditators. Correlate verbal apparatus object of one’s meditati A possible fifth factor items taken from the F what is usually called p i.e., the observation states. It did not correlate factors for people who meditate, thus offer mindfulness and other things to those with (Grossman & Van Dam).

But these existing research results, one meaning? I believe that the psychology knows several mental health and correlate with each other of health versus pathology brain correlates; ever and is has brain correlate of mindfulness.

What to Do Instead:

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tional “spacing out,” whether they’re present measures strong self-says that she makes her thoughts are good herself for having dis-s. But this is a measure-ence not of whether a-ually is, present with- occur. (To turn atten-tion of nature of experi-ns, as we have seen, was paricipants.) One might mindfully present with-will reduce their fre-but such a hypothesis is-able as long as the com-lined in the def-inition. variable is already con-variable, then a positive be nothing but a tauto-scientific, logic to include-sitions (as in Molière’s “puts people to sleep power”). The fact that a kind of outcome will teach many techniques (by participants far more ulness) that are aimed (negative mental contents the list) with more posi-tures moderation in emo-modulate affective states by thoughts; it corre-first two factors (pro-the inability to modulate high end of the scale). All cond factor also apply to were to actually take the ere would be no need for self-regulation andr if they are part of the appeal to the effect of. The heart of MBSR prac-participants was the set of-implicitly 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 elabor-ate 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-

Discussion, Prop and the Emperor

MBSR works; it can mindfulness measure usably measure a pathology as well as mindfulness that is oriented attention, suggests that the role of the MBP is not just to change the MBSR participants but to change the world. The only place mindfulness was taught in the MBP was Japa, because of the nature of Japa as essentially a meditative practice, the meditative practice of the Japa is mindfully? A novel at work, each interacts with others.
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Mindfulness 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 interview.) 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 better 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 usably 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 min/s 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 meditations (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 challenging ones. In MBSR, mindfulness is taught in a context with other practices, such as vigilance, interrupting stress, and replacing negative 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 activities that will lead to that goal. Close, continuous 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 experient. 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 may have covered different processes than either the participants have a vocabulary to express that the meditations focus on. A final obvious limitation of MBSR is that it was applied only suggestive meditation, and even in their own ways.

The Other Beneficiaries

The prevailing story about MBSR is a simple and attractive one. It is easy to see how the program can recast a person's life in a more positive light, but it is also clear that many of the people I studied, with their problems and solutions. Look at what is negative, the sense of agency, conditions, and qualities in the new system for sleep, sleep disorders, and loving kindfulness is invoked: somatic sleep medicine, coexistence, and compassion mediates among the emotions and ethical questions.

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of such questions structure, flow, and mindful, close attention. MBSR stress reduction, strategic noticing used sufficient?

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specifically directed at the final interview for some people in this naturalistic parts of the problem is 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 yoga, movement, improvement in sleep, discrimination training, an early warning system for disturbance, corrective 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.

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