Meditation: An exploration of the research and the implications for education.

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Abstract.

The author describes meditative practice in some of its historical and cultural contexts. She then reviews the literature and research on meditation pertinent to attention, the brain, stress, spirituality and personal development. She discusses the implications of meditation research for education. Finally, she presents suggestions and comments concerning the feasibility of implementing meditation in the schools.

Résumé

L'auteure décrit la pratique de la méditation dans plusieurs contextes historiques ou culturels. Ensuite, elle examine la documentation et la recherche faites sur la méditation se rapportant à la concentration, au cerveau, à la tension, à la spiritualité et à la croissance personnelle. Puis elle discute les implications de la recherche sur la méditation en matière d'éducation. Finalement, elle présente des suggestions et des commentaires concernant l'introduction de la méditation dans les écoles.

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Introduction.

This paper originates from the particular situation in which I have been teaching for the last four years, and from my personal interest in meditation.

Many of the children I teach have learning problems ranging from minor to fairly serious. They are children who have not fared well in the school system, who have not lived up to their parents' expectations of them, who do not think highly of themselves and who consequently tend to be anxious in school. In addition to this, very many of them manifest difficulty in paying attention, and there is no doubt that anxiety and inattention are problems which compound one another.

In the last three decades, meditation has been the focus of considerable interest in the Western world, and its benefits to health, fitness and emotional well-being have been well-documented. Less attention has been paid to its relevance to education. My aim in this paper is to explore meditation and the implications it holds for education.

I describe meditation in its Western context, while not ignoring its many different forms and its relevance within other cultures. The study of meditation reveals its complexity, and a concise definition proves elusive. A comprehensive definition of meditation is by necessity lengthy and anecdotal, due to the fact that meditation is a practice

that has been used for centuries by diverse peoples in disparate contexts, often for different reasons.

In the schools there are many children with learning problems, from mild to severe, which result from various forms of inattention. I propose that meditation is an attention-training technique which could benefit these children.

We also see in the schools many children with learning and behavioural problems related to anxiety and stress. Extensive research has shown that meditation can be a powerful tool in the relief and management of stress, and I propose that meditation could be used in the schools to this effect. There is a notable lack of spiritual guidance in schools today, due in part to the diverse needs of our pluralistic society. I suggest that the practice of meditation by schoolchildren would address this issue by providing them with an opportunity to reflect in silence, and to get in touch with the spiritual aspect of their nature which is so often ignored in our busy world.

Meditation practice affords us access to parts of the mind which we do not use in our normal conscious state; research suggests that this could have positive effects on how we learn and on personal development. I submit that the practice of meditation could serve to expand our ways of learning and understanding.

My interest in meditation has led to modest practice, considerable reading and research, and some implementation of

meditation in my teaching. These have persuaded me that meditation practice could do much to ease the anxiety and to regulate the attention of such children. By reviewing the research and literature on meditation I endeavour to show that its potential effects upon attention, stress, learning, personal development and spirituality have significance for education, as well as for the individual and for society at large.

Chapter 1.

Meditation: Towards a description.

Meditation is an historical and cross-cultural phenomenon, found in both religious and secular contexts. It is a spiritual and psychotherapeutic technique undertaken to improve our understanding of, and quality of, life. Different forms of meditation have been practised for thousands of years, all across the world. West (1987) writes that in the religious context, meditation has been used in an attempt to achieve a direct experiential knowledge of an absolute such as God, Being, Oneness, Buddha nature- each of these labels being a product of a religious or personal belief system and representing the essence of existence.

The term "meditation", write Goleman and Schwartz (1984) refers to a group of methods which have in common:

> ...the systematic and continued focusing of the attention on a single target percept- for example, a mantra or sound- or persistently holding a specific attention set towards all precepts or mental contents as they spontaneously arise in the field of awareness. Meditation as defined here is different from popular usages that denote contemplation or rumination, as in thinking about a conceptual theme. Meditation per se is the self-regulation of attention, not of belief or cognitive processes. (p. 78)

Shapiro and Walsh (1984) state: "As a spiritual discipline, meditation is an ancient and revered practice, and its most outstanding practitioners have been ranked among the wisest people in history" (p. 679).

Ornstein (1972) observes that:

> Meditation is a technique for turning down the brilliance of the day, so that the ever-present and subtle sources of energy can be perceived within. It constitutes a deliberate attempt to separate oneself for a short period from the flow of daily life, and to 'turn off' the active mode of normal consciousness, in order to enter the complementary mode of 'darkness' and receptivity. It is an attempt to inhibit the usual mode of consciousness, and to cultivate a second mode that is available to man [sic]. (p. 107)

It can be seen that meditation has been defined in various ways depending upon the cultural tradition and professional orientation of the meditator. Current research emphasizes the role of attentional mechanisms in defining the technique. Shapiro (1984) describes meditation as: "...a family of techniques which have in common a conscious attempt to focus attention in a nonanalytical way and an attempt not to dwell on discursive, ruminating thought" (p. 6).

Delmonte (1987) describes meditation as a "...self-directed and active process in which a technique is used by a person (not on a person) in the context of particular

subjective expectations and objectives" (p.132).

Moffett (1982) likens meditation to sitting on the bank of one's stream of consciousness and watching it flow by "... staying separate from it, not trying to influence, but above all not being 'carried away' by it" (p. 236). He suggests that meditation is a natural human activity which young children are engaged in when they stare raptly at an object.

Similarly, Benson (1975) states that meditation is a universal human capacity, although it is an experience which has faded from our everyday life with the waning of religious beliefs and practices. We can, however, reclaim its benefits by meditating regularly. Benson devised a simple meditative technique which he named the "Relaxation Response", based on age-old wisdom common to the religious and meditative practices of the East and West. (See Appendix 2.)

In the past few decades, meditation has gained a secular following in the West as a means of managing stress, realizing one's potential and as a treatment for certain disorders. Meditation is often used in conjunction with psychotherapy, and is particularly useful to individuals under high stress.

Carrington (1987) writes: "In modern industrialized society the pace of our lives is determined largely by economic considerations rather than by the rhythms of human life or natural growing things, and there is a dearth of spontaneously occurring quiet inner space into which we can

retreat for refurbishing" (p. 172). Carrington remarks that not only can the meditative state reduce symptoms of stress, but it can redirect the entire life of the practitioner by helping him or her to achieve a less hectic, more balanced approach to many different activities (Ibid.).

Learning to pay attention, or focusing, is a skill necessary to all forms of meditation. There are many ways of paying attention, and varied techniques for training attention, but they all lead to the same end: focusing attention on one thing at a time for an extended period of time. Dosdall (1986) describes this aspect of meditation as follows:

> The challenge of meditation is to examine the moment exactly as it is, accepting it just the way it is. When you focus on the moment, your mind can become like a laser, providing moments of precise insight and clarity. The concentration and focus of meditation also produce a state of relaxation when the moment is accepted exactly as it is. (p. 110)

Meditators focus on the present moment. The ego, which is concerned with the activities of the world, is obliged to rest, releasing us from past-oriented anguish and future-oriented anxiety. By concentrating on the here and now of existence, we shut out distractions and can be at peace, since stress is a reaction to the past or the future, never to the present moment.

The meditative state is one of passivity, or receptivity, and involves a readiness to accept disturbing or unpleasant images, feelings or thoughts. This passive state is one of awareness. Meditators are aware of the intrusion of thoughts and images into their efforts to focus: they accept them and refocus. This awareness of thought processes can lead to a better understanding of oneself. Deikman (1971) sees this state as the receptive mode, and describes it as :

> ...inward-oriented, introspective, and involves reflexivity and circumspection rather than pre-emption, that is, looking at how one processes reality rather than jumping to conclusions about it. The receptive mode is more concerned with perceptual intake than decisive action. It is largely perceptual and vegetative, with functioning usually occurring at a non-locomotory level. Whereas in the action mode the individual is involved in pursuing goals, the receptive mode tends to be associated with a 'letting-go' attitude. There is mental and physical quiescence. (p. 481)

Deikman (1969) sees meditation as a way to "deautomatization" of perception and behaviour:

> Automatization is assumed to be a basic process in which the repeated exercise of an action or a perception results in the disappearance from consciousness of its intermediate steps. Deautomatization is the undoing of automatization presumably by reinvestment of action and

percepts with attention. (p. 200)

He elaborates:

> ..deautomatization is not a regression, but rather an undoing of a pattern in order to permit a new and perhaps more advanced experience. The crayfish sloughs its rigid shell when more space is needed for growth. The mystic, through meditation, may also cast off, temporarily, the shell of automatic perception, of automatic affective and cognitive controls in order to perceive more deeply into reality. (Ibid., p. 217)

In keeping with Deikman, Ornstein (1973) views meditation as a method for transcending the habitual experience of consciousness through achieving a receptive mental set and experiencing intuitively in gestalts, rather than sequentially and analytically. He believes that the meditative state is a right cerebral hemisphere mediated experience. He contrasts the left hemisphere mode of functioning, which he sees as rational, sequential, logical, analytical, verbal and linear, with the right hemisphere mode, which is seen as intuitive, diffuse, holistic, spatial and simultaneous. He suggests that the right hemispheric mode corresponds with Deikman's receptive mode, which Deikman sees as associated with the meditative state (as reported on p. 12).

During the meditative process it may be necessary to re-evaluate and discard previously cherished beliefs, which can be a painful process. As Claxton (1987) observes:

"Meditation is an archaeological dig into the buried commitments we have made, and it is inevitable that we will be unsettled from time to time by what we have unearthed. That is the point" (p. 38).

Thakar (1977) describes meditation in this way:

> It is a state of the total being where there is no movement at all, no movement of the mind, the conscious, the subconscious, the unconscious. It is a state of motionlessness. It's a dimension of life that is beyond the field of energy and motion. (p. 49)

She continues:

> Meditation for me is the perception that life cannot be divided. It is a state of being where one deals with the particular situation, enters into a particular relationship, while being aware of the totality, and the place of the particular in the totality. So meditation is not an activity at all. It's a revolution in the perspective of life, and in the way of living.
>
> (Ibid., p. 51)

In the same vein, Leshan (1974) claims that an important benefit of meditation is to comprehend a new way of perceiving and relating to the world. This, he says, brings a strong serenity and inner peace that remain stable even in the face of much adversity.

Much of the anguish we suffer could be avoided by effecting a change in our attitudes and expectations, by

seeing things afresh from a different perspective. Claxton (1987) elaborates:

> By being committed deep down to the belief that perfection, security and everlasting peace are possibilities, we set ourselves at odds with an existence that persists in changing without regard to our wishes. By denying the fundamental fact of impermanence we set ourselves up for a life of struggle and frustration. We must be continually judging what happens to see whether it fits in with our expectations or not. (p. 32)

To conclude this description of meditation, I quote Leshan (1974):

> We meditate to find, to recover, to come back to something of ourselves we once dimly and unknowingly had and have lost, without quite knowing what it was or when or where we lost it. We may call it access to more of our human potential or being closer to ourselves and to reality, or to more of our capacity for love and zest and enthusiasm, or our knowledge that we are a part of the universe and can never be alienated or separated from it, or our ability to see and function in reality more effectively. (p.1)

Meditation: An historical and crosscultural phenomenon.

The discipline of meditation has been practised throughout history by widely differing cultures and religions all over the world.

Within the Christian tradition meditation has been utilized since early times. The Desert Fathers, who were the first Christian monks, lived in the fourth century A.D. in remote desert areas of Egypt. Their self-imposed isolation in a harsh environment enabled them to commune with God free of worldly distractions. They repeated silently over and over again a phrase from the Scriptures- often the "kyrie eleison"- to help them arrive at a state called "quies", a state of rest where "nowhereness and nomindedness" purified the soul. Merton (1960) relates that they sustained this silent repetition throughout their daily lives "until it became as spontaneous and instinctive as their breathing" (p. 20).

The spirit of the tradition of the Desert Fathers (preserved in modern monastic orders such as the Benedictine Trappists) is summed up in the following directions on spiritual training given by St. Abba Dorotheus in the fourth century, and recounted by Goleman (1988):

> Over whatever you have to do, even if it be very urgent and demands great care, I would not have you argue or be agitated. For rest assured, everything you do, be it great or small, is but one-eighth of the problem, whereas to keep one's state undisturbed even if thereby one

> should fail to accomplish the task, is the other seven-eighths. So if you are busy at some task and wish to do it perfectly, try to accomplish it- which, as I said would be one eighth of the problem, and at the same time preserve your state of mind unharmed- which constitutes seven-eighths. If, however, in order to accomplish your task you would inevitably be carried away and harm yourself or another by arguing with him, you should not lose seven for the sake of preserving one eighth. (pp. 54-55)

In our goal-directed society, preoccupied with doing and achieving, this advice seems bizarre indeed.

The Benedictine monks have practised a form of meditation known as "lectio divina" for several hundred years. Aigner (1987) describes it as slowly reading aloud a passage from the Scripture until a particular word or phrase seems significant; this word or phrase is then repeated until it is internalized. Then the reading is slowly continued until another word or phrase "speaks" to the reader, and this in turn is repeated. In the fifth century St. Benedict recommended at least two hours of "lectio divina" each day. Guigo II, a twelfth century monk, spoke of the four parts to this meditative process:

- reading, listening to the Word
- meditation, allowing the Word to work within
- prayer, one's response to the Word

- contemplation, communion.

The monks dwell on a passage or a line for hours and days at a time, at a contemplative pace. Palmer (1983) comments that this is a method which allows reading to open, not fill, our learning space.

An anonymous fourteenth century monk wrote a book entitled: "The cloud of unknowing". In it he divulged that his method of attaining union with God was through the repetition of a single-syllable word such as "God" or "love". In this way he could defeat distracting thoughts:

> Choose which [word] you like, or perhaps some other, so long as it is of one syllable. And fix this word fast to your heart, so that it is always there, come what may. It will be your shield and spear in peace and war alike. With this word you will hammer the cloud and the darkness above you. With this word you will suppress all thought under the cloud of forgetting (Wolters, 1976, pp. 61-62).

St. Augustine in his "Confessions" described a method of contemplation which he used. Preparation for contemplation involved "recollection", a term used by many Christian mystics, which corresponds with the idea of a passive attitude. Recollection is concentrating the mind, banishing all images, thoughts, and sense perceptions. Recollection prepares the mind for introversion, which concentrates the mind on its own deepest part in what is seen as the final step

before the soul finds God. Augustine describes this state:

> When the attention of the mind is wholly turned away and withdrawn from the bodily senses, it is called an ecstasy. Then whatever bodies may be present are not seen with the open eyes, nor any voices heard at all. It is a state midway between sleep and death: The soul is rapt in such wise as to be withdrawn from the bodily senses more than in sleep, but less than in death. (Goleman, 1988, pp. 57-58)

In the sixteenth century, a monk named Fray Francisco de Osuna related in his writings this exercise:

> I do not tell you to simply lower your eyes, but to keep them fixed steadily on the ground, like men who are forgetful and as it were out of themselves, who stand immovable, wrapt in thought. Some people find it more easy to be recollected if they keep their eyes shut, but in order to avoid remark, it is better when in company to keep our gaze fixed on the ground, on some place where there is little to look at so that there may be less to stir our fancy and imagination. Thus, even in a crowd you may be deeply recollected by keeping your gaze bent, fixed on one place. The smaller and darker the place, the more limited your view will be and the less will your heart be distracted. (Benson, 1975, p. 83)

The forms of meditation within the Yoga tradition are many and varied. A common one involves the use of 'mantra'.

These are sonorous, flowing words, which repeat easily, and are often words of significance, such as names of the deity. They are repeated over and over to focus awareness (Leshan, 1974). Though their means may differ, all yogic paths seek to transcend duality in union, writes Goleman (1988). They perceive the locus of duality as within the mind, the separation of self and other. To transcend duality, the seeker must enter a state where self and other merge, a state known as "samadhi".

In the Judaic tradition, it is customary to repeat a single prayer accompanied by swaying movements to bring about exaltation (West, 1987). Other meditative exercises involved dwelling upon the name of God or upon the letters constituting the name of God, or repeating the name of a magic emblem until an attitude of deep self-oblivion was reached (Benson, 1975).

Within the Buddhist tradition, meditation was practised and taught by the Buddha himself in the sixth century, who is credited with saying: "Though only my skin, sinews, and bones remain and my blood and flesh dry up and wither away, yet never from this seat will I stir until I have attained full enlightenment" (Kapleau, 1967, p. 13).

Of the several forms of Buddhist meditation, Zen is the one most accessible to the Western practitioner. Zen is a sect of Mahayan Buddhism which originated in China, was introduced to Japan in the thirteenth century and has played an important role in Japanese culture ever since. Maupin

(1962) notes that training in Zen meditation seems analogous in some respects to Western insight-oriented psychotherapy- this would partially explain the appeal of Zen to the West. Moreover, Maupin (1965) observes, the responses to Zen training seem interpretable in terms of concepts of ego function which are subject to quantitative measurement. The fact that some aspects of Zen training are measurable validate it to the Western mind, trained to expect tangible results.

In his book about Zen Buddhism Kapleau (1967) describes the meditative technique 'zazen' (just sitting) as follows:

> Zazen that leads to Self-realisation is neither idle reverie nor vacant inaction but an intense struggle to gain control over the mind and then to use it, like a silent missile, to penetrate the barrier of the five senses and the discursive intellect (i.e., the sixth sense). It demands determination, courage and energy. (p. 13)

Sufism, in the Islamic tradition, perceives that the basic human weakness is being bound by the lower self. The Sufi comment on normal consciousness is that humans are "asleep in a nightmare of unfulfilled desires". Meditation is an essential tool in the effort to transcend normal consciousness and to purify the heart. Sufi meditation uses repetitive movements and repetition of sounds to produce a trance-like state. In the West, we are more familiar with the whirling dervishes, who dance in concentric circles, than with

any other Sufi sect. Their dancing has been described by Ornstein (1972) as an exercise for the brain based on repetition:

> The dance is defined by them as bodily movements linked to a thought and a sound or a series of sounds. The movements develop the body; the thought focuses the mind and the sound fuses the two and orientates them toward a consciousness of divine contact, which is called 'Hal', meaning state or condition. (pp. 115-116)

Many traditional cultures, while less materially productive than our own, are far richer in knowledge than we in the intricacies of consciousness. Some cultures explicitly train some or all members in altering consciousness. The Bushmen of the Kalahari Desert dance in a circle facing a fire, staring at the fire, and repetitiously chanting (Naranjo and Ornstein, 1971). The Bushmen are trained to enter a trance through dancing, and to use the trance state for healing (Katz, 1973). Many other African peoples practise ritual dancing coupled with chanting to produce an altered state of consciousness (West, 1987).

A Yaqui Indian "warrior" retrains his perceptual habits so as to apprehend messages and natural forces ordinarily unsensed. In his books, Castaneda relates the struggle he experienced between the two major modes of consciousness. His own highly verbal and analytical nature found it difficult to understand the intuitive mode, referred to by his mentor Don

Juan as "seeing". In order to "see", one must suspend the stream of consciousness. Don Juan explains:

> ...we maintain the world with our internal talk... Whenever we finish talking to ourselves the world is always as it should be. We renew it, we kindle it with life, we uphold it with our internal talk. Not only that, but we also choose our paths as we talk to ourselves. Thus we repeat the same choices over and over again until the day we die, because we keep on repeating the same internal talk over and over until the day we die.
>
> A warrior is aware of this and tries to stop his talking...
>
> A warrior is aware that the world will change as soon as he stops talking to himself, and he must be prepared for that monumental jolt. (Castaneda, 1971, pp. 218-219)

The Malaysian Senoi systematically interpret and utilize dream contents to maintain harmonious interpersonal relations in community life. Stewart (1969) reports that dream contents and experiences are discussed thoroughly on a daily basis, and advice may be given on how to behave in future dreams. In this way dream consciousness is integrated into normal waking consciousness, rather than being two separate, distinct states. The Senoi claim that there has not been a violent crime or an intercommunal conflict for two or three hundred years, thanks to the inventiveness and insight of their spiritual leaders, the shamans.

In the Inuit culture the person sits facing a large, soft stone. Holding a small hard stone, he continuously moves it around and around on the surface of the larger stone, thus carving a circle into it. This can continue for several days, and produces a state of trance (Naranjo and Ornstein, 1971).

Shamanism is a form of mysticism in which a chant intoned by a holy man induces a trance in the subject, often for purposes of healing or exorcism. Shamanism is practised in connection with tribal religions across the world, writes Benson (1975).

In the West, Transcendental Meditation (TM) is the best-known meditation technique. TM is a classic Hindu mantra meditation, made palatable for Westerners by its validation of itself in scientific and medical terms, and by its avoidance of any reference to a belief system. In TM, meditators learn to avoid effortful concentration. The student is told to bring his mind gently back to the mantra as it wanders. The process is one of becoming one-pointed (though concentration is passive rather than forced) since the attention is focused on a meditation object (the mantra), which is eventually transcended. Maharishi Mahesh Yogi, the formulator of TM, describes it as follows: "Transcendental meditation entails turning the attention inward toward the subtler levels of a thought until the mind transcends the experience of the subtlest state of the thought and arrives at the source of thought..." (Forem, 1974, pp. 27-29).

This experience of transcendence, which is one of the aims of meditative practice, is familiar to most of us; fleeting moments when time is suspended and we appear to be on the threshold of another state of being, when our personal existence seems trivial and we sense an intuitive harmony with the universe. Momentarily we are outside our usual selves, disoriented in time and space and glimpsing a state of bliss, a higher awareness. The moment slips away, leaving us to our normal consciousness- wishing to prolong the moment and wondering how it was that we arrived at that altered state in the first place.

Carrington (1977) writes:

> Despite the fact that it frequently occurs naturally, people throughout the ages have nevertheless developed hundreds of ingenious methods for intentionally evoking this mood, methods which have been carefully cultivated and handed down over the generations. Perhaps spontaneous moods occur less often than is desirable. Perhaps they are less intense when they occur naturally than human beings want or need them to be. In modern industrial societies, based on machine-like efficiency rather than on natural rhythms, meditative moods may so seldom occur spontaneously that structured, formal types of meditation are particularly necessary. (pp. 4-5)

Goleman (1988) remarks that such transcendental states seem to be the seeds of spiritual life. Moses receiving the

Ten Commandments, Jesus' forty day vigil in the wilderness, Mohammed's desert visions, and Buddha's enlightenment under the Bo tree all signify extraordinary states of consciousness.

Meditation: Different paths.

"In some respects, every method of meditation is like all others, like some others, and like no other", observes Goleman (1988, p. 102).

The concept "meditation" refers to a set of techniques which aim at spiritual and personal, rather than intellectual, knowledge. The exercises of meditation do not involve reason, and they cannot be understood by means of ordinary logic alone. Ornstein (1972) notes that they are techniques designed to cultivate a certain state of mind, a certain mode of operation of the nervous system, within a certain context. If this altered state of mind is isolated from the context needed to support it, it can be meaningless, or perhaps disruptive.

There is a bewildering array of meditative techniques- whirling, chanting, concentrating on a meaningless question, repeating a mantra, visualizing a cross, gazing at a vase- which are diverse in appearance but not necessarily in function. They are all exercises in deployment of attention in order to achieve an altered state of consciousness.

"All meditation systems", remarked Joseph Goldstein, "either aim for One or Zero- union with God or emptiness. The path to the One is through concentration on Him, to the Zero is insight into the voidness of one's mind" (Goleman, 1988, p.xvii).

Among the diverse meditative paths, we observe many

commonalities- for instance, every type of meditation recognizes the awakened state as the ultimate goal of meditation; at this point all paths would seem to merge. There are however numerous distinctions to be respected in order not to trivialize the meditative practices of the different religious traditions.

Shapiro (1982) delineates three major attentional strategies in types of meditation: a focus on a whole field (wide-angle lens attention), a focus on a specific object within a field (zoom-lens attention), and a shifting back and forth between the two. An example of the wide-angle lens type would be vipassana meditation during which we pay attention to the contents of thoughts as they arise in the mind, in order to gain self-knowledge. An example of the zoom-lens type would be concentrative meditation during which we focus our attention on an object in order to transcend it and all thought. Transcendental Meditation typifies the third group- a shifting back and forth between the two. Shapiro notes that this notion fits in well with brain attentional mechanisms, which are of two types. The first type is a broad, sweeping awareness taking in the entire field, while the second type is a specific focusing on a restricted segment of the field.

Naranjo represents three types of meditation as the three points of a triangle. The three types as defined by him are the Negative Way, the Way of Forms and the Expressive Way. He describes them as follows:

- the Way of Forms meditates upon externally given symbolic objects, in which we see our own centre, with which we identify, and to which we seem receptive.

- the Expressive Way meditates upon spontaneously arising contents of the mind, as the meditator seeks to become receptive to, and to identify with, herself, without the mirror device of the symbol.

- the Negative Way is a self-emptying, in which the meditator tries to attain a stillness of the mind's conceptualization activity, a withdrawal from external perceptions and internal experience alike (Naranjo & Ornstein, 1976, pp. 16-18).

Leshan (1974) categorizes the many different types of meditation into four basic groups- the path through the intellect; the path through the emotions; the path through the body; and the path through action. (Some types of meditation fall into more than one of these groups.) He sees them as different paths eventually leading to the same goal: an attainment of another way of perceiving and relating to reality, and a greater efficiency and enthusiasm in everyday life.

The path through the intellect, which is the path of choice for many Westerners, observes Leshan, uses the intellect to go beyond the intellect, the will, and directed thought processes to transcend themselves. Thought is consistently pursued in order to create a revolution in the

very heart of thought. "Patiently, little by little, a man must free himself from all mental distractions, with the aid of the intelligent will," declares the Bhagavad-Gita.

Of the four paths, says Leshan, the one most widely followed is the path of the emotions, which has been used in both Eastern and Western traditions. This path concentrates on meditations that loosen the feelings and expand the ability to relate to others, to care and to love.

The path of the body has been little used in the West, except recently in the form of T'ai Chi. Completely absorbed in body integration and movement, the meditator is brought slowly to doing one thing at a time. This integrates and strengthens the personality organization and brings the readiness for developing a new way of perceiving and responding to reality.

The path of action, mainly in the Eastern tradition, involves learning how to "be" and to perceive and relate to the world while performing a particular skill. Various skills have been used- archery and flower arrangement in the Zen tradition, and rug weaving in the Sufi tradition. In Christianity, the path of action is exemplified in "The Little Way" of Saint Teresa, which consists of doing the tasks of everyday life with the knowledge that each one is a part of the total harmony of the universe, and the attitude that this task is the most important thing to be doing at this particular moment.

Each of the four types of meditation, writes Leshan (1974), is a discipline which strengthens the personality and brings the meditator to new understandings about the self and the world.

Moffett (1982) summarizes all forms of meditation on a scale progressing from external focus to internal focus and then, within the internal focus, from uncontrolled to controlled inner speech, thus:

- Gazing- rapt absorption in outer object, eyes open.
- Visualizing- imagining of inner object, eyes closed.
- Witnessing inner speech- watching as bystander the inner stream.
- Focusing inner speech- narrowing down to and developing a subject intensely with all faculties of mind and heart together.
- Suspending inner speech- holding the mind on one point until it transcends discourse and culture and merges with cosmos, in trance. (p. 239)

Goleman (1988) classifies meditative techniques into two broad groupings: the concentrative path and the mindfulness way. The concentrative path leads the meditator to merge with the meditation object and then to transcend it. As deeper levels are reached, the bliss becomes more compelling, yet more subtle. In the way of mindfulness, the meditator's mind witnesses its own workings, and he or she comes to perceive increasingly finer segments of the stream of thought. As

perception sharpens, the meditator becomes increasingly detached from what he or she witnesses, finally turning away from all awareness.

Ornstein (1972) describes two major types of meditation, concentrative and "opening-up" meditations. The first type he sees as developing one-pointedness of mind and gives as an example the technique of Zen breath counting. This involves counting the breaths from one to ten and then repeating the process. When the count is lost the meditator returns to one and begins again. Ornstein sees the "opening-up" exercises not as attempting to isolate the practitioner from ordinary life processes, but rather as involving these processes in the training of consciousness. The Zen practice of "shikantaza" ("just sitting") is an example of the "opening-up" type of meditation. Watts (1957) describes it in this way:

> It is not therefore, sitting with a blank mind which excludes all the impressions of the inner and outer senses. It is not 'concentration' in the usual sense of restricting the attention to a single sense object, such as a point of light or the tip of one's nose. It is simply a quiet awareness, without comment, of whatever happens to be here and now. This awareness is attended by the most vivid sensation 'non-difference' between oneself and the external world, between the mind and its contents- the various sounds, sights and other impressions of the surrounding environment. Naturally,

this sensation does not arise by trying to acquire it. (p.175)

The goal of all meditation paths, whatever their ideology, source or methods, is to transform the meditator's consciousness. In the process, the meditator dies to his or her past self and is reborn to a new level of experience. The ultimate transformation for the meditator is a newer state still: the awakened state, which mixes with and re-creates his or her normal consciousness.

The numerous paths variously converge and diverge, and, writes Goleman (1988): "Each path is a living tradition that presents itself differently to each person according to his [sic] needs and circumstances" p.40).

Conclusion.

The term "meditation" embraces so many diverse practices that a description is by no means simple. Some meditation techniques entail sitting quietly and produce a state of quiescence; some involve sitting quietly and produce a state of excitement. Some involve physical movement to a greater or lesser extent, which may induce either a state of relaxation or a state of excitement. Shapiro (1982) finds that all types of meditation however are concerned with focusing attention, and also with how the meditator should respond when attention wanders or thoughts arise.

Meditation has been practised extensively for thousands of years within the religious and philosophical traditions of the East, and to a lesser degree in the religions of the West. Within the last few decades it has found a place in the psychotherapeutic, medical, and scientific traditions of the West. The reasons for which meditation is used vary according to the cultural context within which it is practised, and the orientation of the person teaching or learning it. Thus a definition of meditation depends on many variables, or in other words, there are many definitions of meditation depending upon which tradition or discipline is consulted. Meditation has classically been used by religious traditions in order to produce significant phenomenological changes in which the individual perceives self, others and the world in a profoundly new way.

Meditation is a process which leads us non-verbally and intuitively to new understandings about ourselves and our lives. Access to parts of our minds hitherto closed to us is a significant result of meditative practice, which shifts the mind temporarily away from the usual linear mode (in which, almost exclusively, we have learned to operate) into an awareness of unity, in which the separateness of people and objects disappears. Both of these modes are necessary to us, they complement each other, but we have developed the rational mode at the expense of the intuitive. We need to recultivate the latter in order to live more fully as human beings.

Research into meditation is in its infancy, and the very nature of meditation may defy any precise, definite conclusions. The most significant aspects of meditation are subjective, being largely based on the meditator's expectations in terms of his or her culture and framework of belief.

Smith (1984) writes: "In many respects meditation is proving to be a complex and heterogeneous phenomenon" (p.678). States of mind and spiritual experiences are difficult for us to describe. Asian cultures have highly developed vocabularies for describing distinct degrees, levels and types of meditation-specific altered states. For example, Buddhist psychology enumerates eight distinct levels of "jhana" (absorption), and describes eighteen stages of awareness leading to nirvana. Our own language reflects our spiritual

poverty; such nomenclature as we have seems clumsy and vague compared to that of Asian cultures. It is not surprising that research into meditation has encountered so many difficulties in its attempts to qualify and quantify meditation; we simply do not have the words with which to describe what we are trying to observe, and the spiritual component is often ignored for this very reason.

Shapiro and Walsh (1984) observe:

> What is important for us to remember as we begin this exploration of meditation, is that any and every method of investigation, any concept, hypothesis, or theory, only affords us a partial and elective picture of reality. From the vastness of 'what is', our chosen technologies and concepts dissect nature along corresponding lines and provide a selected and limited perspective on the whole. Thus what we observe is ultimately a function not only of the reality we wish to know, but of the tools and concepts by which we seek to know it, and ultimately ourselves. Nowhere is this recognition more important than in the investigation of meditation, which, as a discipline, traditionally aimed at the deepest and most fundamental types of knowing. This knowing aims at developing greater and greater degrees of experiential sensitivity to more subtle realms called perception, consciousness, and being. Therefore the scientist who expects that the corresponding

> psychobiological changes should be large and easily detectable may be disappointed. (p. 696)

West (1987) notes that many of the problems in research on meditation are created by the researchers themselves, tied to particular methodological approaches or concerned with quick and easy outcomes.

Deikman (1984) reports that in the West research in the field of meditation ignores the context within which classical meditation evolved. It developed as part of a teaching system whose purpose was spiritual growth- the development of an inherent intuitive capacity to perceive the reality that underlies the world of appearances. Meditation tends to be used for pragmatic physiological and psychological purposes, such as a means to remedy stress-related illnesses. Deikman believes that to divorce meditation from its spiritual grounding is to diminish it and to risk its deterioration.

Smith (1984) also voices concern about the tendency in the West to treat meditation as just one more relaxation technique, and to ignore its spiritual content.

Similarly, Shapiro (1982) notes:

> I believe we need to look more carefully at the context of meditation... Most religious traditions have a series of preparations that must be made before an individual is thought to be ready to begin the spiritual practice of meditation. These preparations range from the highly structured and complex- changing dietary habits,

> cultivating feelings of love and compassion, decreasing thoughts of selfishness and greed- to much less complex- preparatory lectures and instructional training. Additional context variables would involve motivation and the role of individual responsibility. (p. 271)

Beyond its many forms and its many religious and philosophical traditions, meditation seems to have as its ultimate goal the conscious striving for an altered state of consciousness resulting in an awareness of the source of life. Each tradition names and describes this experience differently, according to the language and code of its culture, but the at the peak of the meditative experience the meditator transcends his or her origins to enter into an awakened state.

Naranjo (1989) explains how this awakened state eventually becomes integrated into consciousness:

> Trying to understand the common denominator of different meditation traditions leads to the realization that meditation itself is not separate or even different from other things. Perhaps this happens with every great idea: once we delve into its substance, we find that it is but one more name of a unity of which is it but one aspect or name. My own exploration of meditation shows me that the essence of meditation is also the essence of art, the essence of religion, the essence of magic, the essence of psychotherapy, the essence of doing anything

> with the right attitude. I believe that to a meditator with the right understanding all life is meditation, and meditation is living. (p. 4)

Meditation is not an instant "fix" or a universal panacea, but with patience and hard work can bring rewards to those who practise it. It is, primarily, an exercise in learning how to pay attention; and through paying attention, the meditator becomes aware of how body, mind and spirit are a unit, not separate entities.

Chapter 2

Meditation and education: A review of the literature

Research suggests that the benefits of meditation, as outlined in Chapter 1, are many. In the last decade or so, studies have been conducted and reports written about the value of meditation in education. A review of the literature reveals connections between meditation and several factors affecting the educational process, namely attention, the brain, stress, spirituality and personal development.

Meditation and attention.

A Byzantine mystic, Nicophorus the Solitary, said: "Attention is the appeal of the soul to itself". The Baal Shem Tov wrote: "God's miracles belong to those who can concentrate on one thing and limit themselves" (Leshan, 1974, p. 55).

The following story is taken from Kapleau (1967):

> The importance of single-mindedness, of bare attention, is illustrated in the following anecdote. One day, a man of the people said to Zen master Ikkyu: 'Master, will you please write for me some maxims of the highest wisdom?'
>
> Ikkyu immediately took his brush and wrote the word: 'Attention'.
>
> 'Is that all?' asked the man. 'Will you not add something more?'

> Ikkyu then wrote twice running: 'Attention. Attention.'
>
> 'Well', remarked the man rather irritably, 'I really don't see much depth or subtlety in what you have just written'.
>
> Then Ikkyu wrote the same word three times running: 'Attention. Attention. Attention.'
>
> Half-angered, the man demanded: 'What does that word "Attention" mean anyway?'
>
> And Ikkyu answered gently: 'Attention means attention.'
>
> (pp. 10-11).

In the nineteenth century, the psychologist William James (1890) gave a less enigmatic description:

> Everyone knows what attention is. It is the taking possession by the mind, in clear and vivid form, of one of what seem several simultaneous possible objects or trains of thought. Focalisation, concentration of consciousness are its essence. It implies withdrawal from some things in order to deal more effectively with others. (pp. 403-404)

One hundred years later, detailed scientific definitions based on attention research have been formulated. Schachar (1991) elaborates:

> Attention is currently seen as a multi-faceted, dynamic and hierarchical process that is affected by internal (arousal, drugs) and external factors (variation in task demand). In general, attention may be divided into

> executive processes, lower order mechanisms, metacognition and resources. Divided, sustained or focused attention, and inhibitory control are the processes that perform the executive functions of the cognitive system. Children need executive control to choose, construct, execute and maintain optimal strategies for performing a task, as well as to inhibit strategies that become inappropriate when goals or task demands change or errors occur. These processes determine how other mechanisms such as encoding and retrieval will be deployed to meet task demands. The term metacognitive processes refers to the individual's awareness of his or her information processes and the possibility of employing various strategies such as slowing to maintain accuracy on a task. (p. 167)

Attention, then, consists of several components, of which selectivity is one. In most environments an overwhelming array of stimuli presents. It is important to be able to attend selectively to whatever the task in hand demands; this, and the ability to detach and redirect attention, accompanies brain maturation. Selecting what to attend to, and focusing on that thing rather than on irrelevancies, is one part of adaptive behaviour. May (1981) sees this selectivity as an aspect of freedom, and defines it as: "...the capacity to pause in the midst of stimuli from all directions, and in this pause to throw our weight toward this response rather than

that one" (p. 163).

Another component of attention is processing, or using the information attended to for the intended purpose. Having chosen to attend to a person who is speaking, and attending selectively to what that person is saying, one still has to process the information received in order to understand the message, and if necessary act in accordance with that message.

It can be seen that if one of these components is not functioning adequately, attention is likely in some measure to be impaired.

Attention deficits are now being identified as primary impairments in a large group of schoolchildren who were formerly diagnosed under such labels as Hyperkinetic Reaction of Childhood, Hyperactive Child Syndrome, Hyperkinetic Syndrome, Minimal Brain Dysfunction, and others. The current diagnostic label, Attention Deficit Disorder with Hyperactivity (DSM III), supercedes these labels and includes symptom clusters relating to inattention, impulsivity and hyperactivity (Kratter and Hogan, 1982).

Kinsbourne and Caplan (1979) observe that attention disorders among schoolchildren are disorders of cognitive style, not of cognitive power. Some children are overly impulsive and do not maintain their focus of attention long enough to learn the material. Their thinking equipment is adequate; their failure to learn is due to maladaptive selection. A small number of children are overly compulsive;

they concentrate so much on one task that they do not learn enough overall. These children exhibit extreme slowness and reluctance in shifting from one activity to another. If we perceive learning styles on a continuum, impulsive and compulsive styles are at opposite ends.

Meditation may be viewed as essentially a method of training attention (Linden, 1973). The aim is to suspend the flow of ordinary thought (stream of consciousness) and thereby bring the meditator more fully "into the present". "Field independence" reflects a general disposition to perceive and think in an articulated as opposed to a non-analytic fashion (Witkin et al, 1962). One measure of this ability is the Children's Embedded Figures Test (CEFT) which requires the subject to discern a given form within the context of a distracting stimulus background. This ability is crucial to reading.

Linden (1973) hypothesised that since meditation practice trains the individual to focus attention on an object or process and to resist distraction from other sources of stimulation, meditation may be expected to enhance field independence, as measured by the CEFT.

Linden's study was conducted with 90 Grade 3 schoolchildren over a period of 18 weeks, its central aim being to determine whether children could be trained in the practice of meditation and to examine the effects that such training might have on their cognitive and affective

functioning. Results confirmed that children can be taught this discipline with apparently beneficial results; their performance on pre- and post-study CEFTs improved considerably compared to control groups.

It can be seen that poor concentration is a serious barrier to the learning process. In its more extreme manifestations it hinders development in many areas- social, educational, emotional- and is identified as Attention Deficit Disorder.

Kratter and Hogan (1982) conducted a study for 4 weeks on 24 children with this disorder. The test subjects were males between the ages of 7 and 12 years, free from neurological disease or psychosis. The 36 subjects sat with eyes closed, breathed slowly and deeply, and repeated the Sanskrit word "ahnam" (nameless) first out loud and then silently for periods gradually increasing in duration from two to eight minutes. Results indicated that meditation training resulted in significant improvement in selective deployment of attention and freedom from distractibility. The data suggested that the subjects had learned to focus and refocus their attention. Thus, rather than employing attention in an indiscriminate manner to all information, there was a discernible shift to a more selective use of attention. In other words, the subjects were able to withhold attention from irrelevant and peripheral information and to direct attention to information defined as relevant to the task in hand.

Further, an improvement in behaviour was reported by parents, who found it helpful to have a "tool" to use to help their child calm down or be more in control of his behaviour. Parents expressed relief at having recourse to a non-medical intervention, given the unpleasant and sometimes serious side effects associated with the medications used to control this disorder. The results of the study support the contention that meditation can be an effective intervention in the treatment of Attention Deficit Disorder with Hyperactivity, since post-tests showed a reduction in impulsivity and an improved selective deployment of attention.

Costanzo (1990) describes using meditation with students to write with greater concentration, continuity and depth, at any level of writing skill. He finds that meditation helps his students to consciously cultivate the ability to focus, follow and trace ideas through writing (pp. 29-32).

Fiebert and Mead (1981) assessed the effectiveness of a modality for directing attention in modifying test performance. The results suggested that meditating before studying and before exams has a beneficial effect on academic performance as measured by test performance.

Research supports the notion that meditation is an attention-training exercise. Meditative practice enables us to be aware of the workings of our mind, and thus to control and use it to best advantage.

Meditation, the brain and learning.

Because meditation is an effort to focus attention, it also involves how we respond when our attention wanders or when thoughts arise. Benson (1975) advises ignoring them, and Deikman (1969) instructs excluding them. The Zen tradition charges students to merely notice, observe and let go thoughts which occur. Mindfulness meditation says to notice and label the thought. Little importance is given to the content of thoughts, it is awareness of the process of the coming and going of thoughts which is important. These divergent ways of dealing with the stream of consciousness all lead to increased awareness of how one's mind works (metacognition), which can be a valuable learning tool.

As students become aware of their own inner states, they can begin to recognize important conditions which affect their learning ability. Meditation can improve students' performance by enabling them to enter a state of mind conducive to learning.

Gueulette and Hanson (1987) regard meditation as one of the "psychotechnologies" which have potential to expand human learning capabilities and consciousness. They note that some forms of meditation are used to "stop the brain"- to eliminate the cognitive noise or dissonance that for most of us is always present. Apparently eliminating that process opens the mind to many other forms of knowledge that were masked by cognition.

Research on the human brain suggests that the left and right hemispheres of the brain each views and processes external reality in different ways. Beals (1981) writes that the primary style of the left hemisphere is verbal and analytic, while that of the right is non-verbal and global. The two hemispheres are connected and integrated by the corpus callosum, a thick bundle of fibres. Both hemispheres appear to be involved in higher cognitive functionings, with each half of the brain specializing in a complementary fashion for different kinds of processing, both highly complex.

Concerning the right and left hemispheres, Edwards (1979) writes:

> We have learned that the two hemispheres can work together in a number of ways. Sometimes they cooperate, with each half contributing its special abilities and taking on the particular part of the task that is suited to its mode of information processing. At other times, the hemispheres work singly; with one half 'on' and the other half 'off'. And it seems that the hemispheres may also conflict, one half attempting to do what the other half 'knows' it can do better. Furthermore, it may be that each hemisphere has a way of keeping knowledge from the other hemisphere. It may be, as the saying goes, that the right hand truly does not know what the left hand is doing. (pp. 31-32)

It would seem, in light of these findings, beneficial to

stimulate, cultivate and utilize each hemisphere of the brain, in order to maximize our potential. However the main thrust of education in our schools is cognitively oriented, and such orientation is a general function of only one hemisphere of the brain- the left hemisphere. Edwards (1979) quotes Sperry:

> The main theme to emerge ... is that there appear to be two modes of thinking, verbal and nonverbal, represented rather separately in left and right hemispheres, respectively, and that our educational system, as well as science in general, tends to neglect the nonverbal form of intellect. What it comes down to is that modern society discriminates against the right hemisphere. (p.29)

Research suggests that meditation practice is a right hemisphere activity. Ornstein (1972) proposed that meditation is characterized by a gestalt, holistic and spacial cognitive style which is identified with predominant right hemisphere activity. In other words, it seems that during meditation the right hemisphere of the brain is more active than the left (a notion supported by descriptions of how a meditation feels). This is determined by recording "alpha activity" in the brain during meditation. Its presence at the recording site indicates inactivity at that location (Bennett & Trinder, 1976).

There is growing amount of data suggesting that the control of attention may be a function of the right

hemisphere. Earle (1984) conducted a study on a number of right hemisphere damaged people, and he found that they demonstrated dramatic impairments of selective attention. Their symptoms included inability to direct and maintain vigilance, distractibility, and incoherent thoughts. Assuming that attention is controlled by the right hemisphere, Earle hypothesizes, it seems justifiable to conclude that the practice of meditation (an exercise in attention) induces relative right hemispheric activation.

In their study in 1983, Meissner and Pirot assessed the effects of Transcendental Meditation on the cerebral hemispheres. Pirot theorizes that the repetition of a mantra activates both hemispheres of the brain, but has a differential effect on them. He suggests that the mantra occupies the left brain, thus suspending its linguistic and analytic abilities. The habituation of the mantra leaves the consciousness relatively free of discursive content. What remains is an altered state of consciousness, devoid of objects and mental rumination. Eventually one loses awareness of the mantra and experiences a quiescent state.

The right hemisphere of the brain is also occupied by the mantra, says Pirot, but is more ready to respond because it is no longer dominated by left hemisphere verbal consciousness. This, he claims, may account for the unusual experiences of meditators during meditation, such as images of lights, colours and changing geometric patterns. These may be

products of the right hemisphere; internal perceptual material of which the meditator is not ordinarily aware because of the domination of the consciousness by language, analysis and object awareness.

Pirot's theory helps explain how meditation changes the biases of the brain, releasing it from left hemisphere domination so as to allow the right hemisphere free expression.

Pagano and Frumkin (1977) reported that on a right hemisphere specific musical task, experienced meditators performed significantly better than either a less experienced group or non-meditator control group. Based on this study and others, they find it reasonable to infer that meditation, a technique capable of dramatically altering consciousness, also produces a differential effect on right hemisphere functioning.

Banquet observed a uniformity of alpha waves from all areas of the brain during meditation, a "hypersynchrony" usually associated with the sleeping, not the waking, state. The implication is that during meditation the two hemispheres of the brain may be able to work together in a fashion not possible under other circumstances. By encouraging this synchrony between the two halves of the brain, meditation may foster the integration of our two basic modes of thinking- the analytical mode and the synthesizing, intuitive mode (Carrington, 1977).

Earle (1984) suggests that the most distinguishing EEG characteristic of meditation is the: "unusually high intra- and inter-hemispheric synchronization, much higher than during sleep" (p. 403).

In her research on the brain, Ferguson (1980) also found changes in brain wave patterns:

> Meditation, chanting and similar techniques increase the coherence and harmony in brain wave patterns; they bring about greater synchrony between the hemispheres, which suggests that higher order is achieved. On occasion it appears that increasing populations of nerve cells are recruited into the rhythm, until all regions of the brain seem to be throbbing, as if choreographed and orchestrated. The usually dissynchronous patterns in the two hemispheres seem to become entrained to each other. Brain wave activity in older, deeper brain structures may also show an unexpected synchrony with the neocortex. (p. 79)

The chanting and repetition of sounds (which may be as old as human history), obviously have significance which goes beyond the sounds themselves. They appear to facilitate altered states of mind, brought on by changes in the activity in the brain.

Meditation, stress and schoolchildren.

Stress is defined by Manzi (1986) as one type of transaction between a person and an environment that occurs when the environment or internal demands of a situation tax or exceed the person's resources for managing them, or when the person's well-being is endangered.

Stress is the body's general response to any demand made upon it. Stress is physical. It causes real and measurable changes in many bodily functions, such as blood pressure, hormone production and the lymphatic system. Stress is particularly apparent during life's major events (Archer, 1991).

D'Onofrio and Klesse (1990) state that some people are more vulnerable to stress, and all of us vary from time to time in our individual vulnerability. Vulnerability to stress is determined by a set of complex interactions among our biological dispositions, which include health and lifestyle, and financial, spiritual and social resources for coping with stress.

Miller, Smith, Mehler, and Torrington (1987) find that stress is a complex biological phenomenon that is influenced by psychological, sociological, physiological and physical factors. A number of studies have shown that stress is both additive and cumulative. Too many stressors at once, or too much stress over time without recovery periods, can combine to create a total burden of demands and pressures.

It is generally agreed, as Shapiro and Giber (1978) proposed, that meditation can produce a state of relaxation. Certain physiological changes have been repeatedly reported during the act of meditation. These include:

- reduced heart rate
- decreased oxygen consumption
- decreased blood pressure
- increased skin resistance
- increased regularity and amplitude of alpha activity.

These physiological changes are consistent with a relaxed state. Skin resistance is generally considered a measure of stress; if the person is in a calm state, the skin tends to resist electric current. In the presence of anxiety or stress, this skin resistance drops and an electric current flows easily (Carrington, 1977).

Alpha waves typically accompany drowsy relaxed states (Ibid.).

Benson (1975) observes that the stressful consequences of living in our modern Western society can cause many stress-related diseases, such as hypertension, heart attacks and strokes. The stresses we encounter on a daily basis trigger an inborn response, labelled the "fight or flight" response. (The "fight or flight" response occurs when we are faced with situations that require an adjustment of behaviour. It results in an increase in blood pressure, heart rate, rate of

breathing, blood flow to the muscles, and metabolism. It prepares us for conflict or escape.) Benson believes that the Relaxation Response (meditation) is an innate capability we all have to counteract the harmful effects of the "fight or flight" response.

Goleman and Schwartz (1976) conducted a study with a group of meditators and a control group of non-meditators. Findings showed that the meditators manifested a greater level of initial arousal than the control group in the face of stress, but showed a faster recovery afterwards, their signals of bodily arousal falling more quickly than those of the non-meditators. From this and other studies, Goleman & Schwartz surmised that rapid recovery from stress is a typical trait of meditators. Because the anxious person's body stays mobilized after one stress-inducing event has passed, he or she has a lower threshold for the next. The meditator handles stress in a way that breaks up the "threat-arousal-threat" spiral, because of the ability to relax after each stressful event.

In an earlier study by Schwartz (1973), results showed that meditators experienced much lower daily anxiety levels than non-meditators. Furthermore, they had fewer problems of a psychological or psychosomatic nature such as colds, headaches and sleeplessness.

D'Onofrio and Klesse (1990) studied stress in individuals aged 10 to 18 years, focusing on the particular stressors for teenagers. Adolescence, they infer, is a period of human

development characterized by a complex set of developmental tasks that move the person from childhood to young adulthood. D'Onofrio and Klesse point out that adolescents are confronted with:

- managing the physiological changes of puberty
- integrating increased cognitive capacity with life experience
- achieving increased expectations of increasing independence from parents and family
- developing appropriate social roles with same and opposite sex peers
- completing academic requirements
- choosing and planning for an occupation
- evolving a set of values to guide adult roles (p. 7).

D'Onofrio and Klesse recommend teaching meditation to students as one way of managing stress, and propose that the coping style which emerges in adolescence has long-term consequences in that it tends to determine the coping style of adulthood. Coping behaviour is an important component of psychosocial competence by which an adolescent is able to balance and manage the developmental tasks of this stage of the lifecycle.

Proeger and Myrick (1980) suggest that teaching anxious children to relax would improve their performance in school. Their studies reveal that anxiety is a widespread problem among schoolchildren; as many as 30% of schoolchildren in

elementary schools may be undergoing significant stress that prevents them from learning and relating effectively.

Proeger and Myrick report negative correlations between general anxiety and test anxiety and scores on intelligence tests. Their studies show that changes in anxiety levels are related to changes in intelligence quotient scores. Further, anxiety affects the more intelligent as well as the average student. They report that anxiety level is as effective as the intelligence quotient in predicting reading grades. Anxiety was found to be a significant element of the personality of underachieving children, and has a negative effect on a variety of learning tasks, especially complex learning. Their findings also show that anxiety is related to dependence, hostility and aggression, low peer status and poor relationships with teachers. Proeger and Myrick note that relaxation training for reducing students' anxiety has become part of the curriculum in many schools, and they recommend meditation as a technique for learning relaxation and reducing anxiety.

Leshan (1974) supposes that the physiological effects of meditation are due to the fact that the process is a focusing on, a doing, of one thing at a time. The signals received by the body as to how it should be responding are simpler and more coherent than at any other time. In our normal waking state, these signals are many and varied. During the performance of a task, as well as the long-term and short-term

demands of the task itself, we have feelings about the task which may be positive or negative. In addition to this, if other people are involved in the accomplishment of the task, we are preoccupied in some measure with our feelings about them. At the same time, we have memories of the ealier parts of the day, and plans and expectations for the rest of the day. We are aware of the progression of time, our immediate environment, noise level, and of bodily sensations such as fatigue, hunger and thirst. The body responds in some way to each of these signals. In meditation we significantly decrease (or at least attempt to) the messages sent from the brain to the body, resulting in a decrease in physiological tension and an increase in mental receptivity and awareness.

Numerous studies have documented the effectiveness of meditation in stress management; it is a practical, simple alternative to the drugs (prescribed or otherwise) often used for this purpose.

Meditation, spirituality and silence.

An important aspect of meditation which is often ignored by its Western practitioners is that traditionally it is grounded in spirituality, philosophy and religion.

Our fast-paced society, with its emphasis on achieving and consuming, accords little value to spirituality. Organized religion has lost much of its traditional authority and can no longer be depended upon to provide us with spiritual guidance. Schools have largely relinquished any attempt at nourishing our spiritual needs, thwarted by the complex needs of an increasingly pluralistic society. Our sense of moral obligation has fallen into disarray, and our values are frequently eroded by more pragmatic considerations. Many of us suffer from spiritual malnutrition.

Palmer (1983) addresses this issue by proposing that we adapt our epistemology to create a space for spirituality in the schools. Current ways of teaching and learning stress the intellect and the senses, neglecting other equally valuable faculties such as empathy, imagination and emotion, for example. We need an epistemology which engages the whole child, and which nurtures human authenticity. To be truly human is to abandon the roles we assume when dealing with others (and with ourselves) and to experience inner liberation from the power of external life.

It is not necessary to discard the facts, theories, objectives and reality upon which our present education system

is built. Indeed, we need them; we manufacture them in order to build a manageable world out of chaos, and they enable us to make sense of the information which continually bombards us. But they are meaningless without an understanding of ourselves, who we are and why we are here. We may never have the "answers", but it is the search itself which is important because it provides us with the opportunity to experience those parts of our mind which are neglected in our rational lives- intuition, inspiration, wonder and contemplation, to name a few. Meditation practice puts us back in touch with these neglected aspects of ourselves.

In Western society we have developed the intellect at the expense of many other faculties. We tend to deal solely with what we can quantify, to pursue only what is sure to provide us with an answer, and to desire only what is useful. We have learned to operate almost exclusively in our daily lives in the linear, rational, goal-oriented mode. We rarely use the intuitive mode which allows us to muse, ponder and reflect.

If we take the analogy of going for a walk, it can be approached in different ways. We can walk quickly from A to B, taking the shortest possible route. Here the satisfaction lies in arriving at the destination. Or, we can saunter along, enjoying the sensation of sunlight upon skin, pausing to inhale the scent of flowers, lingering in the shade of a tree to listen to the birds singing. In this instance, satisfaction is derived from the journey itself as well as the

arrival. Each of these two ways is necessary to us, and to forgo one for the other is to impoverish ourselves as human beings.

We live in a culture that holds to the scientific worldview, which leaves little room for spiritual or religious experiences because they cannot be quantified, observed or explained in rational terms. In fact, one might say that these experiences are considered a taboo topic, suggestive perhaps of a mental disorder; this is an attitude which limits our theories of human possibility.

Another valuable aspect of meditation is that it provides us with a space for silence. Eastern philosophy has long acknowledged the significance of silence, but in the West silence makes us nervous. We feel that silence is nothing, empty, negative, lacking. May (1981) quotes Lao Tzu:

> We make a vessel from a lump of clay;
> But it is the empty space within the vessel that makes it useful.
> We make doors and windows for a room;
> But it is the empty spaces that make the room liveable.
> Thus, while existence has its advantages,
> It is the emptiness that makes it useful. (p. 165)

It is no coincidence that our most profound experiences are wordless. Silence is of the soul. Palmer (1983) believes that silence creates a potent space for learning. He writes: "In the silence we are more likely to sense the unity of truth

which lies beneath our overanalyzed world, the relatedness between us and others and the world we inhabit and study" (p. 81).

Father Girard, a Trappist monk, remarks: "When you don't speak ... you learn to control the impulse, the need to have an answer. Instead, you descend deep into yourself, to find the real answers which never come from others" (Polak, 1995).

Silence allows us time for reflection, a sadly neglected art which we would do well to cultivate in the schools. Reflection, writes Morgenson (1992), forces us to stretch our minds beyond mere information. Reflection transforms information into knowledge, and knowledge gives rise to wisdom. Reflection means reconstructing taken-for-granted assumptions about our lives; through reflection we structure and restructure our personal, practical knowledge and experience. The unreflective life, he adds, is not worth living, and if we do not pursue wisdom through a reflective process, our collective lives may not be worth living.

Keen (1973) observes that the prerequisite for all wisdom is the attitude of wonder, and that students should: "... develop an inner silence, cultivate the ability to let things happen, welcome, listen, allow, be at ease in situations in which surrender rather than striving for control is appropriate" (p. 43).

In a description of the meditative process, Naranjo (1989) remarks that reflection is one of its components:

"Awareness is receptivity, and inner silence must be created before real concentration takes place, a stilling of the mind's lake before it becomes a mirror and can reflect" (p. 88).

Ovard (1990) suggests that in an era of escalating public demands on schools and school leaders, reliance on values and principles is crucial. Principals in particular, he says, need the vision that comes from meditation in order to fulfil their increasingly complex mandates.

Meditation and personal development.

Delmonte (1987) defines self-actualization as "... a concept with its origins in humanistic psychology and refers to the degree to which individuals have actualized their potential for personal growth and development" (p. 129).

Delmonte finds that the practice of meditation is associated with increments in self-actualization scores, as measured by Shostrom's (1966) Personal Orientation Inventory. However, Delmonte cautions that predisposition to, and expectations of, meditation may explain these findings, since people who take up meditation are probably motivated to "improve" themselves, and this desire may manifest itself in increased self-actualization scores. Nevertheless, he concludes that change in the direction of psychological health accompanies the regular practice of meditation among favourably disposed individuals.

Ferguson and Gowan (1976) note that long-term meditators (with 3.5 years of experience) were significantly more self-actualized than meditators with only six weeks experience (p. 58).

White (1983) proposes that the expansion of human potential and the accompanying increase in self-esteem is the key to resolving learning problems. She suggests the basics of education in the future may include the gathering and application of self-knowledge, and techniques of relaxation and meditation. Meditation can be a route to self-knowledge,

which she sees as a means to self-actualization and the realization of student human potential.

Carrington (1977) observes that many people are aware that while they are well-situated with regard to material benefits, something important seems to be missing from their lives- be it love, creativity, meaning, personal growth, self-fulfillment or spiritual values. The humanistic approach to psychotherapy emphasizes self-fulfillment, or the realization of full human potential. In this, meditation and humanistic psychotherapy have a common goal.

Carrington (Ibid.) proposes that meditation, working on its own level, helps the self grow naturally, without impediment, to flower in its own way and at its own pace. It can, she says, be therapeutic in that it often serves to counteract specific psychological or physical problems, yet it fosters a more pervasive change than the mere absence of symptoms. The practice of meditation, says Carrington, tends to open up new horizons for the individual rather than restoring a former state of affairs.

Goleman (1988) comments that meditation can result in improved interpersonal skills:

> Meditation trains the capacity to pay attention. This sets it apart from other ways of relaxing, most of which let the mind wander at will. This sharpening of attention lasts beyond the meditation session itself. It shows up in a number of ways in the rest of the

meditator's day. Meditation has been found to improve one's ability to pick up subtle perceptual clues in the environment, and to pay attention to what is going on rather than letting the mind wander elsewhere. Meditation enables us to live in the present moment. These skills mean that in conversation with another person, the meditator should be more empathic. Because the meditator can pay sharper attention to what the other person is saying, he can pick up more of the hidden messages the other is sending. (p. 166)

Implications of research for education.

The implications of meditation research appear to be significant for education. There is a general consensus among researchers that all forms of meditation train the deployment of attention. In fact, the strongest agreement among meditation schools is the importance of training attention.

Goleman (1988) points out that different meditation systems may espouse wholly contradictory views from one another on the necessity for virtually every preparatory act, be it a specific environment, the need for a teacher, or a prior knowledge of what to expect from meditation. But the need for the meditator to retrain attention is the single invariant ingredient in the recipe for altering consciousness of every meditation system.

In view of the important role played by the individual's ability to control attention in the learning process (Schachar, 1991; Kinsbourne & Caplan, 1979), it appears that meditation would be a valuable addition to the school curriculum.

The idea that the brain may be more complex and varied than previously believed in the manner in which it responds to and interprets information suggests that both hemispheres of the brain should be developed to their full potential. At present, school curriculums are heavily biased in favour of left hemisphere development, and of developing the analytic, rational and verbal skills. At the same time, they are

tending to neglect the intuitive, spatial, holistic capabilities of the right hemisphere of the brain. MacKinnon (1981) believes that schools should be developing curriculums which develop equally both the right and left hemispheres of the brain, in order to bring into harmony the diverse functions of both hemispheres. He cites meditation as an example of developing right hemisphere activity (as do Pagano & Frumkin, 1977), and recommends integrating it into school activities.

The data suggesting that the control of attention is a function of the right hemisphere of the brain (Earle, 1984), is particularly pertinent to education and provides further grounds for cultivating its facilities in the schools.

The physiological benefits of meditation have also been well-documented, particularly regarding stress (Benson, 1975; Carrington, 1977; Shapiro & Giber, 1978). Anxiety and stress are experienced to a severe degree by many children on a daily basis (D'Onofrio & Klesse, 1990; Proeger & Myrick, 1980), and both studies suggest meditation as a strategy for dealing with stress among schoolchildren. Studies suggest that rapid recovery from stress is a typical trait of meditators (Schwartz, 1973; Goleman & Schwartz, 1976).

The relationship between meditation and spirituality is an historical one, as presented in Chapter 1 of this document. Even when it is divorced from a framework of religious or philosophical belief, meditation can still retain its

spiritual component in that it provides a space in our busy lives for silence and reflection. Meditation practice addresses the spiritual poverty felt by many of us, and if learned in the schools it would provide students with a valuable life skill.

The studies by Delmonte (1987), and Ferguson & Gowan (1976), indicate that the practice of meditation nurtures personal growth- surely an issue with which educators should concern themselves. The realization of an education of the whole child, an holistic education which provides opportunities for all aspects of development- emotional, social, and spiritual as well as academic- is a worthy endeavour.

It is not enough to impart information. Education must assume the responsibility of nurturing wisdom in our children, to prepare them to deal with the complexities of life. As William James (1929) reflected:

> Rational consciousness ... is but one special type of consciousness, whilst all about it, parted by the flimsiest of screens, there lie potential forms of consciousness entirely different. We may go through life without suspecting their existence; but apply the necessary stimulus, and at a touch they are there in all their completeness. No account of the universe in its totality can be final which leaves these other forms of consciousness quite disregarded. How to regard them is

> the question ... At any rate, they forbid a premature closing of our accounts with reality. (p. 89)

Research into different aspects of meditation which concern the learning process and education strongly suggests that teaching children to meditate would afford them many important benefits. The next chapter describes how teachers use meditation in class, and makes suggestions as to its implementation.

Chapter 3

Implementation of meditative practice in the schools.

The data outlined in Chapter 2 indicates that the practice of meditation has a positive effect on the learning process. Its use has been shown to:

- improve concentration skills
- be helpful in the management of stress
- develop the right hemisphere of the brain and serve to integrate the functions of the two hemispheres of the brain
- provide an opportunity for reflection
- be conducive to self-actualization.

My own experience of using meditation in the classroom, whether as an exercise in itself or integrated into an activity such as drawing, shows me that it has many benefits (see Appendix 1) and that it is simple to set in motion.

The implementation of meditation in the schools is not an expensive proposition; meditation is a simple procedure which is easy to learn and requires no equipment. The only cost involved would be that of training teachers to lead meditation sessions.

Majors (1989) recommends incorporating meditation into the classroom routine, starting with relaxation techniques. The time should be gradually increased as students become more skilled and comfortable. He finds that meditation establishes

an atmosphere of calm and order, which aids concentration. His philosophy is: "...to do less and accomplish more" (p. 10). Majors believes that by spending more time on principles and insightful learning, student skills improve.

As well as being used as a starting exercise, meditation can be incorporated into learning activities. Martin (1988) describes using a meditation assignment as a way to find connections between two levels of experience- the reader's transaction with the text and the reader's own life. Martin finds value in this exercise in that, with practice, it leads students from close analysis (of the text) to holistic considerations (his or her own life experiences), and finally to philosophical implications.

Costanzo (1990) believes that meditation can be used to improve writing at all levels, from elementary school to university. He uses meditation to help students write with greater concentration and depth, and to cultivate the ability to focus, follow and trace ideas through writing.

Moffett (1982) observes that writing and meditation are inseparable. He writes:

> Writing and meditating are naturally allied activities. Both are important for their own sake, and through each people can practise the other ... Whatever eventuates as a piece of writing can only begin as some focusing on, narrowing of, tapping off of, and editing of that great panorama that William James dubbed 'the stream of

consciousness'. (p. 231)

Moffett sees the natural meditation practised by young children (as in staring absorbedly at an object) as an important learning tool which should be encouraged in the schools.

There is a strong connection between meditation and inner speech, because both concern forms of thought, the composing of mind that constitutes the real art and worth of writing, claims Moffett (Ibid.). He continues: "Youngsters need to develop inner speech as fully as possible, and at the same time need to learn to suspend it. They must talk through to silence and through stillness find original thought" (p. 240).

As well as in literature, meditation can be deployed very naturally in the realms of art, music and physical education. As an art teacher, I notice that when a student is totally absorbed in the process of drawing or painting, his or her state of mind is altered. It is similar to, related to, or perhaps identical to, the meditative state; typically, the student is very relaxed, receptive, silent and focused. This state of mind is particularly noticeable when students are involved in observing an object or another person closely: the observer seems to merge with the observed. Within my own personal experience, I know that music also is conducive to this "altered state", when the self is inseparable from the music.

Carrington (1977) recommends that meditation be taught as

part of physical education programmes, possibly together with some Yoga training in physical postures and breathing exercises.

There may be resistance to implementing meditation in the schools from those who associate it with cults and particular religions. They may be reassured by the knowledge that meditation in different forms has been practised in all cultures throughout history, and that meditation is a natural human activity. There may also be resistance from those who consider that the demands of the curriculum leave no time for meditation. They may be swayed by the research showing that meditation improves student performance. In any event, it is likely that some dissemination of information to the community may be necessary before meditation can be integrated into the curriculum.

Conclusion

I have shown in Chapter 1 that meditation is a very broad term encompassing numerous behavioural patterns from zazen to vipassana to T'ai chi. It is an activity (or an inactivity, perhaps) which attempts to penetrate the mysteries of the human experiences of awareness, consciousness and being. I believe that it integrates body, mind and spirit, in that it addresses the needs of these three aspects of ourselves.

In Chapter 2 of this document I explored the connections between meditation and education in terms of attention, effect on the brain, anxiety and stress control, personal development and spirituality. In the case of the first four of these, considerable research has been done because the effects of meditation on attention, the brain, stress and personal development, are somewhat quantifiable- albeit crudely. The connections between meditation and spirituality have not as yet been addressed by researchers.

Our cultural and methodological hegemony has determined our tendency to focus on the measurable effects of meditation, such as skin conductivity, EEG, stress reactivity, heart rate and standardized personality measures. Certainly, these are important; however I believe that the primary rewards of meditation are the intangible ones which we have no way of measuring except in terms of human experience.

In Chapter 3 I have made suggestions regarding the use of meditation practice in the classroom. These are based on the

research available, on my own experience of meditation and on my efforts to incorporate it into the curriculum.

I have found that the practice of meditation has helped me to become more self-aware. As I quietly attempt to focus on a mantra, I am amazed and sometimes disturbed by the jumbled, incoherent torrent of thoughts and sensations which we generally refer to as our stream of consciousness. This awareness of the contents of my consciousness permits me to step back a little and observe them, and in doing so I become aware of the still, tranquil continuity of being. This quiet awareness becomes integrated into my daily life, into how I interact with others and how I react to circumstances. In this way, meditation is an exploration of consciousness, of the self, and I believe that this alone justifies its inclusion in the curriculum. Knowledge of one's being is the most fundamental human experience.

Meditation has its dark side, in that its practice results in long (seemingly wasted) hours of frustration and boredom, and occasional painful or frightening confrontations with problematic feelings or unresolved memories which have been long since buried. However, it is part and parcel of the process of understanding who we are. It is in this spiritual component that meditation has its true value, whether for the individual, education or society as a whole.

Appendix 1.

Meditation Journal.

19/09/94. Today I begin relaxation/focusing exercises with my classes, (59 boys and girls aged from 8-14) in order to train them in stress management and to train them in awareness of their attention. The exercise is loosely based on Benson's Relaxation Response (see Appendix 2). It takes place at the beginning of class and proceeds as follows:

- the lights are turned out so the room is quite dim
- any distracting object, such as book, pencil etc. is placed out of sight and reach
- the children sit comfortably, silent, with eyes closed
- they pay attention to their normal breathing, thinking "one" as they exhale
- when distracted, they are to let the distraction go, and return the attention to breathing in and out.

23/09/94. During the first week, the exercise lasted for three minutes. It was met with various reactions; some students appeared self-conscious, others indifferent, while others seemed to do the exercise quite naturally. By mid-week, certain students were reminding me about the relaxation exercise, saying they looked forward to it. At the end of the first week, their verbatim comments were as follows:

"It's very relaxing for me." Jonathan.

"I need more time to relax." Ononsenha:wi.

"It helps me to wake up." Melissa.

"I don't really care for it: I don't like being quiet." Samantha.

"It's too short." Jessica.

"It calms me down to the period." Marco.

"It helps me to focus on what you're teaching us." Meghan.

"I don't like listening to my breathing." Nicole.

"I think we should do this before every class. It helps me." Emerson.

"I need more time to get concentrated." Karla.

"I think it should be longer. It gets all my worries out." Gordon.

"I don't like it because I'm a jumpy person." Erin.

"It's relaxing and gets my tiredness out." Nishant.

"It should be longer." Brandi.

"It could help me when I feel nervous." Matthew.

"Ce n'est pas utile." Stella.

"It's good for me because I was too easily distracted." Alyson.

"Can we get more time? Just as I get focused the time is up." Lois.

"A total waste of time. I know how to concentrate." Brooks.

"It's not long enough." Mark.

26/09/94. Today, a majority of the students came into class,

sat down and quietly began our relaxation/focusing exercise. This is an encouraging sign.

30/09/94. On some days, such as today, the students have a difficult time settling down to the exercise due to being in a state of excitement about some planned extra-curricular activities for the afternoon.

9/10/94. An important aspect of this exercise is that it serves as an opening ritual to class. I think we all need a certain amount of ritual in our lives; it lends meaning what we do, and it provides us with an opportunity to prepare ourselves to do it.

For me as the teacher, I no longer need to quieten the students down in order to begin teaching- the meditation exercise does it for me. I feel that I derive a real benefit from this, because settling down a group of noisy students can be stressful. Now, the settling-down process happens automatically. The end of the exercise indicates that some class activity is about to begin, and the students are focused on participating in it.

16/11/94. The students are now fully integrated into our meditation exercise. They take it in turn to lead the sessions and do so very effectively. The student in charge sits at the teacher's desk, while I sit in his or her place as a participant. The student is in charge of all aspects of the session- timing, instructions, reminders. I recognize that by leading the exercise, each student can <u>see</u> what concentration

is and what it is not, as evidenced by the degree of involvement of the other students.

The student leading the session on a particular day is a role model for the others, and he or she takes particular care to execute the task satisfactorily.

14/12/94. I am finding more and more that collective meditative practice creates a bond- a bond between the students, and a bond between myself and the students. It's something we do together, with a common aim and with a spirit of cooperation.

12/1/95. Our sessions often stretch to five minutes. There remain a few students who prefer not to participate; they understand that they are not obliged to do so, but they do not have the right to disturb others during this time. So far, this has created no problems.

23/1/95. Two interesting comments today about our daily sessions.

> "Sometimes at night, I don't finish my dreams, so I finish them during our quiet time." Leigh.
>
> "Some days, this seems like a waste of time because I just can't settle down. Then on other days, I want it to go on and on." Matthew.

Leigh's comment suggests that she is well-practised in switching to altered states of mind, whereas Matthew's comment is characteristic of one struggling with the meditative process.

6/1/95. There are several questions which are frequently at the edge of my consciousness.

How can I evaluate the quality of the time we spend meditating each day?

How can I tell that the children are benefiting from this exercise?

Are they learning to deploy their attention, are they feeling less stressed?

Are they really deriving some spiritual benefit, or are they simply taking a break? (Now and then, the occasional child falls asleep during meditation.)

The answers to my questions lie in the comments of the children (pp. 65-66), and their level of participation in the meditative sessions. Naturally, some children benefit more than others, simply because they are prepared to work more at it. Some days are better than others- and this is true for all of us who meditate. Their comments reveal to me a need in most of them to meditate; and the ease with which meditation has been integrated into classroom practice suggests that it is an activity which children do quite naturally.

Appendix 2.

The relaxation response devised by Herbert Benson, M.D.

This summary is taken from The Relaxation Response, (1975) pp. 112-115.

Dr. Benson lists four prerequisites essential to eliciting the relaxation response:

- a quiet environment
- a mental device (repetition of a sound, word or phrase)
- a receptive attitude
- a comfortable position.

This technique is non-cultic, and is drawn from meditative techniques common to many religions. It proceeds as follows:

1) Sit quietly in a comfortable position.

2) Close your eyes.

3) Deeply relax all your muscles, beginning at your feet and progressing up to your face. Keep them relaxed.

4) Breathe through your nose. Become aware of your breathing. As you breathe out, say the word "ONE", silently to yourself. For example, breathe IN...OUT, "ONE"; IN...OUT, "ONE"; etc. Breathe easily and naturally.

5) Continue for 10-20 minutes. You may open your eyes to check the time, but do not use an alarm. When you finish, sit quietly for several minutes, at first with your eyes closed and later with your eyes opened. Do not stand up for a few minutes.

6) Do not worry about whether you are successful in achieving a deep level of relaxation. Maintain a passive attitude and permit relaxation to occur at its own pace. When distracting thoughts occur, try to ignore them by not dwelling upon them and return to repeating "ONE". With practice, the response should come with little effort. Practise the technique once or twice daily, but not within two hours after any meal, since the digestive processes seem to interfere with the elicitation of the Relaxation Response.

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