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Indra's Net at Work: The Mainstreaming of Dharma Practice in Society

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I

The image this chapter invokes is that of the great net of Indra, described in the *Avatamsaka Sutra*. It's an image of the interconnectedness of the universe. This net hangs over the palace of the Vedic god, Indra, atop Mt. Meru, the world axis in ancient Indian cosmology. At each vertex there is a multifaceted jewel. Each jewel is reflected in each facet of every other jewel in the net. As soon as you touch one part, you've in some way captured the whole.

I'd like to use this image of Indra's net not only in its classical guise as representative of the absolute interconnectedness of all of experience and reality in the universe, but also in the sense of its being a network that is currently expanding and doing a certain kind of work in society, that is, creating conducive conduits for the universal elements of Dharma to be felt in ways that are (as Dharma always is) profoundly healing and compassionate.

The way I propose to do this is to tell you something about my own life trajectory and work. I embarked on this trajectory and continue to pursue it simply as one individual who has been deeply touched by the Dharma in his own life and who was looking for a vehicle for a right livelihood. Of course, now I have the privilege and deep pleasure of sharing this work with a group of extraordinary colleagues and friends at our institute, the

Center for Mindfulness in Medicine, Health Care and Society, and with people around the world who have appeared, past and present, as nodes in Indra's mysterious net.

In the late 1970s I longed to find work that had value and meaning to me, having come out of a long trajectory of interest in and study of science in general and molecular biology in particular. My father was a highly accomplished and honoured molecular immunologist, what you might call a truly hard-core scientist, and my mother was and is an artist. I grew up in the 1950s, the era of C.P. Snow and 'the two cultures', and so, from early on for me, there was a germ of intuitive yearning, mainly below the level of consciousness, for the possibility of bringing the worlds of art and science together.

When I eventually came upon meditation, I never thought of it in terms of bringing art and science together, although now I see that it has served me in that particular way because of my own karma. Meditation just struck me as something that was missing from my own life, emphasising as it did the importance of wakefulness and self-acceptance, a sense of being okay the way I was without having to be judged by how I performed.

In school, at least in the United States at that time, you were constantly being evaluated and judged for how you performed, and hardly ever acknowledged as being a whole person. At gatherings of professionals and at parties, the common way for male intellectuals and academics to reach out in conversation was to say 'Where are you?' Translated, that meant 'What recognisable institution are you affiliated with?' That, instead of perhaps, 'How are you?' or 'Who are you?'

It was a kind of discourse, a way of relating, that I always had a great deal of trouble with. I often had the impulse, which I usually recognised as hostile and kept in check, to say 'Why, I'm standing in front of you! Where do you think I am?'

When I came across meditation and the consciousness disciplines, they meant an enormous amount to me, in part because they emphasised so much a clear seeing and acceptance of the present moment rather than being so caught up in one's head that one literally lived there full-time. I dropped into meditation (that's another story), and started practising as much as I could. It was love at first sight.

Much of the direction our work at the hospital has taken over the past seventeen years came to me in a flash, maybe lasting fifteen seconds, on a retreat in the spring of 1979 at the Insight Meditation Society in Barre, Massachusetts. The retreat was led

by Christopher Titmuss and Christina Feldman, who are guiding teachers at Gaia House in Devon. The flash had to do with the question of how to take the heart of something as meaningful, as sacred if you will, as Buddha Dharma and bring it into the world in a way that doesn't dilute, profane or distort it, but at the same time is not locked into a culturally and tradition-bound framework that would make it absolutely impenetrable to the vast majority of people, who are nevertheless suffering and who might find it extraordinarily useful and liberative.

Parenthetically, I had the occasion in 1990 to spend some time with His Holiness the Dalai Lama in Dharamsala at one of the Mind/Life Conferences that on occasion arrange discussions between Western scientists and His Holiness. At one point in our discussions, the question was put to His Holiness about the danger of bringing the Dharma into the world in ways that might require giving up much of the traditional form and vocabulary, and whether that was possible without destroying the religion and the culture from which it springs and also without, in some way, profaning and betraying the moral and ethical foundations of Dharma practice.

I had more than a little interest in the Dalai Lama's answer, since I had been involved in just that kind of effort for eleven years at that point, although I hadn't yet given my formal presentation of our work to the group in Dharamsala. I found myself sitting there wondering how I would take it if the Dalai Lama's response were that it was an unwise, perhaps even a sacrilegious thing to do. What would I do? Would I repudiate our efforts of eleven years in the face of his authoritative disapproval? I thought to myself, if this practice means anything to me, then I have to really examine my own direct experience and if it measures up, to trust it, even if I'm living in total delusion. My strong impression, perhaps delusion, was an ongoing sense that our work was having a profound effect on people in the hospital, who were coming to our clinic, referred by their doctors by the hundreds each year. So the question hung there for me for what seemed an eternity while His Holiness listened to the translation into Tibetan. Then he said something I'll never forget: 'There are four billion people on the planet. One billion are Buddhists, but four billion are suffering.'

The implication was clear. It made no sense to withhold the Dharma, which we know to be fundamentally universal, so that its teachings are only accessible to Buddhists. The challenge is to make it accessible to all human beings, and to do it in ways that

are authentic, true to the heart of the Dharma but at the same time not so locked in or wedded to tradition and vocabulary that prevent the practice from assuming new forms over the years, to grow and deepen (as it has always done) as it encounters new cultures.

My colleagues and I have recently formed an institute known as the Center for Mindfulness in Medicine, Health Care and Society at the University of Massachusetts Medical Center. Our 'organisational mandala' is meant to display the range of different but interpenetrating elements that comprise the Center and its work: patient care, education, research and outreach/networking. But the heart of everything that we do, as exemplified by mindfulness being placed at the centre of the circle, is grounded in stillness and in the practice of meditation itself.

You might note that the very words 'medicine' and 'meditation' sound as though they might be related, and they are. They both derive from the Latin *mederi* meaning 'to cure'. But the deep Indo-European root meaning of *mederi* is 'to measure', not in the usual Western scientific sense of holding an external standard up to things and measuring them, but more the Platonic notion that everything has its own right inward measure; therefore medicine in this context is the restoring of right, inward measure when it is perturbed, and meditation is the direct perceiving of right inward measure.

At the beginning, I asked myself, what would be a skilful way to approach the introduction of meditation into medicine and health care? It felt like the least skilful way would be to call it the Meditation Center. The First Noble Truth suggests that everybody relates to suffering because it is universal. Most people who come to hospitals do so because they are suffering in one way or another, or somebody else close to them is suffering. Hospitals are not a big draw when you are feeling well. You've got to be suffering a lot before you are willing to go to the hospital on your own. But hospitals do function as '*dukkha* magnets' in our society. So they are logical places in which to do Dharma work.

In 1983 *Time* magazine ran a cover which showed the head of a man in agony exploding out of a block of concrete, with the heading: 'Stress: Seeking Cures for Modern Anxieties'. This is symbolical of our age. I find it of value with certain professional audiences to emphasise the correspondence between our concept of stress and the Buddhist understanding of *dukkha*. Indeed, some translators actually use stress in English as a translation of *dukkha*. Stress is something that everybody intuitively

understands in our society. So calling our programme 'stress reduction' might give us direct entry into the realm of working with *dukkha*. It had universal appeal.

We wanted to target a 'stress reduction' programme toward those people who were not satisfied with the health care system, were not being cured by the promise of medicine, were not receiving the kind of cure or caring that they sought in coming to the hospital. The challenge was to establish the clinic we had in mind to serve as a kind of safety net, one which was capable of catching people falling through the cracks of the health care system and challenging them in a meaningful way to see if there was not something that they could do for themselves as a complement to what medicine would be trying to do for them.

So we call our service 'The Stress Reduction Clinic' and everybody intuitively gets it. The universal response to seeing the signs up in the hospital, among patients, physicians, surgeons, hospital administrators, everybody, is that they invariably think or say 'Oh, I could use that.'

Of course, the Buddha noticed this a very long time ago: the universality of that sense of things being not quite right, that we all have running through us a river of anguish or grief or dissonance. In our society, the term 'stress' captures that. Yet 'stress' is not a good term from the scientific point of view because it is ambiguous in most contexts as to whether one is speaking of it as a response or a stimulus. It can mean many different things to different people, and has to be reduced to a precisely defined condition for scientific study. So from that point of view, the term has its drawbacks. But from the point of view of the inescapable anguish of the human condition, from the point of view of actually reaching out to people who are suffering, the term 'stress reduction' is something people are intuitively attracted to. And that can be exceedingly useful if your aim is to offer them a resource which includes asking them to do something for themselves which is arduous and challenging. There is a need to elevate motivation and aspiration, and if a particular term can help to accomplish that aim, it becomes a skilful way to embark on what is really a journey of a lifetime. Moreover, 'stress reduction' comes free of a lot of the baggage that accompanies psychiatric labels, which triggers for many people the implication that your problem is 'all in your mind', that 'there is something wrong with you'. In the US now, there is no onus to admitting that you are under a lot of stress. That you might be doing something about it conveys, if anything, a sense of intelligence

and of agency, rather than being inadequate or abnormal.

Since 1979, we have seen over ten thousand medical patients who have completed the programme in the clinic. We have coined the term 'Mindfulness-Based Stress Reduction' (MBSR) to differentiate this Dharma approach from other programmes that carry the label 'stress reduction', many of which have nothing to do with the cultivation of wisdom, very little to do with compassion, and a lot to do with a fairly formulaic behaviour modification approach and philosophy, where transformation and healing are virtually excluded from the vocabulary and the underlying theory and thought processes. Whether we are conscious of it or not, our models of what human beings are and what they are capable of always dictate how we approach people and what we think might be possible for them.

Our view is that people are fundamentally miraculous beings, geniuses in fact, and also, in many fundamental ways, mysterious. We see everybody as having their own inner and outer expressions of genius, related in its universality to what some Buddhists call one's 'true self'. If we are able to appeal in some way to that genius within everyone, each person will recognise it instantly and that will form a good foundation for the actual work of meditation practice.

When we speak of meditation, I like to emphasise that what we are really talking about is a particular way of paying attention, one that gives rise to a moment-to-moment, non-judging awareness, which is how we define mindfulness. There is an *intention* involved in how we pay attention in meditation. If you have some experience with meditation, you will understand what I am talking about. But the systematic and intentional cultivation of present-moment, non-judgemental awareness is something I go into in great detail when I am giving talks to physicians, for instance, because it is new to them. When one speaks of meditation in this way, I find that professional audiences understand it intuitively, because everybody has had the experience of paying attention, or not being able to pay attention.

Apart from the word 'Dharma', I have not used any Buddhist terminology in talking about meditation in this presentation. And I should stress that I do not use the word 'Dharma' with our patients, or when I am talking to a group of mainstream professionals, although even that may change in the coming years as the world becomes more receptive and open to such concepts. But paying attention, and what it means to be truly human, and mindfulness, and states of mind such as wakefulness: people

understand such concepts without any resistance, and without having to appeal to an ideological or cultural shift in perspective. Attention and wakefulness are key concepts in exploring meditation and the whole question of the 'psychology of awakening'.

A lot of the time you will notice, even if you have been meditating for some time, that there is a tendency to run around on automatic pilot, to be not quite here, with your children, at work, or wherever you are. We can operate in a kind of mechanical mode a good deal of the time, perhaps more than a little bit out of touch. There's a wonderful line in James Joyce's *Dubliners* that goes something like this: 'Mr Duffy lived a short distance from his body.' We may be capable of living a short distance from our bodies for decades at a time, all the while having all sorts of ideas in the mind about how our body is or should be or why it is inadequate or whatever it is, or too old or too young or too large or too small, or whatever. So our so-called everyday waking state can be a kind of dream. We are capable of living from day to day with an ongoing, persistent lack of awareness, a lack of consciousness. The implication is that you could go through life and never be where you actually are. You are always someplace else.

Now this is not just a Buddhist observation. Blaise Pascal, in his *Pensées*, said: 'All of man's difficulties are caused by his inability to sit quietly in a room by himself.' Henry David Thoreau, who lived in Concord, Massachusetts in the early part of the nineteenth century, said: 'I went to the woods because I wished to live deliberately, to confront only the essential facts of life and see if I could not learn what it had to teach and not, when I came to die, discover that I had not lived.'

Listening to the stories of hundreds of the people who have been referred to our clinic over the past eighteen years, and, of course, watching my own mind and my own leanings towards automaticity, it has become clear that many of us live caught up in this dream, in this fairly automatic and unconscious consensus trance that we think of as being awake. Yet, there are moments when we break through this dream state, often when we are ill, or dying, or when we receive a shock to the system, and we realise, 'My God, I got the rules of the game all wrong. I had no idea that I had a choice, that I didn't have to run over people or look cynically at people's motivations, or be preoccupied solely with my own pursuits, or withdraw into hurt, depression, isolation, and helplessness – that I have options, choices that can be exercised.'

Many of us may not come to such a 'rude' awakening until we have a heart attack, or are threatened with cancer, or are at death's door. Only then might we realise that we haven't really honoured our children or spouse, or that we didn't listen to our own heart. It might be a good idea, as Thoreau suggested, not to wait until you are about to die to realise that your life is yours. Perhaps it is not dying that we are afraid of in this life. Perhaps what we are really terrified of is living.

In 1939, Carl Jung wrote a foreword to D.T. Suzuki's *Introduction to Zen Buddhism*. Speaking of Zen meditation and practice, he said, 'As we know, this question of coming to wholeness has occupied the most adventurous minds of the East for more than two thousand years and in this respect methods and philosophical doctrines have been developed which simply put all Western attempts along these lines into the shade.' He knew something about it. But he also said that he did not think that it was possible for Westerners to really understand the heart of Zen and of Buddhist Dharma. That view is quite arguable now. Who could have predicted the incredible flowering of Buddhist practices and interest in Buddhism in the West that started in the 1960s or in the late 1950s with the Beatniks and with various meditation teachers coming to the West in large numbers for the first time? In 1996, it is not so inconceivable that Westerners might have an authentic meditation practice. And in an interesting cultural role reversal, on occasion we have Japanese, Chinese and Indian people coming to Westerners to learn something of the heart of their own traditions.

In America, meditation has even crept into the bubble gum comics: This is Bazooka Joe:

'What are you up to Mort?'
'Practicing meditation. It fills me with inner peace. After two minutes my mind is a complete blank.'
'Gee, and I thought he was born that way.'

Of course, this is a completely erroneous view of meditation – the idea, and it's very common, that meditation is a state change akin to simply flipping a light switch; switch into 'the meditative state' and your mind goes blank and stays that way. My point is simply that people who have no direct experience of meditation still have all kinds of ideas about it that they pick up from the culture at large.

Why have we chosen mindfulness to be the central focus of our

work in the hospital with medical patients? I will answer that by first reviewing briefly the observation that in Pali, the classical language of Theravada Buddhism, the word most commonly used for 'meditation' is *bhavana*, which means 'development'. Meditation lies at the core of what is involved in the ongoing development of being human, or, if you will, the inquiry into what it means to be human and to have this apparatus – the body/mind – that has so much potential yet so much of the time we feel is weighing on us or falling apart or betraying us or getting us into trouble because we don't even know what is coming out of the mouth before it has come out, and even less what is going on in the mind. The 'apparatus' could, of course, work in our service, if only we paid attention to it and understood its potential for the ongoing development of awareness, of penetrative insight, of some degree of wisdom, and of compassion for others and for ourselves.

Even if you are thinking, 'I am a meditator, I know what I'm doing. I am cooking, or driving, or thinking . . .' there may still be a problem. The problem is not with the meditating, or the cooking. The problem is our relationship to the pronoun 'I' – as in 'I am a meditator'. In the practice of meditation we are dropping the notion of 'self' as we usually think about it. Mindfulness was taught by the Buddha in the *Mahasattipathana Sutta*, which speaks of the four foundations of mindfulness: the contemplation of the body, the contemplation of feelings (pleasant, unpleasant, and neutral sensations), the contemplation of mind states (including thoughts and emotions), and the contemplation of mind objects (suffering, impermanence, emptiness).

The text starts with the body, which is a really wonderful place to begin. If we are talking about interconnectedness and the true nature of the self, why not start the investigation close to home? If it is true that Mr Duffy lived a short distance from his body, maybe what would be required is to get back into the body. How do we cultivate mindfulness of the body?

We see meditation, yoga, Tai Chi, Qi Gong as what Roger Walsh, of the University of California at Irvine School of Medicine calls 'conscious disciplines'. These are methods for the systematic cultivation of our capacity to optimise functions that we hardly understand at all, including being in the body. Two major strands of practice are *samatha*, or *samadhi*, the strand of concentration (including calmness, stability of attention, one-pointedness), and *vipassana*, the strand of insight, mindfulness, awareness, discernment.

Our approach to practice aims to cultivate both strands

simultaneously. Yet we certainly don't use this vocabulary when we teach in the clinic. Practice taught in this way emphasises not trying to get anywhere but, for once in our lives, allowing ourselves to just be where we are, without any striving, without actually doing anything. Realising that in some way if you are already whole (the words 'health', 'healing', and 'holy' are all related to the word 'whole'), then there is no place to go, and nothing to do. In this sense, meditation is more a realising, a 'making real' what already is. That requires a certain kind of work, but we really don't have an appropriate verb for the process. 'Work' isn't quite right, and we can't really use the word 'doing' either.

We go by the term 'human beings' rather than 'human doings', but to watch us, one might wonder sometimes. Again, we are speaking of discernment, differentiated from judging. We are not talking about judging things, forming opinions then getting locked into one thing or another, but rather cultivating or developing our capacity for seeing more clearly, for letting go of opinions and accepting the actuality of what is unfolding, as best we can. This leads us to the cultivation and the spontaneous arising of compassion, including self-compassion, and of wisdom, which both have something to do with seeing the interconnectedness of the world, the play if you will of Indra's Net, in virtually every aspect of life, every aspect of reality.

Now if we created a stress reduction programme based on such principles and practices, would anybody come? Would it become acceptable, in our case, to mainstream Americans and relevant to their concerns? Such an approach had, to our knowledge, never been tried before back in 1979. Could medical patients even be interested in such a thing? Would doctors refer people? Would hospital administrators do what was needed to support such a clinic? Would insurance cover it? And was what we had in mind truly universal? Could it be offered and seen as valuable by the people who are under the most stress in our society: the poor, recent immigrants, who do not even speak English, who face economic deprivation, bad living conditions, homelessness, joblessness, very often fragmented families? These are some of the questions we wished to explore in our research, and in our attempts to take a degree of responsibility for contributing to the emergent field of what has come to be called mind/body medicine.

The Stress Reduction Clinic or Stress Reduction and Relaxation Programme (SR&RP), as it was originally called, is a

clinic in the form of a course. It is a course that is designed to teach people how to take better care of themselves and how to live more skilfully and more fully as a complement to whatever their medical treatments are, in other words how to move towards greater levels of health and well-being.

How do we know *how* individuals who come to the clinic with major medical problems and life stresses should move towards greater levels of health and well-being? The answer is, we don't. What we do is challenge each individual: 'If it makes sense to you, why don't you try engaging in what we offer, and see whether it would have any value? Together, we will try systematically to document your experience as we go along. The course is eight weeks long, and the commitment to take it requires that you would have to come to class once a week for two and a half hours.' There are about thirty to forty people in a class, all referred by physicians or, in perhaps ten per cent of cases, by other health care providers. They come with a vast range of different kinds of medical problems: heart disease, cancer, HIV, AIDS, chronic pain, irritable bowel syndrome, high blood pressure, skin problems, chronic anxiety, chronic panic disorder to name some of the major classes of diagnoses.

We challenge the people referred to the clinic to make a major commitment in taking this course. The commitment involves being willing to carve out at least forty-five minutes a day, six days a week, to practise the meditation and the yoga. To make matters worse, we tell people right up front, 'You don't have to like the meditation or the yoga, you just have to do it, and at the end of the eight weeks, you can tell us whether it was of any value or not. But in the middle, when the mind comes up with, ". . . this is so boring", or "this is not relaxing . . ." just keep up the practice, whether you like it or not. Because we can tell you right now, in advance, that you may find the meditation boring. You will no doubt also run into anxiety, ennui, irritability, in fact, you are going to run into every kind of human mental state that exists. Why? Because you are human, and mind moments, mental states keep coming up. It's got nothing to do with taking a stress reduction programme, although you can attribute it to the stress reduction programme if you want to. But, as we said, you don't have to like it, just suspend judgement as best you can and do it for the eight weeks, then we'll reassess.'

Participants also have to commit to doing awareness exercises in a workbook for about fifteen minutes a day, and attend an all-day silent retreat in the sixth week. In addition, they are required

to attend individual interviews before and after taking the programme. I want to emphasise that the SR&RP is offered as a complement to medical treatment, not a substitute for it. We are not talking about an attitude of 'Oh, you have headaches. Why don't you meditate?' First it has to be established that the person doesn't have a brain tumour or something like that. So, all prospective participants are first worked up medically to the degree considered reasonable by their physician. Only then, when appropriate, are they referred to the stress reduction clinic. Of course, that is a lot of people because most people who have headaches don't have brain tumours. Brain tumours are relatively rare, but they do occur, so we want to be sure that people are getting appropriate medical treatment for their conditions at least concurrently as they launch into complementary, self-regulatory practices.

Meditation training is offered as a complement to traditional medical treatment, in part based on what we believe to be a core principle of the medicine of the future, namely, that twenty-first-century medicine will be fundamentally participatory. It will honour what I would call the sovereignty of the individual person, the patient as a whole human being. Many doctors have practised in this way throughout history. Now this principle is making its way into the training of all physicians from their first encounters with medical school. Ultimately, there is only one way to do it. You cannot honour who another person is without being present, and being present is not something that comes all that easily to most of us, especially if you are busy, stressed, and this person that you are seeing is one of twenty or thirty people that you have to see today, and each has a story that may be more painful and disturbing than the one before.

It is important to mention that, on the face of it, the MBSR approach takes the medical/psychiatric model – which rests on the development of specific treatments for specific problems – and appears to turn it on its head, in the sense that we are working with people with a wide range of different kinds of problems, yet we offer them all more or less the same intervention. The only way that that could possibly make any sense and be of any value is if we appeal to what is 'right' with them rather than focus on what is 'wrong' with them.

If you have thirty people in a room and they all have serious, sometimes horrible, problems of one kind or another: what do they have in common? Where could we possibly start to make a difference in their lives? Well, to begin with, you will have to get

very basic. First grade is not good enough. You've got to drop down to kindergarten or day-care to really penetrate this koan. What do they have in common that is important, and a good foundation on which to build? For one, they all have bodies. Every single person has a body. Some may be partially or totally paralysed, some may not be able to walk, or see, or hear, but they all have a body. (Parenthetically, let's notice that it is a peculiar terminology to say that someone 'has' a body. Who is it that actually 'has' the body?) They are also all breathing. So that is where we start, with contemplation of the body. What's more, all the people in the room have minds too, in conventional parlance, and as we know, their minds are all waving to one degree or another and, to a large extent, they are unaware of it. It's absolutely news for most people that that's the case, that the mind is always waving. But ordinarily, without training in meditation, we don't think about it quite that way. And they are also all capable of paying attention to one degree or another.

Meditation, in the way we look at it, is a way of being. It's far more than a collection of techniques. Most clinically oriented people, if they think of meditation at all, think of it as just another relaxation technique. Nothing could be further from the truth. Meditation has little to do with relaxation. It has to do with being present and with seeing things as they are. What if you're tense in a particular moment? Is that bad, or is it just the way it is? If you are practising a relaxation exercise and you find you are tense at the end of it, then either you have failed, or the teacher has failed, or the exercise is no good, or the tape is no good; something is no good. But if you are practising meditation and your body feels as tense as can be, then you are just aware of the tension. That is just as good as if you were loose as a goose. So we sometimes tell people in the intake interview that we are going to teach them how to be so relaxed that it is okay to be tense. Then they have no place to go, nothing to attain. This is an effective attitude for furthering the inner work of attending to the present moment non-judgementally. Such a paradoxical tack can serve to help people to grow beyond the conventional mode of striving to get somewhere else to make progress. The Zen tradition mastered this approach a long time ago.

Imagine that you are guiding a meditation and you say: 'When you are ready, breathing in . . .' You haven't given anyone an imperative, an order. You've given them the freedom to breath in when they are ready. Sooner or later every person in the room is going to breathe in. So you have aligned yourself with something

that is going to be part of everybody's immediate experience. '. . . and then watch the breath go out . . .' Sooner or later everyone is going to breathe out. All you are suggesting is that they be there for it. There is no coercion, no controlling them, no suggestion of what they 'should' experience. By the skilful use of language and pacing, you are actually empowering people, guiding them to become more awake to the present moment, to the body, to the mind, to the whole world. At some point, they may begin to see connections you have never mentioned; insights may begin to emerge that can be 're-incorporated' into their own body, in their own 'corpus'. So meditation practice goes far beyond a set of 'techniques'. It is a way of being, a way of relating to the entire field of awareness and experience.

We often use a variant of the Kalachakra mandala as a teaching device to talk about the extensive repercussions related to this work. At the centre of the mandala is a space we have labelled 'the room'. Once we get people into the room, we can do a certain type of work with them that can't be done unless they show up with certain expectations and motivation. In order to get people into the room, you need a staff of people to talk to the people you want to get into the room to help ignite and shape those expectations and motivations. This is depicted in the next level out, surrounding the space of the room. You also need skilled and caring meditation teachers who are going to do the work in the room with the people. That is the next level out from the centre.

Then you need a clinic to create a framework for what goes on in the room so you can call it stress reduction and people will come, and so you can bill their health insurance companies, and have a revenue stream to pay the teachers. Next level out: you need doctors and health care providers, nurses, psychologists, etc., who will refer the people to come to work in the room. In order to have the doctors, you need patients or people who come to the doctors, so that is the next level out. As we keep going out, we have levels such as the hospital, the medical centre, then medicine itself, and health care. Then, to pay for that, you have the health insurance level, then employers that contract with the insurance companies. Beyond that, there is the level of society as a whole, and beyond that, the politics of health care, and the economic life of the society. Beyond that is the world; beyond that, the universe. Moreover, the room is not just the physical space in which the classes are conducted. It represents the room one discovers in one's own heart as one practises mindfulness meditation.

This teaching mandala can readily remind us of the interconnectedness latent in 'doing' the work of *being*, right there in the room, with whoever shows up. The attitude that the instructor brings into the room, and whether he or she is aware of all these levels, ultimately influences absolutely everything in the world. Once you make the commitment, as Kabir put it, 'To stand firm in that which you are', to hold the central axis of your being human, the entire universe is different.

That is one of the repercussions of the physicist David Bohm's notion of the implicate order, the enfolded universe, of which Indra's net is such a powerful symbol. And seeing the world as fundamentally interconnected, one seamless whole, provides us with a very practical way to catalyse, both in individuals and in institutions and in the society as a whole, the emergence of unpredictable characteristics and events that reflect the underlying intrinsic wholeness of the world and are therefore both healing and transformative.

In 1979, the year that I set up the Stress Reduction Clinic, the Surgeon General of the United States issued a report called 'Healthy People'. It made the observation that half of the US mortality in 1976 was due to unhealthy behaviours or lifestyle, and twenty per cent to environment factors; in other words, things that people could do something about. The inner work we are speaking of here involves in some way taking charge of that which we can have some effect on. Rene Dubois, the great microbiologist/philosopher who worked at what was then the Rockefeller Institute, observed that 'human health transcends purely biological health because it depends primarily on those conscious and deliberate choices by which we select our mode of life and adapt creatively to its expression'. Adaptation is one of the key characteristics of being human, indeed, of all living systems.

When we begin to pay attention and cultivate awareness, our view of the world changes and we can begin to navigate in ways that are highly adaptive, highly supportive of healing, of health, and of a healthier way of being, not only in one's own body but in the world. We do that through the choices we make, through taking responsibility for ourselves to whatever degree is possible. Dr John Knowles, who was president of Massachusetts General Hospital, observed around the same time that: 'The next major advance in health of the American people will come from the assumption of individual responsibility'. That was in 1979, when the Stress Reduction Clinic first opened. In the autumn of 1996,

there were over 120 MBSR programmes in the US and a few in other countries, including some in the UK, all based on the University of Massachusetts model we are speaking about. And that number is growing rapidly. The net is expanding. (As of June, 1997, there were over 240 centres worldwide offering MBSR.)

Taking a look at the fundamental training that goes on inside the room in the Stress Reduction Clinic's classes and at home, our patients cultivate mindfulness through both *formal* and *informal* meditation practices. Although it is crucial to keep in mind that meditation is a way of being and not a technique, we do make use of a number of formal meditation practices in MBSR, which involve a regular and, if possible, daily discipline. The big three are the body scan, sitting meditation, and mindful hatha yoga. These and other formal practices such as walking meditation are described in detail in *Full Catastrophe Living*, *Wherever You Go, There You Are*, and in my colleague, Saki Santorelli's book, *Heal Thy Self*. We ask the participants in the programme to make a strong commitment to practice at least 45 minutes per day, six days per week, using mindfulness meditation practice tapes that guide them in these various formal practices.

If people were to come in and observe what we are doing, from the outside it could well look like the Stress Reduction Clinic is the biggest joke in the world. Imagine: an observer would see people lying on the floor for long periods of time (practising the body scan), not talking, then they might spend more time sitting still (practising sitting meditation). What would not be intuitively obvious is that there is deep work going on here, and it is very hard to do. When physicians take the programme and gradually come to realise the enormity of what we are asking of the patients, their respect for their patients skyrockets, because they themselves may be having a terribly hard time just keeping their mind on the breath for even five minutes, or even five seconds! It become even more impressive to them that the dropout rates in this programme are extremely low. Our published studies show that the dropout rates average fifteen per cent.

The heart of the practice in MBSR lies in what we call informal mindfulness practice, i.e. mindfulness in everyday life. The true meditation practice is when life itself becomes the practice. We cultivate mindfulness systematically in daily life through paying attention to what we are doing, and bringing mindfulness of the breath into it is a very good way to develop this in whatever we find ourselves doing or experiencing: eating,

standing, walking, routine activities like doing the dishes, taking out the garbage, cleaning the house, taking a shower, having words come out of your mouth. All these are occasions to which we can actually bring awareness, and notice how awareness itself actually changes how we relate to things.

I like to give people the following homework to drive the point of this practice home. The next time you are in the shower, check and see if you are in the shower. You can do the same checking in virtually every situation you find yourself in, driving a car, having a conversation, being with your children, even making love. It might be a rude awakening. Part of the curriculum of MBSR is to bring awareness to and examine with interest pleasant events, unpleasant events, neutral events, as they unfold in our lives.

II

I would like to switch gears at this point and discuss some of our research efforts in mind/body medicine and the outcome of MBSR training in medical patients over the past seventeen years. I'll begin by telling you very briefly about an experiment we did in the dermatology clinic with people with psoriasis. We asked ourselves the question: if people meditate, would it have a positive effect, not on just their stress levels or symptoms but on an actual disease process? Is there something that the mind does that is capable of actually healing the body or influencing healing in the body?

We decided to look at the skin disease psoriasis because it is known to be related to stress. We don't really understand the pathophysiology of psoriasis. It is known that stress is a part of it, but there are some very interesting things about the molecular biology of psoriasis that suggest that it would be a good model to study uncontrolled cell proliferation, which is closely related to cancer, and the genes known to be affected in psoriasis.

One standard treatment is phototherapy using ultraviolet light (UVB). The patient stands naked in a small, cylindrical light-booth and is bathed by ultraviolet light for short periods of time, no longer than fifteen minutes, often much less. The UV knocks out the rapidly growing epidermal cells, presumably by hitting the dividing DNA in the cell nucleus, and, over time, the skin clears. So we decided to teach standing meditation to people undergoing phototherapy. To maximise the connection between

the meditation practice and the light treatment setting, and the patient's participation in his or her treatment process, we included instructions for visualising what the light is doing to help the skin clear.

We randomised people to two conditions: those who just received the light treatments, and those who got both the light and the meditation instructions, which were delivered through a guided meditation tape played from speakers on top of the booth while the person was standing in the lightbooth. The patients came for treatments three times a week, and we followed them and photographed their skin over time for up to about thirteen weeks. We looked not only at phototherapy as a treatment, but also photochemotherapy (PUVA) in which patients get ultraviolet light treatments plus a chemical called psoralen, which is thought to intercalate between base pairs in the DNA and creates covalent crosslinks between the strands when it is struck by the UV hitting the epidermis. The rapidly growing skin cells can no longer divide. Growth slows down, the scaly patches slough off and the skin clears.

In the first study that we did with a small number of people, we followed the meditators and the non-meditators. The survival curves were normalized to a hundred per cent for each patient. When a person came into the study, the degree of skin involvement at baseline for that patient was labelled a hundred per cent. Over time, it would go down. We defined five per cent or less of the initial skin involvement as clear. The five meditators, undergoing UVB in this case, cleared before the two people who were not meditating, and one non-meditator did not reach clearing at all. This pilot study had a very small number of subjects, twenty-three in all. We then produced a survival curve for the patients undergoing photochemotherapy. We found that only the meditators made it to clearing within forty treatment sessions.

We did this study back in the mid 1980s. It suggests that something that people are doing in the lightbooth is influencing the rate of skin clearing, having an effect on the healing process directly or indirectly. We didn't try to publish our findings at the time, except for a letter to the editor of the *Journal of the American Academy of Dermatology* in 1988 (Bernhard *et al*, 1988), because we felt it was potentially too important a result about which to make claims on the basis of one very small study, in which skin status was only assessed by the visual inspection and rating of nurses in the clinic who were not blinded to the patient's condition. We felt we should first try to replicate the

Figure 17.1

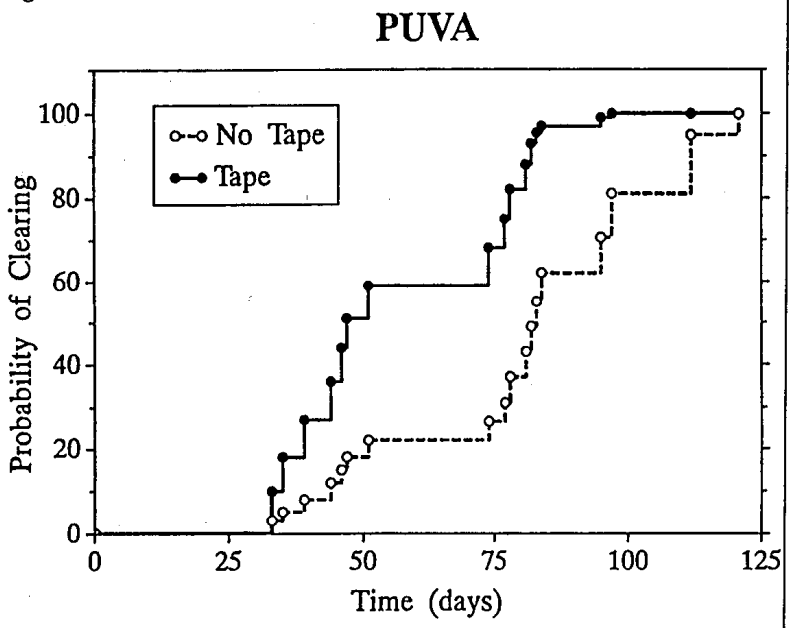
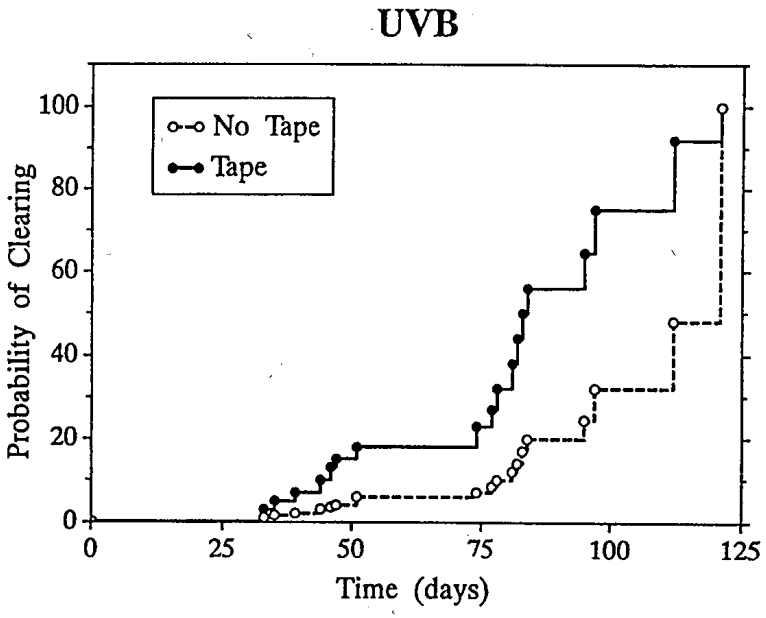


Figure 17.2



From Kabat-Zinn, Wheeler, Light *et al*, 1998. Reprinted with permission, *Psychosomatic Medicine*.

finding, with more people, and under more stringent experimental conditions, which would include blinded photographic verification of the nurses' ratings by the dermatologists. If we could see it twice, then perhaps we would be willing to believe it. It is good to be sceptical and cautious when making claims in this area.

So we designed a much more stringent study, although here too, the number of subjects, thirty-seven, was not as large as we would have liked. Nevertheless, the results are highly significant, both clinically and statistically, and show that the meditators cleared about four times as fast as the non-meditator controls (Kabat-Zinn, Wheeler, Light, *et al*, 1998). Figures 17.1 and 17.2 show you the Cox proportional hazard probability models of clearing as a function of time for both the meditation (tape) group and the regular treatment (light but no meditation) group. Notice that in the case of photochemotherapy (PUVA) (Figure 17.1), at a fifty per cent probability of clearing, there is about a thirty-day difference between the meditators and the non-meditators.

Figure 17.2 shows the results for phototherapy (UVB), the weaker treatment. Note that it takes longer for clearing to occur in general (because the treatment is weaker) but again you can see that here, too, there is about a thirty-day difference at the fifty per cent probability of clearing between meditators and non-meditators. When we plot it not as a function of time but as a function of total energy exposure of the skin, we see the same thing.

We interpret these findings as evidence that something that the meditators are doing is actually influencing cellular and molecular processes that are resulting in the clearing of the skin, in other words, in healing. There are enough suggestions about the molecular biology of psoriasis to actually begin looking at gene expression using this experimental system, so perhaps we can do science on the question of what the mind is doing all the way down to the cellular and even the gene expression level, in a way that might be able to tease out certain aspects of the underlying healing process in this case, and the mind's relationship to it. Moreover, this study suggests that the duration and cost of the light treatments might be substantially reduced if patients participated in the treatment by meditating. That would also reduce the risk of cancer associated with UV exposure.

In addition to studies such as this one that I have described, much of our research, especially in the early years, focused on

clinical outcomes in the stress reduction programme itself, for medical patients with a range of different diagnoses. We have documented interesting, reproducible and long-lasting results in patients with a range of chronic pain conditions, with stress-related disorders and with people who, in addition to their medical conditions, suffer from anxiety and panic. Many of these findings are outlined in *Full Catastrophe Living* (Kabat-Zinn, 1996), and many have been published in the medical literature already (see references).

We also work in other venues. In 1992, the people in charge of the prison system in Massachusetts came to us, took the stress reduction programme themselves, and then proposed putting MBSR into the prisons for both inmates and correction staff. There is an enormous amount of suffering in and around prison. It is not just the inmates who are suffering, but also the people who are keeping them in prison. So to work in the prison system seemed like a very good opportunity to further the mainstreaming of Dharma practice in society and perhaps contribute in a small way to the reduction of suffering and, ultimately, the reduction of recidivism, a huge problem in the criminal justice system in the US.

It takes an enormous degree of individual commitment and courage to walk into a prison, past three or four four-foot thick walls and barbed wire, to go through traps and random searches and everything else, and do this kind of work. Really, there is only one way you can do it and that is out of a love for the practice itself, and a deep respect for the human beings you encounter. The first rule in prison is that you never close your eyes in a group. Yet our instructors, many of whom were women, would often guide extended meditations for the inmates, everyone with their eyes closed! It is a very moving experience just to be in there on the floor with these folks, as they work on self-acceptance, letting go, being present, being non-judgemental, being non-reactive.

After four years and having had over 2,000 inmates and 200 staff go through the programme, our involvement with the prisons came to an end shortly after a big media uproar, with a front page editorial in the *Boston Herald*. Our work got caught up in a huge election year debate around 'coddling' prisoners as opposed to making them 'crush rocks', as our Governor put it (the very one whose appointed chairman of the Massachusetts Committee on Criminal Justice recruited us to do the work). Rehabilitation versus punishment was the issue. So the pro-

gramme came to an end, which would have probably happened anyway because the funding was only there for that period of time. But the flap precluded any possibility of keeping it going, and made it very difficult for the wonderful instructors who were working in the prisons. At the time, we couldn't say much about scientifically validated outcomes because we hadn't completed the analysis of the data. But we had collected data on thousands of inmates and hundreds of staff and are currently in the process of analysing it. So, if the results are positive, as I imagine they will be from our personal experiences of working in the prisons, we will be able to make the case for the value of this approach in the criminal justice and corrections system.

MBSR is also making its way into the schools. One day, a fourth-grade teacher named Cherry Hamrick showed up at a talk I gave in Utah about our work in the hospital. She had gone through an MBSR programme at a hospital in Salt Lake City and said to me, 'I want to bring this into my classroom.' I said, 'Don't do it, the parents and the school system will misunderstand it and will eat you alive.' But like any good student, she did not listen to her teacher, she just went ahead and did it. Apparently she found a vocabulary and a way to do it such that, in this public elementary school in Utah, in a community which is ninety per cent Mormon, the children are practising a form of meditation that comes from the Buddhist tradition. Of course, they don't talk about it as Buddhist meditation, but they do know where it comes from. Not only that, the stress reduction was so popular with the students that it spread throughout the school.

I visited the class one time. The children and their parents came on a Saturday to meet me. One boy, who had ADHD (Attention Deficit Hyperactivity Disorder) and had been so problematic that he was described to me as having been the most hated kid in the school in earlier years, guided the sitting meditation for ten minutes. He did it very skilfully, and he didn't move a muscle. His mother sat right next to him. Later, when we had a chance to speak, she told me that her son is a different person now, and she and he attribute it to the meditation practice, which wasn't easy for him but which he pursued doggedly until he could be still for increasing periods of time and follow his breathing and watch his thoughts and impulses without reacting. This is just one personal story, but it suggests the potential value of a meditative approach within the classroom to enhance concentration, calmness, and engagement with the experience of learning when offered by a skilled and empathic and creative teacher.

(Another parenthetical observation: ADHD is running rampant through our society. I've seen studies that suggest that its incidence is quadrupling every four years, that perhaps ten per cent of children are on ritalin. One can't help wondering how much of this is for the sake of the children and how much for the sake of keeping order in the classroom rather than having a compelling educational environment that ignites a passion for learning and that excites the imagination.)

In this context, I think it is important to note that, from the meditative perspective, the entire society suffers from attention deficit disorder. Rather than medicating the whole society, which some doctors and the pharmaceutical industry are perfectly happy to contemplate, maybe what we really need to be doing is shifting one consonant in the word medication, to make it meditation. But not in some dime store, Mickey Mouse way, as just another behavioural modification technique to tune someone in and get them sort of straightened out so they will be more obedient and quiescent, but as a way of being, a way of inquiring into what it means to be human, a way of self-discovery.

Ms Hamrick once looked up what the Utah Board of Education said about the nature and practice of education in the state of Utah. It turns out that it is mandated to be directed to four different domains: the emotional, the intuitive, the somatic and the cognitive. The domain which dominates, of course, is overwhelmingly the cognitive. Often, sadly, even that domain is reduced to just bits of fragmented information thrown at the kids. They have to memorise the names of the states, the capitals of the states, the gross national product of the states. Ms Hamrick has taken the novel step of bringing mindfulness into every aspect of the curriculum, into Maths, English, Science and Social Studies. She works through poetry, through the body, through feelings, through experiments, to bring out the deeper meaning and interrelatedness and relevance of things in terms of body, feelings, intuition and thinking. It's virtually the four foundations of mindfulness and it's actually mandated by the state of Utah. This is her sixth year of offering the programme in her classroom (see Kabat-Zinn and Kabat-Zinn, 1997).

We also work with athletes. My colleague George Mumford has been working with the Chicago Bulls, world champions of basketball. For the past three years, George has been training them in mindfulness meditation and yoga. They do it because they believe that when they pay attention, they don't just get the basketball into the hoop more often, but they know more of what

is going on the court, they know where each other is, they can feel it, they can sense it better in motion, and it gives them an edge over the competition, who may be playing in a less intentional and attuned state of awareness. The Bulls play with an awareness that is beyond what is usually thought of as possible, and they train to keep that a part of their game. It does not have to happen much more beyond the normal for it to be very effective. All you need is an edge of one or two per cent over the competition. We also trained the 1984 US Olympic Men's Rowing Team.

In closing, let me quote from Goethe: 'Whatever you can do, or dream you can, begin it. Boldness has genius, power and magic in it.' That has been a guiding principle in the work we have done, whether it has been with medical patients in the Stress Reduction Clinic, or with people in prison, with teachers and children, with athletes, judges or business leaders. It is very interesting to ask how it is that some of the world's best athletes and people who are awaiting heart transplants and liver transplants can find the very same practice of paying attention intentionally and non-judgementally to be of such value. It is extraordinary that they all report that mindfulness is in some way healing or transformative, worth the effort to cultivate it on an ongoing basis, and that it spills out into one's life, that it has more than one effect.

For, indeed, mindfulness has an enormous number of dimensions that can profoundly affect the lives of individuals and institutions. We have reached the point in the US where the hunger for inner peace, authentic experience and wisdom is huge. More and more people in our society are coming to meditation, and particularly to mindfulness meditation. Many are finding the practice within a wonderful constellation of meditative environments, such as the Insight Meditation Society and Spirit Rock in the US, and Gaia House in the UK. Others learn it through MBSR programmes in hospitals and in clinics. All of these environments, and many more, are simultaneously beginning to create an emergence of a new kind of possibility in the culture. It is filtering into virtually every aspect of society: politics, health care, education and parenting. For those of us who love the Dharma and deeply care about it, perhaps it is becoming more possible for us to ask ourselves how we might be more effective, more resonant nodes in Indra's net and perhaps take on a new level of work in and with the world. That work would be unique for each of us because of who each one of us is.

Maybe we can find new and imaginative ways to bring more of a universal Dharma element into our own lives in whatever we are already doing, and not be shy about bringing it more into the world for the sake of others as well as for ourselves.

If you are a physician, a psychotherapist, or work in the helping professions in other capacities, the opportunities are vast, and the possibility for creativity is also vast. The hunger is enormous. And let us note that there are huge potential pitfalls as well. They are usually one variant or another of the Buddha's big three: greed, hatred and ignorance. These are nothing new, of course, but they take on interesting new ramifications when working in the world with meditation because it is becoming so popular. But the challenge here, at the turn of not only the century but also of the millennium, is to see if it is not possible to shape ourselves in such a way that the net of Indra resonates as it has always resonated but with more and more people being drawn to the practice and to insight, wisdom and compassion. I think we have the potential to participate in and to help catalyse a flowering, not only of ourselves as individuals but of the society as a seamless whole. I like to think that we have the potential here and in all other places where such sparks exist, for a new renaissance, one of wholeness, birthed through the ceaseless mystery and beauty of the awakened mind and the awakened heart.