

The Buddha on Meditation and Higher States of Consciousness

By

Daniel Coleman

Harvard University

Buddhist Publication Society
Kandy • Sri Lanka

The Wheel Publication Nos. 189/190

Reprinted, by permission of the Transpersonal Institute, 2637 Marshall Drive, Palo Alto, California 94303 U. S. A.

First reprint—1973

Second reprint—1980

BPS Online Edition © (2008)

Digital Transcription Source: BPS Transcription Project

For free distribution. This work may be republished, reformatted, reprinted and redistributed in any medium. However, any such republication and redistribution is to be made available to the public on a free and unrestricted basis, and translations and other derivative works are to be clearly marked as such.

Contents

The Buddha on Meditation and Higher States of Consciousness.....	3
Introduction.....	3
Visuddhimagga: The Buddha’s Map of Higher States of Consciousness.....	5
Satipaṭṭhāna.....	6
Hindrances.....	7
Samādhi: The Path Of Concentration.....	8
Jhāna: Levels of Absorption.....	9
First jhāna.....	10
Second jhāna.....	11
Third jhāna.....	11
Fourth jhāna.....	12
The “formless” jhānas.....	12
Prajña: The Path Of Insight.....	15
Mindfulness.....	15
The Stages of Insight.....	16
“Knowledge of Arising and Passing Away”.....	18
Nibbāna.....	20
Levels of realization of Nibbāna.....	20
Nirodha.....	22
The Two Paths: Their Highest Extremes.....	23
The Buddha’s Map: Implications For Research.....	23
Psychophysiological measures.....	24
Maps of Consciousness in Perspective.....	27
References.....	29

The Buddha on Meditation and Higher States of Consciousness¹

In the Buddhist doctrine, mind is the starting point, the focal point, and also, as the liberated and purified mind of the Saint, the culminating point.

Nyanāponika, Heart of Buddhist Meditation

Introduction

The predicament of Westerners setting out to explore those states of consciousness discontinuous with the normal is like that of the early sixteenth century European cartographers who pieced together maps from explorers' reports of the New World they had not themselves seen. Just as Pizarro's report of the New World would have emphasized Peru and South America and underplayed North America, while Hudson's would be biased toward Canada and North America to the detriment of South America, so with explorers in psychic space: each report of states of consciousness is a unique configuration specific to the experiences of the voyager who sets it down. That the reports overlap and agree makes us more sure that the terrain within has its own topography, independent of and reflected in the mapping of it. The differences in maps show us that there are many routes to these states, and that they can be reached in distinct ways and told of within disparate systems of language, metaphor, and symbol.

Perhaps the most thorough maps of the realms of consciousness today are among the teachings of the religious systems of the East. The Tibetan *bardo* or the *loka* of the Vedas and Buddhism are in their esoteric sense metaphors for those mental states traditionally dealt with by Western psychology, as well as for a range of states not yet widely acknowledged by psychology in the West. Buddhadasa Bhikkhu (1968), for example, gives a psychological interpretation of terms found in Theravada scriptures for these terms: "hell" means anxiety; *peta loka*, the "realm of hungry ghosts," refers to motivation based on craving or deficiency; *asura loka*, the "realm of frightened ghosts," is irrational fear and "heaven" is sensual bliss of the highest order. All these states exist here and now. Beyond these more familiar states the Eastern systems go on to describe realms of mind that have only recently begun to be recognized and investigated by psychologists in the West. What has for ages constituted a fundamental transcendental religious experience, and so been described in the terminology of religious belief systems, is on the verge of being translated into the framework of modern

¹ To Acharya Anagarika Munindra of the International Meditation Centre, Bodh Gaya, India, and S. N. Goenka of Bombay, for their instrumental instruction in the teachings of the *Visuddhimagga*; to Baba Ram Dass for our conversations during the preparation of this paper; to Joseph Goldstein for his seminal comments on the mathematics of higher states of consciousness; and to Mahāraj-ji for arranging my stay in India so as to make possible this work; I am deeply and humbly grateful.

psychology, itself a belief system, as “altered” or “higher states of consciousness” (ASC and HSC, respectively).

This paper is concerned with a subcategory of ASC: meditation—specific states of consciousness, or MSC. Meditation states are distinct from ASC in that they include only those states attained through meditation that transcend normal conditions of sensory awareness and cognition. ASC subsumes a wider range than does MSC: altered states include, e.g., those induced by hypnosis and psychedelics (topics beyond the scope of this paper) as well as MSC. In their effects on the three normal states waking, dreaming and sleeping, MSCs produce a higher state, in accord with Tart’s (1971) criteria for HSC: (1) all functions of “lower” states are available—i.e., waking, dreaming, sleeping—and (2) some new functions derivative of meditative states are present in addition. What I have called elsewhere (1971) the “fifth state” has by definition the attributes of an HSC; the meditation-specific states to be discussed here are not HSC within Tart’s formulation.

As systematic investigation of states of consciousness comes to fruition, seeming differences among traditional sources in descriptions and delimitations of meditation and higher states may prove to be due to the individual idiosyncrasies of those who have experienced and told of them, rather than to the innate nature of the states themselves. Since most of the teachings about MSC and HSC are within a religious framework, the particular belief system in terms of which the experiences of an HSC are interpreted also must be seen as accounting for some of the variance. Here, as elsewhere, the Schachter (1962) effect prevails: cognitive predispositions determine the interpretation and labeling of internal stimuli. Rāmana Mahārshi, for example, a being who has experienced higher states himself, says of St. Paul’s great experience on the Damascus road that, when he returned to normal consciousness, he interpreted it in terms of Christ and the Christians because at the time he was preoccupied with the thought of them; St. Paul then identified his realization with this predominant thought (Chadwick, 1966). A more recent example is R. M. Bucke (1961), who spontaneously entered a high state while riding home after an evening of reading Whitman’s Vedantic poetry, and subsequently saw his experience in terms of “cosmic consciousness.” As Suzuki (1958) points out, in every religion it has been the core experience of an altered state which has preceded and been foundation for the subsequent structures of institution and theology. Too often it is the latter that have survived rather than the former; thus the modern crisis of the established churches might be seen in terms of the disappearance in our age of personally experienced transcendental states, the “living spirit” which is the common base of all religions.

This paper presents a detailed discussion of the *Visuddhimagga* account of Gotama Buddha’s teachings on meditation and higher states of consciousness—perhaps the most detailed and extensive report extant of one being’s explorations within the mind. On the basis of these teachings, implications are discussed for research in the psychophysiology of meditation, and a framework of landmarks are proposed for methodical laboratory tests of meditation and meditative states of consciousness.

Visuddhimagga: The Buddha's Map of Higher States of Consciousness

Perhaps the broadest and most detailed treatment of higher states of consciousness is the encyclopedic *Abhidhamma*, attributed to the disciples' rendition of more than forty years of Gotama Buddha's discourses. Some of the basic doctrines of the *Abhidhamma* were summarized in the fifth century by Buddhaghosa in his voluminous *Visuddhimagga*, the "Path of Purification."² Buddhaghosa explains that "purification" should be understood as Nibbāna. In the course of delineating this path virtually every other path to meditative states is touched on; the Buddha, it is said, traversed them all before attaining the nibbānic state. Indeed, the system of paths and their respective states given in the *Visuddhimagga* encompasses or intersects the major practical teachings of most of all the Eastern schools newly transplanted to the West.

The Buddha's system begins with *sīla*—virtue or moral purity—the systematic cultivation of thought, word, and deed, converting energies spent unprofitably into profitable or wholesome directions. "Wholesome" is understood to be the absence of greed, hate, and delusion which can lead one toward meditative states of consciousness, and finally to Nibbāna. In the process that culminates in Nibbāna, *sīla* is the essential foundation, the "cool-headedness" which serves as the basis for attaining MSC. *Sīla* is one of three major divisions of training in the Buddha's schema, the other two being *samādhi* or concentration, and *paññā* or insight. There is a psychological interaction effect between *sīla*, *samādhi*, and *paññā*. Effortful *sīla* facilitates initial concentration, which enables sustained insight. Established in either *samādhi* or *paññā*, *sīla*, formerly an act of the will, becomes effortless and natural. *Paññā* can reinforce purity while aiding concentration; strong concentration can have both insight and purity as by-products. The dynamic of interaction is not linear; the development of any one of the three facilitates the other two. There is no necessary progression, but rather a simultaneity and spiral of interactions in the course of traversing any given meditation path. Though the presentation here is of necessity linear, it should be kept in mind that in actuality there is a complex interrelation in an individual's development of moral purity, concentration, and insight. These are three facets of a single process.

To attain effortless *sīla*, ego must "die"—i.e., desires originating from thoughts of self cease to be the primary determinants of behavior. According to the *Visuddhimagga*, if this "death" comes about through development of *samādhi*, ego will remain in the form of latent tendencies which will remain inoperative so long as mind is concentrated and will bloom again when concentration wanes. If ego death is due to maturing of *paññā*, ego will cease to exist as an operative force in behavior, though it may continue in thought as old habits of mind; with full insight mind remains disenchanted with ego desires which are now realized to be impermanent, unsatisfactory, and non-self. On first approach to Nibbāna (i.e., 'stream-entry'), *sīla* is perfected, the potential for impure acts having been utterly relinquished.

From the Eastern viewpoint, this end state is *virāga*, choiceless *sīla*. *Sīla* is not merely abstention from acting in proscribed ways, but also involves avoiding the intent to act or speak

² The most authoritative translation of the *Visuddhimagga* is the *Path of Purification* by Bhikkhu Ñāṇamoli (Buddhist Publication Society, Kandy, Sri Lanka). In addition to the translation by Bhikkhu Ñāṇamoli, I have also consulted contemporary commentaries on the *Visuddhimagga* by Bhikkhu Soma (1949), Conze (1956), Dhammaratana (1964), Kashyap (1954), Lama Govinda (1969), Ledi Sayādaw (1965), Mahāsi Sayādaw (1965, 1970), Narada Thera (1956), Nyanaponika Thera (1949, 1962, 1968), Nyanatiloka (1952a, b), and P. Vajiranana.

in those ways, for intentions are seen as the root of action. Thus, e.g., the *Visuddhimagga* urges the meditator, should lustful thoughts arise, immediately to counter those thoughts by contemplating the loathsomeness of the body. The object of the practice of moral purity is to free the meditator from thoughts of remorse, guilt, or shame.

What was initially effortful practice facilitates a change in consciousness to higher states where the attitudes embodied in *sīla* are an effortless and natural by-product of the state itself. In these states the laws of thought and behavior are determined by the experiences of bliss, contentment, and detachment that prevail there. The old psychologies of the West, based on fundamental assumptions such as sexual dynamisms and the urge to power, cease to apply in these new realms of the mind, just as Newtonian physics was found to be inadequate for understanding physics within the atom.³ Meditative and higher states are from the perspective of most Western psychology “transcendental” in that they are a realm beyond that particular body of thought but MSCs and HSCs are not without laws and rules of their own.

Sīla in the *Visuddhimagga* tradition begins with the observance of the codes of discipline for laity, novices, and fully ordained monks. The precepts for laity are but five: abstaining from killing, stealing, unlawful sexual intercourse, lying and intoxicants. For novices the list expands to ten; for monks it mushrooms to 227 prohibitions and observances regulating monastic life. While the practice of *sīla* varies in accord with one’s mode of life its intent is the same: it is the necessary purification of one’s deeds and speech which can serve as preparation for meditation. On one level these are codes for proper social behavior; in this Buddhist tradition, that level is secondary in importance to the life of motivational purity which proper behavior foreshadows. *Sīla* is to be understood not only in the ordinary external sense of propriety, but also as mental attitudes or as psychological preconditions out of which right speech, action, and thought arise. Behavior is to be controlled insofar as it affects consciousness. *Sīla* is conscious and intentional restraint of action designed to produce a calmed and subdued mind. Purity of morality has only the purity of mind as its goal.

Satipaṭṭhāna

Because a controlled mind is the goal of *sīla*, its practices include restraint of the senses. The means for doing so is *satipaṭṭhāna*, or mindfulness. Control is exercised over the sense organs through cultivation of the habit of simply noticing sensory perceptions, and not allowing them to stimulate the mind into thought-chains of reaction to them. This attitude of paying bare attention to sensory stimuli when systematically developed into *vipassanā*, seeing things as they are, becomes the avenue to the *nibbānic* state. In daily practice it facilitates detachment toward one’s internal universe of perception and thought. One becomes an onlooker to his own stream of consciousness, preparing the way to those states that transcend normal consciousness.

In the initial stages, before becoming firmly grounded in mindfulness, one is vulnerable to distractions from external circumstances. Accordingly the *Visuddhimagga* gives instructions to the would-be meditator for what constitutes an optimum life setting. One must engage in “right livelihood” so that the source of financial support will not be cause for misgivings. In the case of monks, professions such as astrology, palm-reading, and dream interpretation are expressly forbidden, while the life of a mendicant is recommended. Possessions should be kept to a minimum. A monk is to possess only eight articles: three robes, a belt, a begging bowl, a razor, a sewing needle, and sandals. Food should be taken in moderation, enough to ensure physical

³ One exception is the late Abraham Maslow’s (1970) “Theory Z”, which could, along with the work of R. Assagioli and C. G. Jung, become for the West the cornerstone for a psychological understanding of HSC.

comfort but less than would make for drowsiness. One's dwelling should be aloof from the world, a place of solitude; for householders who cannot live in isolation, a room should be set aside solely for meditation. Undue concern for the body should be avoided, but in case of sickness appropriate medicine should be obtained. The four requisites of clothing, food, dwelling, and medicine are to be acquired only insofar as they are necessary to well-being, and without greed, so that even one's material necessities will be pure and untainted.

Since the state of one's mind is seen to be affected by the state of mind of one's associates, it is recommended that the meditator surrounds himself with like-minded people. This is one of the advantages of a *Sangha* (Sanskrit: *satsang*), narrowly defined as those who have attained the nibbānic state and, applied in its widest sense, the community of people on the path. Meditation is facilitated by the company of mindful or concentrated persons, and is impeded by "hanging out" with those who are agitated, distracted, and immersed in worldly concerns. The latter are likely to engage in talk which does not lead to detachment, dispassion, or tranquility. The sort of topics typical of such unprofitable talk are enumerated by the Buddha as (from Nyanāponika Thera, 1962, p. 172)

Talk about kings, thieves, ministers, armies, famine, and war; about eating, drinking, clothing, and lodging; about garlands, perfumes, relatives, vehicles, cities and countries; about women and wine, the gossip of the street and well; about ancestors and various trifles; tales about the origin of the world, talk about things being so or otherwise, and similar matters.

Hindrances

Having gained the advantages and encouragement to be found in a Sangha and become firmly set in meditation, the determined meditator at a later stage may find to be obstacles what once were aids. The *Visuddhimagga* lists ten categories of potential attachments or hindrances to progress in meditation: (1) any fixed dwelling place if its upkeep is the cause of worry, (2) family, if their welfare causes concern, (3) accruing gifts or reputation which involves spending time with admirers, (4) a following of students or being occupied with teaching, (5) activities or projects, having "something to do." (6) traveling about, (7) people dear to one whose needs demand attention, (8) illness involving treatment, (9) theoretical studies unaccompanied by practice, and (10) supernormal psychic powers, the practice of which becomes more interesting than meditation. The principle underlying this list is that release from worldly obligations frees one for single-minded pursuit of meditation. This is purification in the sense of freeing the mind from affairs that might disturb it.

There is a further set of thirteen practices of self-purification treated in the *Visuddhimagga* apart from *sīla*. These ascetic practices are optional in the "middle way" of the Buddha. If someone set on a contemplative life should find any of them conducive to that aim, he may practice them but in their observance must be discreet, preferably doing them without anyone noticing. These ascetic means to purification include wearing robes made only of rags; begging for food; eating only one bowl of food, and just once a day; living in the forest under a tree; dwelling in a cemetery or in the open; sitting up throughout the night. Though optional, the Buddha praises those who follow these modes of living "for the sake of frugality, contentedness, austerity, detachment," while criticizing those who pride themselves on practicing austerities and look down on others. In all facets of *sīla*, spiritual pride bars purity. The goal of *sīla*, is a mind unconcerned with externals, calm and ripe for the inward turning of attention that is meditation.

Samādhi: The Path Of Concentration

With the development of *sīla* a psychological base is prepared for training in *samādhi*, concentration. The essence of concentration is non-distractedness; *sīla* is the systematic pruning away of sources of distraction. Now the meditator's work is to attain unification of mind, one-pointedness. The stream-of-thought normally contains myriad concomitants. The goal of *samādhi* is to break and steady the thought continuum by fixing the mind on a single thought. That one thought is the subject of meditation. In *samādhi* the mind is not only directed toward the subject, but penetrates it, is absorbed in it, and becomes one with it. The concomitants of the thought-stream are prevented from dissipation by being firmly fixed on that one point.

Anything that can be the object of attention can be the subject for *samādhi* meditation. *Samādhi* is simply sustained attention to a single point. But the character of the object attended to has definite consequences for the outcome of meditation. The compilation of suttas known as the *Nikāyas* gives the fullest list of subjects of meditation recommended by the Buddha, elaborating 101. The *Visuddhimagga* enumerates 40 meditation subjects:

ten *kaṣiṇas*, contemplation devices: earth, water, fire, air, dark-blue, yellow, blood-red, white light, bounded space;

ten *asubhas*, loathsome and decaying corpses: e.g., a bloated corpse, a gnawed corpse, a worm-infested corpse, a skeleton;

ten reflections: on the attributes of the Buddha, his Teaching, the sangha, one's own *sīla*, one's own liberality, one's own possession of godly qualities, or on the inevitability of death; contemplation on the 32 parts of the body, or on in-and-out breathing;

four sublime states: loving kindness, compassion, joy in the joy of others, and equanimity;

four formless states: contemplation of infinite space, infinite consciousness, the realm of nothing-ness, and the realm of neither-perception-nor non-perception;

the loathsomeness of food; and

the four physical elements (earth, air, fire, water) as abstract forces.

Each of these subjects has characteristic consequences for the nature, depth, and by-products of concentration. All of them can serve as bases for developing concentration to the depth necessary for attaining the *nibbānic* state. The concentration produced by those of a complicated nature—e.g., the attributes of the Buddha—will be less unified than that produced by a simple object—e.g., the earth *kaṣiṇa*, a clay-colored wheel. Apart from the quality of concentration produced by a given meditation subject, each has distinct psychological by-products. The meditation on loving kindness, for example, has among its fruits: the meditator sleeps and wakes in comfort, dreams no evil dreams, is dear to all beings, his mind is easily concentrated, his expression serene. and he dies unconfused. Perhaps the most important consequence of a subject is the depth of absorption-*jhāna* it will produce.

Table 1. Meditation Subjects

Meditation Subject	Highest Jhāna Level Attainable
Kasiṇas; Mindfulness of breath; Neither-perception-nor non-perception	Eighth
No-thing-ness	Seventh
Infinite consciousness	Sixth
Infinite space	Fifth
Equanimity	Fourth
Loving kindness; Selfless joy; Compassion	Third
Body parts; Corpses	First
Reflections; Elements; Loathsomeness of food	Access

The Buddha recognized that persons of different temperaments would be more suited to some meditation subjects than to others. The typology of temperaments are set down as guidelines for advising which person should be given which subject has four main types: (1) one disposed to hatred, (2) the lustful, deluded, or excitable, (3) one prone to faith, (4) the intelligent.⁴ Subjects suitable for type (1) are the four sublime states and the four color kasiṇas; for type (2) the 10 asubhas, body parts, and respiration; for type (3) the first six reflections; for type (4) reflection on death, the loathsomeness of food, and the physical elements. The remaining subjects are suitable for all cognitive dispositions.

The ideal meditation teacher was the Buddha, who, it is said, had developed the power to know the mind and heart of others, and so could match perfectly each person with the appropriate subject for concentration. In lieu of the Buddha, the *Visuddhimagga* advises the would-be meditator to seek out a teacher according to his level of attainment in meditation, the most highly accomplished being the best teacher. His support and advice are critical in making one's way through unfamiliar mental terrain. The pupil "takes refuge" in his teacher, and must enter a contract of surrender to him. What is surrendered is the propensities of ego—"hindrances"—which might prevent the student from purposefully pursuing meditation to the point where those ego propensities are transcended. But the responsibility for salvation is laid squarely on the student's shoulders, not on the teacher's; the teacher is not a traditional Eastern guru, but a "good friend" on the path. The teacher will point the way, the student must walk for himself. The essence of the role of teacher in this tradition is given in the lines from the *Zenrin*:

If you wish to know the road up the mountain,
You must ask the man who goes back and forth on it.

Jhāna: Levels of Absorption

Having found a suitable teacher and been instructed in an appropriate subject, and established to some degree in sila, the meditator begins in earnest. This first stage is marked by an internal psychological tension between concentration on the primary object of attention—the meditation

⁴ This typology parallels a psychoanalytic scheme of character types based on cognitive styles; in the same order (Shapiro, 1961): (1) the "paranoid," who sees others as separate and suspect, (2) the "hysteric," who judges and acts on the first impulse, (3) the "obsessive-compulsive," who looks to others for direction, and (4) the "psychopath" who perceives accurately but restructures reality as he wishes.

subject—and distracting thoughts, which hinder concentration. These hindrances mainly take the form of: desires, ill will, despair, and anger, sloth and torpor, agitation, worry and doubt and skepticism. With sustained effort there comes the first moment when these hindrances are wholly subdued, marked by a quickening of concentration. At this moment those concomitants of consciousness that will mature into full absorption come into dominance. This is the first noteworthy attainment of samādhi; because it is the state verging on full absorption, it is called “access” concentration.

This state of concentration is comparable to a child not yet able to stand steady but always trying to do so. The factors of mind characteristic of full absorption are not strong at the access level; their emergence is precarious, and the mind fluctuates between them and “inner speech,” the usual ruminations and wandering thoughts. The meditator is still receptive to sensory input and remains aware of environmental noises and body states. The primary object is a dominant thought, but it does not yet fully occupy the mind. At this stage there may emerge (though not always) any of the following: strong feelings of zest or rapture, happiness and pleasure, equanimity, initial application to the primary object as though striking at it, or sustained application to the primary object as though repeatedly noting it. Sometimes one sees luminous shapes or flashes or bright light, especially if the meditation subject is a kasīṇa or respiration. Visionary experiences associated with MSC occur at this level, where mind is purified but still can be occupied with name and form. There may also be a sensation of bodily lightness, as though floating in the air. Access concentration is a precarious attainment, and if not solidified into full absorption at the same sitting, it must be guarded between sessions by avoiding distracting endeavors or encounters.

Table 2. The Path of Concentration

Formless States	Eighth	Neither-perception-nor-non-perception. Equanimity and one-pointedness.
	Seventh	Awareness of no-thing-ness. Equanimity and one-pointedness.
	Sixth	Objectless infinite consciousness. Equanimity and one-pointedness.
	Fifth	Consciousness of infinite space. Equanimity and one-pointedness.
	Material States	Fourth
Third		Feelings of bliss, one-pointedness, and equanimity. Rapture ceases.
Second		Feelings of rapture, bliss, and one-pointedness. No thought of primary object.
First		Hindering thoughts, sensory perception, jhāna and awareness of painful body states all cease. Initial and unbroken, sustained attention to primary object. Feelings of rapture, bliss and one-pointedness.
Access		Hindering thoughts overcome; other thoughts remain. Awareness of sensory inputs and body states.

Primary object dominant thought. Feelings of rapture happiness, equanimity; initial and sustained thoughts of primary object; flashes of light or bodily lightness.

First Jhāna

With continued application of mind to the primary object comes the first moment marking a total break with normal consciousness. This is full absorption, or jhāna. The mind suddenly seems to sink into the object and remains fixed in it. Hindering thoughts totally cease. There is neither sensory perception nor the usual awareness of one's body; bodily pain cannot be felt. Apart from the initial and sustained attention to the primary object, there are only rapture, bliss, and one-pointedness. There is a subtle distinction between "rapture" and "bliss": rapture at the level of this first jhāna is likened to the initial pleasure and excitement of getting a long-sought object; bliss is the enjoyment of that object. Rapture may be experienced as raising of the hairs on the body, as momentary joy flashing and disappearing like lightning, as showering through the body again and again in waves, as the sensation of levitation, or as the pervasive suffusion of thrilling happiness. Bliss is a more subdued state of continued ecstasy. One-pointedness is the property of mind that centers it in the jhānic state. The first experience of jhāna lasts but a single moment of consciousness. With continued practice the jhānic state can be maintained for progressively longer intervals. Until the jhāna is mastered, it is an unstable attainment which might be lost.

Full mastery is stabilized when the meditator can attain this first jhāna whenever, wherever, as soon as, and for as long as he wishes.

Second Jhāna

In the further course of meditation, one-pointed-ness will become more and more intensified by the successive elimination of rapture, bliss, and attention; the energy invested in the eliminated factors becomes absorbed by one-pointedness at each higher jhānic level (see above). The process of becoming totally one-pointed proceeds, after mastery of the first jhāna with the systematic elimination of initial and sustained attention to the primary object, which, on reflection after emerging from the jhānic state, seems gross relative to the other mental factors. Just as the hindrances were overcome in attaining access, and all thoughts were stilled in attaining the first jhāna, applied and sustained attention to the primary object are abandoned at the threshold of this second jhāna. The procedure for this requires entering the first level of absorption on the basis of the primary object, and then, having previously so resolved, turning the mind toward the feelings of rapture, bliss, and one-pointedness, free of any idea of the primary object. This level of absorption is both more subtle and more stable than the first; mind is now totally free of any verbal formations or ideas of form embodied in the primary object. This jhāna is to be mastered as before.

Third Jhāna

After mastery, on emerging from and reviewing the second jhāna, the meditator sees the factor of rapture—a form of excitement—as gross compared to bliss and one-pointedness. The third level of jhāna can be attained by again contemplating the primary object, abandoning sequentially thoughts of the object, and then rapture. The third level of absorption is marked by

a feeling of equanimity and impartiality toward even the highest rapture, which manifests with the fading away of rapture. This jhāna is extremely subtle, and mind would be pulled back to rapture without this newly emergent equanimity. An exceedingly sweet bliss fills the meditator, and on emerging from this state he is aware of bliss throughout his body. Because the bliss of this level is accompanied by equanimity, mind is kept one-pointed in these subtle dimensions, resisting the pull of rapture. Having mastered the third jhāna as before, and on reviewing it, the mediator sees bliss as gross and disturbing compared to one-pointedness and equanimity.

Fourth Jhāna

Proceeding again through the jhānic sequence, with the abandonment of all forms of mental pleasure, the meditator attains the fourth level. With the total cessation of bliss, the factors of equanimity and one-pointedness achieve full strength and clarity. All mental states that might oppose these remaining two factors have been overcome. Feelings of bodily pleasure are fully abandoned; feelings of pain ceased at the first jhāna. There is not a single sensation or thought. Mind rests with one-pointedness in equanimity at this extremely subtle level. Just as mind has become progressively more still at each level of absorption, breath has become more calm. At this fourth level, breath, it is said, ceases altogether. Concentration here is imperturbable; the meditator will emerge after a time limit set before entering this state.

Each jhāna rests on that below. In entering any jhāna; mind traverses successively each lower level, eliminating its constituents one by one. With practice the traversal of jhānic levels becomes almost instantaneous, the mind residing at each level on the way for but a few moments of consciousness. As mental factors are eliminated, concentration is intensified.

The “Formless” Jhānas

The next step in development of concentration culminates in the four states called “formless.” While the first four jhānas are attained by concentration on a material form or some concept derived therefrom, the formless states are attained by passing beyond all perception of form. While the first four jhānas are attained by removing mental factors, with the formless jhānas the complete removal of one stage constitutes the next attainment. All the formless jhānas share the factors of one-pointedness and equanimity, but at each level these factors are progressively refined.

The first formless absorption—the fifth jhāna—is attained by first entering the fourth jhāna through any of the kasiṇas. Mentally extending the limits of the kasiṇa to the largest extent imaginable, the meditator turns his attention to the space touched by it. With this infinite space as the object of contemplation, and with the full maturity of equanimity and one-pointedness, mind now abides in a sphere where all perceptions of form have ceased. Mind is so firmly set in this level of sublime consciousness that no external sensory input can perturb or disrupt it. Still, the tendencies of the mechanisms associated with sensory perception exist in the fifth jhāna, though they are not attended to: the absorption would be broken should attention turn to them.

The next level is attained (fifth jhāna having been mastered) by achieving the consciousness of infinite space, and then turning attention to the element of infinite awareness. Thus the thought of infinite space is abandoned, while objectless infinite consciousness remains. This marks the sixth jhāna. Having mastered the sixth, the meditator attains the seventh jhāna by first entering the sixth and then turning contemplation to the nonexistence of infinite consciousness. The seventh jhāna is thus absorption with no-thing-ness, or the void, as its object. That is consciousness has as its object the awareness of absence of any object. Mastering this

jhāna, the meditator then reviews it and finds any perception at all a disadvantage, its absence being more sublime.

So motivated, the meditator can attain the eighth jhāna by first entering the seventh, and then turning attention to the aspect of peacefulness, and away from perception of the void. The delicacy of this operation is suggested by the stipulation that there must be no hint of desire to attain this peacefulness, nor to avoid perception of no-thing-ness.

Attending to the peacefulness, he reaches the ultra-subtle state where there are only residual mental formations. There is no gross perception here at all: thus “no-perception”; there is ultra-subtle perception: thus “not-non-perception.” This eighth jhāna is called the sphere of “neither-perception-nor-non-perception.” The same degree of subtlety of existence is here true of all concomitants of consciousness. No mental states are decisively present, yet residuals remain in a degree of near-absence. The *Visuddhimagga* says of mental states in the eighth jhāna, “not having been, they come to be; having come to be they vanish.” Lama Govinda (1969) describes it as the ultimate limit of perception. As with mind, so with body; metabolism becomes progressively more still through the formless jhānas until the eighth, where Kashyap’s (1954) characterization of cognition applies, too, to physiological processes: it is a state “so extremely subtle that it cannot be said whether it is or is not.”

The states of consciousness embodied in the jhānas are characteristic of what are called in the *Visuddhimagga* system the “Brahma realms,” the “planes of illumination,” and the “pure abodes.” Just as the jhānas are out of the relative world of sense-perception, thought, time, and space, are permeated with bliss and/or equanimity, embody infinite consciousness, and so on, so these other planes of existence are seen as existing solely in those jhānic dimensions. Beings may be born into existence on one or another of these planes according to karmas of lifetimes, especially the degree to which one has mastered jhānas in a human birth.⁵ Thus, for example, developing the second jhāna and practicing it to the highest degree is said to bring rebirth in the realm of “radiant Brahmas,” from whose bodies rays of light are emitted like flashes of lightning.

The section on supernormal powers is the one part of the *Visuddhimagga* most dubious from the standpoint of the West, since it treats as real events that overleap the bounds of even the most advanced physical sciences. The *Visuddhimagga* enumerates among these supernormal accomplishments: knowing the minds of others, knowing any past or future event, materialization of objects, seeing and hearing at great distances, walking on water, flying through the air, and so on. More interesting, the *Visuddhimagga* describes in technical detail how these feats are performed, while Western science at present cannot reconcile their possibility.⁶ Yet every school of meditation acknowledges them as byproducts of advanced stages of mastery, if only to caution against their misuse. The *Visuddhimagga* sees them as fruits of concentration but a hindrance to full insight, and sets down stiff provisos as prerequisites for supernormal powers, warning that they are hard to maintain and the slightest thing breaks them. The required degree of mind-mastery for their use is formidable. One must first have full proficiency in fourteen methods of mind-control, beginning with achievement of all eight

⁵ These “kingdoms of heaven” are sometimes called in other cosmological teachings “astral planes,” *deva lokas*, *bardos*, and the like.

⁶ Tart (1971) describes as a “state-specific science” one where a group of practitioners are able to achieve a certain state of consciousness and agree with one another on their common attainment of that state, and then investigate further areas of “interest—e.g., the interaction of that state with “reality.” By these criteria, the Buddha and his meditating disciples are analogous to a principal investigator and coinvestigators in the science of MSC, the *Visuddhimagga* and other Buddhist teachings are their findings, and the supernormal powers described here are a representative body of technology generated by their research efforts.

jhānas, using as a base each of the eight kasiṇas up to the white one, and including such feats as skipping both alternate kasiṇas and alternate jhānas—i.e., attaining first jhāna on the earth kasiṇa, then third jhāna on the fire kasiṇa, etc.—in both forward and reverse order. The *Visuddhimagga* estimates that of those who try, only one person in 100,000 or one million will achieve the prerequisite level of mastery. It further marks as a “blemish” wanting it to be known one can practice these things (little wonder that Western parapsychological researchers have yet to encounter a subject capable of the supernormal feats of mind—e.g., telekinesis and supernormal hearing—described).

From the Buddhist point of view, the attainment of powers is a minor advantage, of no value in itself for progress toward liberation. Powers in one who has not yet attained the nibbānic state are seen as an impediment, for they may endanger progress by enhancing his sense of self-esteem, thus strengthening attachment to self. In Buddhist tradition powers are to be used only in circumstances where their use will be of benefit to others. It is an offense against the community of monks for a Buddhist monk to display before laity any psychic powers that are beyond the capacity of ordinary men; a false claim to their possession would mean expulsion from the Order.

Prajña: The Path Of Insight

From the standpoint of the *Visuddhimagga*, mastery of the jhānas, and the sublime bliss and supernormal powers that may accrue therefrom, is of secondary importance to the cultivation of *prajña* (Pali: *paññā*) discriminating wisdom. Jhāna mastery is part of a fully rounded training, but the advantages are seen in terms of making the mind wieldy and pliable for speeding the training in *paññā*. Indeed, the deeper stages of *samādhi* are sometimes referred to in Pali, the language of the *Visuddhimagga*, as concentration-games, the “play” of those well advanced in the practice. But the crux of this training is the path that begins with mindfulness (*satipaṭṭhāna*), proceeds through insight (*vipassanā*), and ends in Nibbāna.

Mindfulness

The first phase, mindfulness, entails breaking through habits of stereotyped perception. The natural tendency is to “habituate” to the world surrounding one, to substitute abstract cognitive patterns or perceptual preconceptions for the raw sensory experience. The practice of mindfulness is purposeful de-habituating: to face the bare facts of experience, seeing each event as though occurring for the first time. The means for de-habituating is continual observation of the first phase of perception when the mind is in a *receptive*, rather than *reactive*, state. Attention is restricted to bare noticing of objects. Facts of perception are attended to as they arise at any of the five sense-doors or in the mind, which in the *Visuddhimagga* constitutes a sixth sense. While the meditator attends to sense impressions, reaction is kept to a bare registering of the facts of impression observed. If further mental comment, judgement, or reflection should arise in one’s mind these are themselves made objects of bare attention; they are neither repudiated nor pursued, but dismissed after their noting. The essence of mindfulness is, in the words of Nyanāponika Thera (1962), “the clear and single-minded awareness of what actually happens to us and in us, at the successive moments of perception.”

It is in the thorough pursuit of mindfulness that the concentration developed previously finds its utility. In adopting and applying this new habit of bare perception one-pointedness and the concomitant factors of concentration are essential. The optimal level of concentration in practicing mindfulness is, however, the lowest: access Mindfulness is to be applied to the perceptual process of normal consciousness, and from the first jhāna on, those processes cease. A level of concentration less than that of access, on the other hand, would be overshadowed by hindering thoughts and mental wandering, and so be dysfunctional for practicing mindfulness. It is only at the access level that there is a perfect balance: perception and thought retain their full strength, but concentration is powerful enough to keep the mind from being diverted from steadily noting the processes of perception and thought.

The preferred method for cultivating mindfulness is to precede it with training in the jhānas. Having some degree of mastery in *samādhi*, the meditator then applies his power of concentration to the task of mindfulness. There is, however, a method of “bare insight,” where these practices are undertaken without any previous attainment in absorption. With bare insight the prerequisite level of absorption is attained through the practice of mindfulness itself. During the first stages of bare insight, the meditator’s mind will be intermittently interrupted by wandering, hindering thoughts which will arise between moments of noticing. Sometimes they will be perceived, sometimes not. Gradually the momentary concentration of mind in noticing will strengthen until virtually all stray thoughts are noted; such thoughts will then subside as soon as noticed, and the practice will resume immediately afterwards. Finally the point will be

reached where the mind will be unhindered by straying. Then the noticing of perceptual and cognitive processes will proceed without break; this is functionally equivalent to access concentration.

In practice there are four varieties of mindfulness, identical in function but distinguishable by virtue of their point of focus. Contemplation can focus on the body, on feelings, on the mind, or on mind-objects. Any one of these serves as a fixed point for bare attention to the processes of experience. Mindfulness of the *body* entails attending to each moment of bodily activity, such as posture and movement of limbs, regardless of the nature of the activity engaged in. All functions of the body in daily experience are to be clearly comprehended by simply registering their occurrence; the aim of action is to be disregarded—the focus is on the bodily act itself. Mindfulness of *feeling* involves focusing on internal sensations, merely noting whether they are pleasant, unpleasant, or neutral, but without dwelling on them. All proprioceptive stimuli are simply noted as they come to attention. Some will originate as the initial reaction to sensory input, some as physiological concomitants of psychological states, some as by-products of physiological life processes; whatever the source, the sensation itself is registered.

In mindfulness of the *mind*, it is mental states as they come to awareness that are objects. Whatever mood, mode of thought, or psychological state presents itself, it is simply to be registered as such. If, for instance, there is anger at a disturbing noise, at that moment one simply notes, “anger.” The fourth technique, mindfulness of *mind-objects*, is virtually the same as the one just described save for the level at which the mind’s workings are observed. Rather than noting the quality of mental states as they arise, the meditator notes the objects of the thoughts which occupy those states—e.g., “disturbing noise.” When a thought arises it is noted in terms of a scheme for classifying mental contents which broadly categorizes all thought forms as either hindrances to, or factors of, enlightenment.

The Stages of Insight

As any of these four techniques of mindfulness are persistently pursued, they break through the normal illusions of continuity and reasonableness that sustain cognitive and perceptual processes. The mind begins to witness the random and discrete units of stuff from which a reality is continually being structured. There emerge a series of realizations concerning the true nature of these processes, and mindfulness matures into insight. The practice of insight begins when contemplation continues without lag; mind is fixed on its object so that contemplating mind and its object always arise together in unbroken succession. This marks the beginning of a chain of insights—mind knowing itself—culminating in the nibbānic state (see table above).

The first cognitive realization is that the phenomena contemplated are distinct from mind contemplating them. The faculty whereby mind witnesses its own workings is experienced as different from what is witnessed. As with all the stages of insight, this realization is not at all on the level of verbalization at which it is expressed here, but rather at the level of raw experience. The understanding arises, but not necessarily an articulation of that understanding.

Once the two-fold nature of mind and its objects is realized, there arises in the meditator a clear understanding that these dual processes are devoid of self. They are seen to arise as effects of their respective causes, not as the result of direction by any individual agent. All come and go according to their own nature, regardless of “one’s will.” It becomes a certainty to the meditator that nowhere in the mind’s functioning can any abiding entity be detected. This is direct experience of the Buddhist doctrine of *anattā*, literally “not-self,” that all phenomena are devoid of an indwelling personality, including “one’s self.” All one’s past and future life is understood as merely a conditioned cause-effect process. Doubts whether “I” might really exist have gone:

“I am” is known to be a misconception. The truth of these words of the Buddha (Saṃyutta-Nikāya I 135) are realized:

Just as when the parts are set together
 There arises the word “chariot,”
 So does the notion of a being
 When the aggregates are present.

Further contemplation reveals that witnessing mind and the phenomena it takes as objects arise and pass away at a frequency beyond the meditator’s ken. Flux and change are seen to characterize the whole field of consciousness. The realization strikes the meditator that his world of reality is continually renewed every mind-moment in a seemingly endless chain of experiences. The fact of impermanence (Pali: *anicca*) is known in the depths of his being. Seeing that these phenomena arise and pass away at every moment, the meditator comes to see them as neither pleasant nor reliable. Disenchantment sets in: what is constantly changing cannot be the source of lasting satisfaction. The psychological process, begun with the realizations of reality as devoid of self and ever-changing, culminates in a state of detachment from one’s world of experience to the point where it can be seen as a source of suffering (Pali: *dukkha*).

Table 3. Path of Insight

Cessation	<i>Nirodha</i> : Total cessation of consciousness. <i>Nibbāna</i> : Consciousness has as object total cessation of physical and mental phenomena.	
Effortless Insight	Contemplation quick, effortless, indefatigable. Instantaneous knowledge, of <i>anattā</i> , <i>anicca</i> , <i>dukkha</i> . Cessation of pain; equanimity pervades.	
Realizations Leading to Desire to Escape	Realizations of dreadful, unsatisfactory, and wearisome nature of physical and mental phenomena. Physical pain. Arising of desire to escape these phenomena. Perception of vanishing of mind objects. Perception fast and flawless. Disappearance of lights, rapture, etc.	
A Pseudo-Nibbāna: Knowledge of Arising and Passing Away	Clear perception of arising and passing of each successive mind moment accompanied by: brilliant light, strong mindfulness, rapturous feelings tranquility, equanimity toward objects of contemplation, devotion, attachment to these, energy, newly arisen states, happiness, quick and clear perception.	
Stage of Reflections	These processes seen as neither pleasant nor reliable. Experience of <i>dukkha</i> , unsatisfactoriness. These processes are seen to arise and pass away at every moment of contemplation. Experience of <i>annica</i> , impermanence. These dual processes seen as devoid of self. Experience of <i>anattā</i> , “not-self.” Awareness and its object are perceived at every moment as distinct and separate processes.	
Mindfulness	Mindfulness of body functions, physical sensations, mental states, or mind objects.	
Applying Concentration	Access Concentration: Previous practice of <i>Samādhi</i>	Bare Insight: No previous practice. <i>Samādhi</i> developed to access level by mindfulness.

“Knowledge of Arising and Passing Away”

Without any such further reflections, contemplation continues. A stage follows where the beginning and end, of each successive object of contemplation is clearly perceived. With this clarity of perception there arise:

the vision of a *brilliant light* or other form of illumination, which may last for just one moment or longer;

rapturous feelings causing goose-flesh, tremor in the limbs, the sensation of levitation, and so on (as described above in the factors of the first jhāna);

a calm *tranquility* of mind and body, making them light, plastic, and easily wielded;

devotional feelings and faith, which may take as their object the meditation teacher, Buddha, his Teachings—including the method of insight itself—and the *Sangha*, accompanied by joyous confidence in the virtues of meditation and the desire to advise friends and relatives to practice it;

vigorous and steady *energy* in contemplation, neither too lax nor too tense;

sublime feelings of *happiness* suffusing the whole body, a wholly unprecedented bliss which seems never-ending and motivates the meditator to tell others of this extraordinary experience;

quick and clear perception of the phenomena noticed: noticing is keen, strong and lucid and the characteristics of impermanence, non-self, and unsatisfactoriness are understood quite clearly and at once;

strong mindfulness in practicing insight so that all successive moments of phenomena present themselves effortlessly to noticing mind;

equanimity toward all mental formations: neutral feelings prevail toward the subjects of insight, which proceeds of itself without effort;

a subtle *attachment* to the lights and other factors listed here, and to pleasure in contemplation.

The meditator is elated at the emergence of these ten signs, and may speak out his experiences thinking he has attained enlightenment and finished the task of meditation. Even if he does not think they mark his liberation, he may pause from the task of insight to bask in their enjoyment. For this reason these ten signs are subtitled in the *Visuddhimagga* “the ten corruptions of insight”; it is a pseudo-Nibbāna. The great danger here is in “mistaking what is not the Path for the Path.” or in lieu of that, faltering in the pursuit of insight because of attachment to these phenomena. When the meditator, either by himself or through advice from his teacher, realizes these experiences to be a landmark along the way rather than his final destination, he turns his focus of contemplation on them, including his own attachment to them.

Proceeding, the meditator finds that these experiences gradually diminish and the perceiving of objects becomes clearer. The discrimination of successive phenomena becomes increasingly finer; perception is flawless. The perception of objects becomes faster, and their ending or vanishing is more clearly perceived than their arising. Only their vanishing comes to be perceived at every moment of contemplation: contemplating mind and its object are experienced as vanishing in pairs at every moment. The meditator’s world of reality seems to be

in a constant state of dissolution. A series of realizations flow from this experience. The mind becomes gripped with fear and dread; all mental formations are seen to be dreadful in nature. Becoming—i.e. the coming into being of thoughts—is regarded as a state of terror. The occurrence of mental phenomena—ordinarily reckoned a source of pleasure—is seen only as a state of being continuously oppressed, which mind is helpless to avoid.

Then arises realization of the faults and unsatisfactoriness of all phenomena. All mental formations are seen as utterly destitute of any core or satisfaction. In them is nothing but danger. The meditator comes to feel that in all the kinds of becoming there is not a single thing that he can place his hopes in or hold on to. All mental formations—whether the objects noticed or the consciousness engaged in noticing, or in kind of existence brought to mind—appear insipid. In all the meditator perceives, he sees only suffering and misery.

Having known the misery in all phenomena, the meditator becomes entirely disgusted with them. Though he continues with the practice of insight, his mind is dominated by feelings of discontent and listlessness toward all mental formations. Even the thought of the happiest sort of life or the most desirable objects will seem unattractive and boring. He has become absolutely dispassionate and adverse toward the multitudinous field of mental formations, and to any kind of becoming, destiny, or state of consciousness.

Between the moments of noticing, the thought will arise that only in the ceasing of all mental formations is there relief. Now, mind no longer fastens on to formations; the meditator becomes desirous of escape from suffering on account of these phenomena. Painful feelings may arise throughout his body, and he may be unwilling to remain long in one posture. The comfortless nature of mind-stuff becomes more evident than ever; motivation for deliverance from it emerges at the root of his being. With this strong motivation for surcease from mental formations, the meditator intensifies his efforts of noticing these formations for the very purpose of escaping them. Then the nature of these phenomena, their impermanence, the element of suffering, and their voidness of self-will become clearly evident. Also at this stage the meditator's body will usually undergo severe, sharp pains of growing intensity. His whole body and mind will seem a mass of suffering; restlessness may overwhelm his application to insight. But by applying the practice of noticing to these pains, they will come to cease. At this point noticing becomes strong and lucid. At every moment he knows quite clearly the three characteristics of these phenomena, and one of the three will come to dominate his understanding.

Now contemplation proceeds automatically, without special effort, as if borne onward of itself. The feelings of dread, despair, misery, etc. which formerly arose cease. Bodily pains are absent entirely. Both dread and delight in mental objects have been thoroughly abandoned. Exceedingly sublime clarity of mind and pervasive equanimity toward all mental formations emerge. The meditator need make no further deliberate effort; noticing continues in a steady flow for hours without interruption or tiredness. Contemplation proceeds by its own momentum, and insight becomes especially quick and active.

Insight is now on the verge of its culmination; noticing is keen, strong, and lucid. All mental formations are instantly known to be impermanent, painful or without self just by seeing their dissolution. All formations are seen either as limited and circumscribed or as devoid of desirability, or as alien. Detachment from them is at a peak. Noticing no longer enters into or settles down on any formations at all. Then consciousness arises that takes as its object the "signless, no-occurrence, no-formation": Nibbāna. Physical and mental phenomena cease entirely. This moment of realization of Nibbāna does not, in its first attainment, last even for a second. Immediately following, mind reflects on the experience of Nibbāna just past.

Nibbāna

The experience of Nibbāna is a cognitive shock of deepest psychological consequence. Its nature is of a realm beyond that of the consensual phenomenal reality from which our language is generated, and so Nibbāna, the unconditioned state, is describable only in terms of what it is not. It is the “Unborn, Unoriginated, Uncreated, Unformed.” The word itself is derived from the negative prefix “nir” and the root “vana,” to burn, a metaphorical expression for the extinction of all forms of becoming: desire, attachment, and ego. Decisive behavior change follows from this change in consciousness. With the realization of Nibbāna, aspects of ego, or normal consciousness, are abandoned, never to arise again. The path of insight differs significantly from the path of samādhi on this point: Nibbāna destroys “defiling” aspects of ego, hatred, greed, delusion, etc., whereas jhāna suppresses them. Nibbāna makes sila effortless; in fact, sila becomes the only possible behavior. Jhāna supplants defilements, but their seeds remain latent in personality as potentialities; on emergence from the jhānic state these acts again become possible as appropriate situations arise.

Levels of Realization of Nibbāna

There are four levels of realization of Nibbāna, contingent upon the depth of insight attained in approaching it. Persons who have achieved Nibbāna are distinguished according to their level of attainment: The number of times one enters the nibbānic state determines his degree of mastery—i.e., the ability to attain Nibbāna whenever, wherever, as soon as, and for as long as he wants—but is not related to the level of attainment. One can enter Nibbāna with a given level of insight countless times without any change of level. The deeper the development of insight prior to entering Nibbāna, the higher the level of attainment, and the more pervasive the consequent personality changes. The experience of Nibbāna itself is identical at each level of attainment; the difference between levels is reckoned in terms of the consequent permanent loss of ego on emergence from Nibbāna. Entering the nibbānic state is one’s “awakening”; subsequent ego loss is one’s “deliverance” from bondage to personality. D. T. Suzuki (1957, p. 55) says of the Buddha’s prototypic experiences of enlightenment:

The enlightenment feeling affects the whole personality, his attitude toward life and the world. . . . , Buddha’s experience was not just a matter of feeling which moves on the periphery of consciousness, but something awakened in the deepest recesses of a human being.

The first level is that of Sotāpanna, “Stream Enterer.” One becomes a Stream Enterer at the first moment of the first experience of Nibbāna, and remains so until insight deepens to the degree necessary to mark the next level of attainment. The “stream” entered is that leading to the total loss of ego, the cessation of all becoming. This final liberation, it is said, is sure to occur “within seven more lifetimes.” At this first level the following strata of personality traits and attitudes drop away: greed for sense desires and resentments strong enough to produce anxiety; greed for one’s own gain, possessions, or praise strong enough to cause inability to share with others; failure to perceive the relative and illusive nature of what seems pleasurable or beautiful; the misapprehension of permanence in what is impermanent (anicca); and of self in what is devoid of self (*anattā*); adherence to mere rites and rituals, and the belief that this or that is “the Truth”; doubt or uncertainty in the utility of the path of vipassanā; lying, stealing, sexual misconduct, physically harming others, or earning a livelihood at the expense of others.

When insight deepens so that the realizations of dukkha (suffering), anattā, or anicca more fully pervade one’s being, there comes a quantum-level intensification of insight: Nibbāna is

now attained at a level where both greed for sense desires and ill will become attenuated. One is now a *sakadāgāmi* "Once-Returner," who will be fully liberated in this lifetime, or will be reborn only once more within the world of five-sense experience; any future rebirth will be on higher planes. Added to the elements of ego abandoned with Stream Entry are gross feelings of desire for sense objects, and strong resentment. The intensity of experiences of attraction and aversion undergoes a diminution: one can no longer be strongly impelled toward or put off by any phenomena; sex, for example, loses its appeal, though it might still be engaged in for procreation. An impartial attitude toward any and all stimuli is typical.

At the next quantum-level intensification of insight, both greed for sense desires and ill will are abandoned without remainder. What was diminished on attaining to Once-Returner is now wholly extinguished. One's status becomes *anāgāmi*, "Non-Returner," who no longer is reborn in the world of five-sense experience, but will reach the final state of Nibbāna in a realm of great purity, the so-called 'Pure Abodes' *Isuddhāvāsa*. In addition to previously abandoned ego elements, the last remaining residual propensities for greed or resentment drop away. All aversion to worldly states such as loss, disgrace, pain, or blame ceases. Malicious motivation, volition, or speech becomes impossible – one can no longer even have a thought of ill will toward anyone; the category of "enemy" vanishes from thinking, along with that of "dislike." Similarly, even the subtlest desire for sense objects disappears. Sexual activity, for example, is now extremely unlikely, because feelings of craving or lust are extinguished. Equanimity prevails toward all external objects; their valence to the Non-Returner is absolutely neutral.

The final and full maturity of insight results in overcoming all fetters of ego, and the dissolution of any subjective meaning in the consensual conceptual universe. One is now an *arahat*, a "Fully-Realized Being" or saint. He is absolutely free from suffering and from the generation of any new karma. Having no feelings of "self," any acts will be purely functional, either for maintenance of the body or for the good of others. There remains not a single unabandoned internal state from one's past owing to which thoughts of greed, hatred etc. could come to mind. All past deeds are erased, as is all future becoming; only pure being remains. The last vestiges of ego relinquished in this final stage include: all feelings of approval for or desire to seek the worldly states of gain, fame, pleasure or praise; any desire for even the bliss of the material or formless jhānas; mental stiffness or agitation, covetousness of anything whatsoever. The least inherent tendency toward an unvirtuous thought or deed is literally inconceivable. From the level of arahat the validity of the noble truths of impermanence, suffering, and non-selfhood is evident at every moment. Wei Wu Wei (1968, p. 61) says of the meaning of suffering from this level of consciousness:

When the Buddha found that he was Awake ☸ it may be assumed that he observed that what hitherto he had regarded as happiness, as compared to suffering, was such no longer. His only standard henceforward was *ananda* or what we try to think of as bliss. Suffering he saw as the negative form of happiness, happiness as the positive form of suffering, respectively the negative and positive aspects of experience. But relative to the noumenal state which now alone he knew, both could be described as *dukkha* (suffering). *Dukkha* was the counterpart of *sukha* which implied "ease and well-being," ☸ to the Buddha nothing phenomenal could appear to be *sukha* although in phenomenality it might so appear in contrast to *dukkha*.

Understanding the truth of non-self for an arahat is more straightforward. Suzuki (1958, p. 293) puts it simply: when one attains that level he finds "by immediate knowledge that when one's heart was cleansed of the defilements of the ordinary ego-centered impulses and desires, nothing was left there to claim itself as ego-residuum." Impermanence is perceived at the primary stage of cognition. For an arahat, perception in vipassanā is perfected: he is a witness of

the most minute segments of the mind's working, the chain of mind-moments. According to this tradition, the Buddha witnessed 17×10^{21} mind-moments in the "wink of an eye," each one distinct and different from the one preceding and the one following it. Like him, the arahat sees that elementary constituents of the flow of consciousness are changing at every moment. Nothing in the universe of one's mind is constant, and one's external reality follows from one's internal universe. Nowhere, then, is there any stability or permanence.

Nirodha

There is a state apart from Nibbāna, little known in the West, called *nirodha*, cessation. In Nibbāna, awareness has as its object the cessation of consciousness: in *nirodha*, awareness ceases altogether, though only temporarily for the duration of this state. It is the absolute cessation of consciousness and its concomitants. *Nirodha* is accessible only to a Non-Returner or an arahat who has also mastered all eight jhānas. Neither a Stream Enterer nor a Once-Returner has relinquished enough strata of ego to muster the super-concentration required for *nirodha*, in the access process to this state of total non-occurrence even the slightest residuum of sense desire will be an obstruction.

The path to *nirodha* entails the practice of *vipassanā* using as a base each jhāna in succession up to the eighth, neither-perception-nor-non-perception. With the cessation of this last state of ultra-subtle consciousness, one enters *nirodha*. Cessation is "differently real," all the data of our experience of reality, even the most sublime states, being absent. Although *nirodha* can last for up to seven days of the human time-rhythm, there is no time sequence in the state itself: the moment immediately preceding it and that immediately following it are experienced as of immediate succession. The limit of seven days given for the duration of *nirodha* may be due to its unique physiology: heart-beat and normal metabolism, it is said, cease along with consciousness though metabolic processes continue at a residual level so that the meditator's body can be distinguished from a corpse. Prior to entering this state the meditator must set a predetermined length of time for staying in it. On emergence, he will go through the jhānas in reverse order to normal consciousness. At the eighth jhāna, awareness resumes; at the third, normal bodily function; at the first, discursive thought and sense perception.

The Two Paths: Their Highest Extremes

At their highest extremes, the path of samādhi through the jhānas and the path of insight to nirvana tend to meet. But between these ultimate states of rarefied consciousness there remain extremely subtle but crucial differences. The seventh jhāna is a state of awareness of consciousness that has no object: no-thing-ness. In the eighth jhāna the consciousness of no-thing-ness cannot even be said to be operative, but yet remains as a latent function, and so cannot be said not to exist: this is the realm of neither-perception-nor-non-perception. At Nibbāna the final extinguishing of consciousness begins, with a state that is the awareness of no consciousness at all. This process of extinguishing culminates in nirodha, where there is no awareness whatsoever. The attainment of even the highest jhānas does not on emergence necessarily affect normal ego function, while the experience of Nibbāna irrevocably alters ego function:

These different paths mark two extremes on a continuum of exploration and control of mind. One who could marshal enough one-pointedness to attain, say, the formless jhānas might easily attain the nibbānic state should he choose to turn his powerful concentration ability to watching his own mind. And, conversely, one who had entered the nibbānic state might well possess a mind so indifferent to hindrances and distractions that should he choose to focus on a single object of awareness, he would readily enter and proceed through the jhānic levels. Thus those beings who have traversed these distinctly different paths to their highest extremes may no longer belong solely to one, but rather to both. With full mastery of either samādhi or insight, the other is readily attainable, the distinction between meditation avenues melts. As the *Zenrin* puts it:

From of old there were not two paths
"Those who have arrived" all walked the same road.

The Buddha's Map: Implications For Research

In an earlier article (1971) I proposed a comparative study of meditation techniques to see whether differences in technique are psychophysiologically consequential. This elaboration of the Buddha's ancient system can be a step toward that investigation, by serving as the framework for a grid and gradient in psychophysiological studies of those techniques. Dalal & Barber (1969), in reviewing studies of yogis, concluded that "yogic samādhi" is an hypothesized ASC as yet inadequately denoted and without objectively verifiable criteria; the Buddha's map of MSC can be seen as a model for research meeting Barber's methodological requirements. The *Visuddhimagga* is unique in the orderly fashion in which it delineates MSC along both psychological and physiological parameters (see [Table 4](#)); the distinct levels of MSC shown can be conceptualized as the ledges of a psychophysiological step-function (see Ashby 1970). Though this psychophysiological cartography of MSC is by no means complete, it gives enough key landmarks in these realms of mind to serve as a skeleton on which one might hang amplifications.

The initial stage in either path is access concentration. The major psychological indicators of the access level are an initial stilling of the mind, qualitatively distinct from normal consciousness though thoughts and sensory perceptions remain; visions and bright lights; feelings of rapture, happiness, and bodily lightness. It may be that the bulk of EEG studies of meditation have been of subjects at this level, and that the state most often produced by alpha-wave feedback devices with normal subjects resembles access concentration: Kamiya (1969)

describes the “alpha state” as “a general calming down of the mind”. My own experience as a subject in an alpha-feedback experiment at Harvard Medical School was that when I was emitting a more or less sustained train of alpha my consciousness was at a level of “access to access concentration”. That is, my mind was not so stilled as to be at the level of access concentration, but it was qualitatively more calm compared to its normal state; there were feelings of bliss, quiet rapture, and contentment while thoughts floated by. Had I entered full access, the alpha perhaps would have gotten stronger. In a study of the subjective states associated with alpha activity, Brown (1970) found greatest enhanced alpha to be related to narrowing of perceptual awareness and pleasant feeling states – two fundamental components of access concentration. Both yogis practicing samādhi and zazen meditators produce alpha and sometimes theta (Anand et al. 1961, Kasamatsu & Hirai 1969), but in no study thus far has there been a scale used for judging the level of absorption the subject had attained.

Psychophysiological Measures

When appropriate studies are done, alpha giving way to theta may be found associated with jhānas above the level of access as well as with skilled practice of insight techniques like zazen, where mastery of concentration at the access level seems to be an adjunct. Theta may be associated both with the higher jhānas and the later stages of insight; delta may accompany the higher jhānas and Nibbāna, and nirodha may even be marked by a subdelta EEG. One might anticipate a discrepant pattern of measures like brain-wave changes comparing concentration and insight techniques, the former becoming slower through the jhānas, the latter leveling off at access level with a quantum leap at Nibbāna. Within the jhānas and the stages to Nibbāna, there may be unique and distinct shifts in patterns of psychophysiological measures at any given stage e.g., excitation due to rapture at the access level may produce an increase in heart rate while EEG shows alpha or even theta waves. But generally speaking metabolic indicators such as oxygen consumption, cardiac output, heart rate, and respiration rate should decrease as mind becomes progressively stiller, as is suggested by Elmer Green’s (Green, Green & Walters 1970) “psycho physiological principle”:

Every change in the physiological state is accompanied, by an appropriate change in the mental-emotional state, and conversely, every change in the mental-emotional state, conscious or unconscious, is accompanied by an appropriate change in the physiological state.

On attaining the first jhāna, the meditator should experience cessation of all discursive thoughts other than that of the primary object; loss of awareness of all sensory stimuli; intense rapture, bliss, and fixity of mind in the state itself. Behaviorally this internal state should be verifiable to investigators in the meditator’s failure to react in any way to external sensory inputs. Ortnet-Johnson found that meditators habituated more quickly than non-meditating controls. Tests of habituation in Indian yogis practicing samādhi have shown that they fail to respond to external sounds at all (Anand et al. 1961)—an indication that the subjects were at least at the first level of jhāna.

Table 4: Psychophysiological Landmarks of MSC

PATH OF JHANA Subjective Landmarks	OBJECTIVE Measures	PATH OF INSIGHT Subjective Landmarks
<i>Jhāna 8.</i> Neither-perception nor. Non-perception	Shut-down of metabolic function; “near-death” metabolism	<i>Nirodha</i> : total cessation of experience; neither knower nor object. <i>Nibbāna</i> : cessation of awareness as primary object; no awareness of physical/mental phenomena.
<i>Jhāna 7.</i> Awareness of Nothingness	Metabolism bare minimum	<i>Effortless insight.</i> Instantaneous awareness of mind-moments; fatigueless energy; equanimity; cessation of pain.
<i>Jhāna 6.</i> Awareness of Infinite Consciousness		<i>Desire to escape physical/mental phenomena</i> Realization of dreadfulness of mind-moments; physical pain.
<i>Jhāna 5.</i> Awareness of Infinite Space		<i>Pseudo-Nibbāna rejected.</i> Clear perception of <i>end</i> of mind-moments; lights, rapture, etc. vanish.
<i>Jhāna 4.</i> Equanimity and one- pointedness; cessation of feelings of pleasure, bliss.	Cessation of breath Concentration impervious to any and all distractions	<i>Pseudo-nirvana.</i> Clear perception of arising and passing of mind- moments; accompanied by bright light(s), rapture, happiness, tranquility, devotion, energy, strong mindfulness, equanimity toward mind-objects; attachment to these states.
<i>Jhāna 3.</i> Feelings of bliss, one- pointedness, and equanimity; rapture ceases.		
<i>Jhāna 2.</i> Feelings of bliss, one- pointedness, and rapture; no thoughts of primary object	Decreasing metabolic indicators: heart rate, cardiac output, respiration rate etc.	<i>Reflections.</i> Awareness and its objects seen as distinct processes; experience of impermanence, unsatisfactoriness, and impersonality of mental functions.
<i>Jhāna 1.</i> Continuous, sustained concentration on primary object; accompanied by feelings of rapture and bliss, one-pointedness; thoughts hindering concentration, sensory perception, and awareness of pain all cease.	No response to external inputs; habituation. Mindfulness: non-habituation to external stimulus.	<i>Mindfulness.</i> All sensory stimulus and thoughts (mind- moments) register in awareness.
<i>Access concentration.</i> Primary object dominant thought interspersed with other thoughts, hindrances to concentration tentatively overcome: awareness of sensory inputs and body	Alpha, theta states	<i>Access concentration.</i>

PATH OF JHANA Subjective Landmarks	OBJECTIVE Measures	PATH OF INSIGHT Subjective Landmarks
states remains; feelings of rapture, happiness, flashes of lights and visions; sensation of body lightness.		

The successive transitions upward from first jhāna until the fourth are difficult to discriminate. Subjectively the change undergoing in transition from first to second is primarily the disappearance from awareness of the primary object or any discursive thinking whatever. From second to third the feelings of rapture fall away, replaced by an attitude of equanimity. On ascending to the fourth jhāna all feelings of bliss cease, leaving only equanimity and one-pointedness; breath is said to cease, and the meditator is utterly impervious to any distraction. Just as the mind becomes more still at each higher jhāna, so with respiration, until at the fourth jhāna breath is said to cease altogether. Whether or not breath actually ceases remains an empirical question; it may be found that breath in the higher jhānas actually becomes very shallow and slows, say, to a rate of one every minute, and so might *seem* to cease. One of the few studies to date of yogis practicing samādhi meditation found an extreme slowing of respiration rate to 4 to 6 per minute in some subjects (Bagchi et al. 1971). The jhānas with their accompanying progressive respiratory quiescence constitute what Wallace (1970, 1971) calls the “fourth state of consciousness,” and describes as “a wakeful hypometabolic physiologic states.” On the basis of physiological studies of practitioners of “transcendental meditation”—a concentration technique—he postulates a shift in the cellular metabolization of oxygen which would allow breathing to become still, perhaps ultimately to the point of cessation. The formless jhānas—i.e., fifth through eighth—differ from the fourth not in factors of consciousness but in the degree of refinement of those factors as well as in primary object. At the eighth jhāna mind function is stilled to its most subtle extreme. The same can be expected from metabolism.

The path of insight is distinguishable at inception from concentration techniques: at its initial stages the insight meditator is mindful of each successive thought or sensation and so does not habituate (see, e.g., the study of zazen-an insight technique-by Kasamatzu & Hirai 1969). The next major landmark is the stage of “Knowledge of Arising and Passing Away” of mind-moments, the pseudo-Nibbāna. The insight meditator will experience at this point any or all of these signs: visions of brilliant lights, feelings of rapture, tranquility, devotion, energy, and happiness; quick, clear perception, strong mindfulness and equanimity in the practice itself; and attachment to this state. There are no necessary physiological concomitants of this stage, though some may be discovered such as alpha or a quickened heartbeat. Nor are there any in the following phases of realization, where the dissolution of each mind moment is clearly perceived, and the indicators of the previous stage fade. But accompanying the ensuing series of realizations about the wearisome and dreadful nature of these phenomena and the arising of the desire to escape them, sharp pains frequently rack the meditator’s body. These pains cease only at the next phase, where equanimity prevails. At this point contemplation is effortless, and the meditator can continue for hours or days without fatigue.

Not until the end of the path of insight is it likely to be most fruitful for psychophysiological studies. On entering the nibbānic state, awareness takes as its object non-awareness. This blackout of consciousness entails all the metabolic shutdowns of the eighth jhāna, perhaps to an even more marked degree. On ascension to nirodha, awareness ceases totally, as does metabolic

functioning.⁷ Heartbeat is said to stop as well as all organic systems; according to the *Visuddhimagga* the only distinctions between a corpse and the body of one in nirodha is that the latter remains warm and does not decompose. As with the breath rate, the actual degree of slowing of heart rate awaits empirical verification.⁸ The “seven days” traditionally set for the duration of this state suggest a metabolically determined limit in nirodha for bodily maintenance. Similarly phenomena of a “survived death” under rare circumstances have been reported in patients clinically dead on the operating table, and in some persons struck by lightning, who have revived and recovered fully (Taussig 1969).

In almost every school and tradition the specifics of these higher states are not regarded as suitable subjects for teaching. As realities they transcend words; being inexpressible, they are to be experienced rather than discussed; thinking mind hinders realization. Detailed maps of the psychophysiology of these states can take their major landmarks from traditional sources like the *Visuddhimagga*, but data on the intricacies of mind-body topography in MSC and HSC will have to come from thoroughgoing research.

There is a paradox in seeking suitable subjects for the studies that might develop in this area; those nations with the required affluence and technological sophistication generally lack the traditions and schools that produce people developed enough in meditation to be worthwhile testing. One exception is Japan, where the Zen Institutes have pioneered in psychophysiological studies of zazen (see, e.g., Akishige 1970). But the largest untapped pool of potential subjects extends from the Middle East eastward throughout Asia outside the Communist nations, among Sufis or Muslim fakirs, the yogis of India, Tibetan lamas, and Buddhist monks. A further complication is that those who have developed greatest familiarity with MSC are the least likely to speak of their own attainments, except with deprecation. If they are to be tested in psychophysiological labs, they must be approached with the utmost discretion. In the West, for the most fruitful studies of MSC it is not the students of the numerous rapidly proliferating techniques who should be tested, but rather their masters.

Maps of Consciousness in Perspective

This exposition, based on Buddha’s map of MSC, may be an aid to those who seek to formulate theories or conceptualize and design research in this area. This was my intent. Those who, through personal practice are themselves exploring these states may or may not find these thoughts or this map helpful. The work of *sadhana* is often amorphous, its delimitation fluid, and the stages of progress as intricate as one’s life experience. There is as much variety in paths to higher states of being as there are persons on the path; any one map does not necessarily apply to a given person’s situation. There is a sufi saying, “He who tastes knows.” In the words of Meher Baba (1967, p. 191):

⁷ The ascension through insight into nirvana can be seen as the psychophysiological analog of Heisenberg’s Uncertainty Principle, that consciousness mediates and affects the object it observes. Nirodha is the penultimate case; when consciousness observes itself, the process culminates in the cessation of consciousness.

⁸ Investigations of “heart stoppage” thus far have studied hatha yogis using effortful breath and muscle manipulation, not meditators (e.g., Wenger et al. 1961). One patient in California reportedly slowed his heart to a standstill for approximately 5 seconds—his method was merely relaxing (McClure 1959). When Swami Rāma demonstrated a 17-second fibrillation of his heart for Elmer Green (*Green, Green & Walters* 1971) through a “solar plexus lock,” the Swami commented that he knew another way to stop his heart which involved a “hibernation-like” state, though he wasn’t prepared to demonstrate it at the time.

In the spiritual life it is not necessary to have a complete map of the Path in order to begin traveling. On the contrary, insistence upon having such complete knowledge may actually hinder rather than help the onward march ... He who speculates from the shore about the ocean shall know only its surface, but he who would know the depths of the ocean must be willing to plunge into it.

References

- Akishige, Y. (Ed.), *Psychological Studies On Zen*, Tokyo: Zen Institute of Komazawa Univ., 1970.
- Anand, B., Chhina, G., Singh, B. Some aspects of EEG studies in Yogis, *EEG Neurophysiol.*, 1961, 13, 452–56. Also in C. Tart (Ed.), *Altered states of consciousness*. New York: Wiley, 1969.
- Ashby, W. R. *Design For A Brain*. London: Science Paperbacks, 1970.
- Bagchi, B. K., Wenger, M. A. Electro-physiological correlates of some Yogi exercises. Reprinted in 7. X. Barber et al. (Eds.) *Biofeedback and self-control*. Chicago: Aldine-Atherton, 1971.
- Bhikkhu Soma. *The Way Of Mindfulness*. Colombo, Ceylon: Vajirarama, 1949 (2nd Ed. 1967, Buddhist Publication Society, Kandy.)
- Brown, B. B. Recognition of aspects of consciousness through association with EEG alpha activity represented by a light signal. *Psychophysiology*, 1970, 6, 442–52.
- Bucke, R. M. *Cosmic Consciousness*. New Hyde Park, NY: University Books, 1961.
- Buddhadasa Bhikkhu (Ariyananda Bhikkhu, Transl.) *Two Kinds Of Language*. Bangkok, Thailand: Sublime Life Mission, 1968.
- Chadwick, A. W. *A Sadhu's Reminiscences Of Rāmana Mahārshi*. Tiruvannamali, India: Sri Rāmanasram, 1966.
- Conze, E. *Buddhist Meditation*. London: Allen & Unwin, 1956.
- Dalal, A. S., Barber, T. X. Yoga, “yogic feats” and hypnosis in the light of empirical research. *Amer. J. Clin Hypnosis*, 1969, 11 155–66.
- Dhammaratana. *Guide Through Visuddhimagga*. Varanasi, India: Mahābodhi Society, 1964.
- Goleman, D. Meditation as meta-therapy: hypotheses toward a proposed fifth state of consciousness. *J. Transpersonal Psychol.*, 1971, 3 (1), 1–25.
- Govinda, Lama Anagarika. *The Psychological Attitude Of Early Buddhist Philosophy*. London: Rider, 1969.
- Green, E. E. Green, A. M., Walters, E. D. Voluntary Control Of Internal States: Psychological And Physiological. *J. Transpersonal Psychol.*, 1970, (11), 1–26.
- Green, E. E., Green, A. M., Walters, E. D. Biofeedback for mind-body self-regulation: healing and creativity. Paper delivered at symposium on “The Varieties of Healing Experience,” Cupertino, California, October, 1971.
- Kamiya, J. Operant control of the EEG alpha rhythm and some of its reported effects on consciousness. In C. T. Tart (Ed.), *Altered States Of Consciousness*, New York: Wiley 1969, 507–17.
- Kasamatsu, A., Hirai, T. An EEG study of Zen meditation, *Folia Psychiat. Neurol. Jap.*, 1966, 20, 315–36. Also in C. Tart (Ed.I, *Altered states of consciousness*. New York: Wiley, 1969.
- Kashyap, J. *The Abhidhamma Philosophy, Vol. I*. Nalanda, India: Buddha Vihara, 1954.
- Ledi Sayadaw *The Manuals Of Buddhism*. Rangoon, Burma: Union Buddha Sasana Council, 1965.
- Mahasi Sayadaw (Nyanāponika Thera, Transl.). *The Progress Of Insight*. Kandy, Buddhist Publication Society, 1965.

- Mahasi Sayadaw. *Buddhist Meditation and its Forty Subjects*. Buddha-gaya, India: International Meditation Center, 1970.
- Maslow, A. Theory Z. *J. Transpersonal Psychol.*, 1970, 2 (1), 31–47.
- McClure, C. Cardiac arrest through volition. *California Med.*, 1959, 90, 440–41.
- Meher, Baba, *Discourses I, II, III*. San Francisco: Sufism Reoriented, 1967.
- Merton, T. *The Wisdom of the Desert*. New York: New Directions, 1960.
- Narada Thera. *A Manual of Abhidhamma*. 2nd Ed.; Kandy, Ceylon: Buddhist Publication Society, 1968.
- Nanamoli, Bhikkhu (Trans.), *The Path of Purification (Visuddhimagga)*. 3rd Ed.: Buddhist Publication Society, 1975.
- Nyanaponika Thera. *Abhidhamma Studies*. Colombo, Ceylon: Frewin, 1949; 2nd Ed.: Kandy 1965, Buddhist Publication Society.
- Nyanaponika Thera. *The Heart Of Buddhist Meditation*. London: Rider, 1962.
- Nyanaponika Thera. *The Power Of Mindfulness*. Kandy, Ceylon: Buddhist Publication Society, 1968, USA ed.; Unity Press, Santa Cruz. Calif., U.S.A.
- Nyanatiloka Thera *The Word Of The Buddha*. (15th Ed.) Kandy 1971, Buddhist Publication Society.
- Nyanatiloka Thera *Path to Deliverance*. Colombo, Ceylon: Buddha Sahitya Sabha, 1952 (b).
- Orme-Johnson, D. Autonomic Stability And Transcendental Meditation Unpublished manuscript.
- Schachter, S., Singer, J. Cognitive, social, and physiological determinants of emotional state, *Psychol. Rev.* 1962, 69, 379.
- Shapiro, D. *Neurotic Styles*. New York: Basic Books. 1961.
- Suzuki, D. T. *Mysticism: Christian and Buddhist*. New York: Macmillan, 1957.
- Suzuki, D. T. *Essays in Zen Buddhism (second series)*. London: Rider, 1958:
- Tart, C. Scientific foundations for the study of altered states of consciousness. *J. Transpersonal Psychol.* 1971, 3 (2), 93–124.
- Taussig, H. B. “Death” from lightning and the possibility of living again. *Amer. Sci.* 1969, 57 (3) 306–16,
- Vajrañāṇa Maha Thera, P. *Buddhist Meditation In Theory And Practice*, Colombo, Ceylon: Gunasena & Co., 1962.
- Wallace, R. K. *Physiological effects of TM: A proposed fourth major state of consciousness*. Los Angeles: Students International Meditation Society, 1970.
- Wallace, R. K., Benson, H., Wilson, A. E. A wakeful hypometabolic state. *Amer. J. Physiol.*, 1971, 224 (3), 795–99.
- Wei Wu Wei. *Posthumous Pieces*. Hong Kong: Hong Kong Univ. Press. 1968.
- Wenger, A. M. Bagchi, B. K., Anand, B. Experiments in India on “voluntary” control of to heart and pulse. *Circulation*, 1961, 204.