

INTENSIVE INSIGHT MEDITATION: A PHENOMENOLOGICAL STUDY

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INTRODUCTION

A study was undertaken to record and examine the range and patterns of experiences reported by students of insight meditation (*vipassana*, a traditional Theravadin Buddhist awareness practice) during five two-week and one three-month intensive training periods. This form of meditation has been well described in the literature (Goleman, 1975; Goldstein, 1976; Kornfield, 1977) and previously in this journal (Goleman, 1972; Deatherage, 1975; Walsh, 1977, 1978).

This examination was undertaken to supplement the paucity of phenomenological data available in current studies of meditation in the West. Basic phenomenological groundwork is essential to a fuller understanding of the meditative process and to the construction of valid research models. Although phenomenological descriptions of meditative practice do exist in traditional Eastern psychological literature (e.g., Sobhana, 1965; Buddhaghosa, 1976), these texts have focused almost entirely on very advanced levels of meditation practice. This current study attempts to supplement phenomenological data on the early stages of meditation practice and to familiarize Western psychologists with the range and patterns of experience commonly noted by beginning meditators. Due to ignorance regarding the frequency and variety of unusual experiences in early meditative practice, Western psychology has often erroneously given pathological interpretations to what are in fact common and normal meditation experiences (Group for the Advancement of Psychiatry, 1976).

*a study
of
meditation
experience
in
early
stages
of
practice*

Research for this paper was completed in 1976 as partial fulfillment of doctoral dissertation requirements for the Humanistic Psychology Institute, 325 Ninth Street, San Francisco, California.

This descriptive study hopes to provide a more useful context for understanding this data, and for interpreting meditation in an accurate way for Western psychological study and use.

INSIGHT MEDITATION

*concentration
on
breath,
and
predominant
experience*

Briefly, insight meditation begins by concentrating attention on the sensation of the breath for several days until the mind becomes quieter and more easily and frequently focused on the breath. This concentration exercise is followed by an insight exercise which changes the focus of attention by directing meditators to notice whatever experience of the body or mind is most predominant in each moment. In this meditation, mindfulness, defined as a careful and nonjudgmental attention, is developed by observing the natural sequence of changing experience, whether breath, body sensation, sights, sounds, tastes, smells, thoughts, feelings, etc. The aim of the practice is to develop, through careful observation, an understanding of how the process of experience takes place. It employs the cultivation of mindfulness to foster a non-reactive awareness which allows a non-interfering appreciation of the entire range of life experience.

*silent
retreats,
sitting,
walking*

The retreat format emphasizes silent group practice. A typical daily schedule includes seven to nine sessions of sitting meditation for forty-five minutes to an hour; four or five periods of slow, mindful walking for thirty to forty minutes; and regularly scheduled periods for meals, rest and meditation instruction (Goldstein, 1976). In addition, students are instructed to develop a continuous and careful attention to each movement or action which takes place between fixed periods of group sitting and walking. Retreats usually take place in a silent monastic setting and all outside contact, as well as reading, writing, music and other such activities are prohibited. This leaves the student outwardly undistracted, providing a simplified environment for assisting in the task of self-observation.

*group
instruction,
individual
interviews*

Instruction is given in groups for one hour each evening and includes actual meditation directions, general lectures on the Buddhist framework of growth and psychology (such as talks on the relationship of meditation to morality and wisdom, or talks on the common difficulties in meditation and their causes), and inspirational topics (such as talks on love, patience, open-mindedness and so forth). In addition, each student has a fifteen-minute interview with a teacher every two days to discuss any questions or difficulties which may arise in regard to the meditation practice. In summary, the retreats are very intensive, involving twelve or more hours of sitting

or walking meditation daily, and allowing short periods for meals, instruction, bathing and sleep.

STUDY METHOD

Data for this study on student experience was collected through simple questionnaires and the student-teacher interviews held every two days. At the close of an interview, the teacher would record the student's description of his/her meditation experience. In addition, over one thousand questionnaires, which had been filled out by students on an average of every two or three days, were collected. The questionnaires asked three sets of questions:

*questionnaire
and
interview
method*

1. How much are you sleeping? Has your food intake increased/decreased?
2. Have you noticed changes in clarity of perception, concentration, and *lor* frequency of moments of mindfulness?
3. What is predominant in the meditation now? What unusual experiences have you noted since the last interview?

All interview records and questionnaires collected were used in studying this process. Altogether over 110 two-week students and 63 three-month students are included in our data. These represent 52% of the total students in the two-week retreats, and all but five of the 68 students in the three-month retreat. They are evenly divided among the sexes, and contain students with a variety of past meditation background—from none to quite extensive—but including 50% new students among two-week subjects and 30% new students among three-month participants. Of the 63 three-month students who participated in the study, 28 submitted especially frequent and detailed questionnaires. The group with more complete questionnaires was particularly analyzed for frequency and patterns of experience in practice.

*two-week
and
three-month
students
as
subjects*

Because this study is primarily a phenomenological or descriptive exercise aimed at cataloguing and mapping the range and patterns of meditative experience, the statistical results will often appear in general terms such as most, few, many, not often, and so forth. This places the emphasis of the research directly and purposefully on the classes and patterns of the experiences studied without overly emphasizing the precise percentages of subjects reporting specific experiences. Modern statistical psychology may be uncomfortable with this approach, but it genuinely reflects our state of unknowing in this area and the necessity to establish patterns, hypotheses, and models upon which further statistical studies can be made.

As a compliment to the retreat groups, a control study involved students of the same age and background, who received identical talks and instructions but who practiced meditation only one or two hours per day in a Buddhist *school* and community setting rather than in an intensive silent retreat. Extensive [allow-up questionnaires were sent to sixty students several months after their completion of the three-month retreat to collect data on how the students perceived themselves as being changed or unchanged by the retreat. Finally, this data was compared to descriptions of progress in meditation found in several traditional Buddhist texts.

Data Analysis

*descriptions
of
unusual
experiences*

In analyzing the data, the first area of concern was to order the extensive descriptions of unusual experience. For simplicity, these were divided into basic categories according to sense modality. Within these categories of sense modality, the data was further subdivided by creating sub-categories based on the classes of experiences most often reported. This led to a total of 22 categories containing all the data collected on unusual experiences. These categories are as follows:

CATEGORIES OF UNUSUAL EXPERIENCES REPORTED

Somatic experiences

1. Spontaneous movement
2. Alterations in body image
3. "Energy" flow experiences
4. Other proprioceptive changes such as temperature, weight, etc.
5. Unusual breathing patterns
6. Unusual experiences during walking
7. Changes in perception of pain

Visual experiences

8. Eyes open
9. Eyes closed
10. Auditory experiences
- II. Gustatory and olfactory experiences

Mental experiences

12. Strong emotions and mood swings
- /3. Rapture and bliss
14. Psychological insights
15. Equanimity
16. Insights into basic mental and physical life processes
17. Dream changes
18. Time changes
19. Concentration changes
20. Effortless awareness
21. "Out-of-the-body experiences"

22. Other general perception changes including creativity and psychic phenomena

To give some sense of the range and content of this data, we examined sample experiences reported by students in several of these categories. It must be remembered that in the meditation training these experiences are not encouraged, rewarded or described in advance. The instructions are simply to sit or walk and be carefully aware of the breath or whatever else happens in each new moment, without interfering with the natural flow of experience.

Sample Data

The first category of data, under the general class of "unusual somatic experiences," details reports of "spontaneous movement," which is the commonest class of unusual experience reported. Fifty-five percent of the student questionnaires from the three-month retreat reported at least one such experience. The list below quotes a random sample of these reports, described in the words of the subjects:

*spontaneous
movements*

I felt much twitching
my arms rose involuntarily in a blessing
involuntary jerks
violent shaking, clearing of deep body tension
much involuntary movement
spontaneous Yoga stretching ... hand movements
jerking, weird faces, drooling, pain
much movement, arms dancing, head rolling, falling over
violent shakes, loosening, tension release
much automatic movement
lots of shaking
anus flapping like wings
arms move by themselves, swung up to my face, then opened
felt a force that was really strong pushing against left side
body pulls to the left

Spontaneous alterations of body-image perception were also reported. Here are some examples from this category:

*alterations
of
body-image*

I felt my body divided in half
strong experience of having been switched into slow motion
strong sensation in throat, neck
feel torso expanding-I'm very tall and my arms seem to float to another spot

acute body sensations, feel heartbeat, tingling
 loss of perception of hands
 loss of body awareness
 felt body heavily pulled in all directions
 floating, not touching cushion
 felt like I was floating, but I was really stone still
 distinct sensation of being turned around 90 degrees, facing
 new direction
 limbs and body huge and bulbous
 body disappeared
 face keeps getting the feeling it's all contorted and screwed up
 head feels tilted
 head detached itself
 body grew huge, then tiny, tiny
 felt I was leaving the body

*visual
 perceptions,
 eyes open*

Visual perceptions are another class of unusual experiences frequently reported. These occurred during periods of meditation with the eyes open, and also with the eyes closed. Such reports are often associated with simultaneous reports of strong concentration and rapture. Some examples of experiences with the eyes open include:

color changes in visual field
 seeing becomes more acute
 vision improved greatly
 still objects moving
 like seeing through special glasses, so clear
 light flashes
 saw a *spider* as big as my hand come out of the floor
 LSD melting-like visions
 colors brighter
 seeing after-images whenever eyes move
 sec double for a bit
 see space clearly
 see air energy, vision trippy
 see darkness when mind is depressed
 all sights, mind luminous
 see visual after-images
 see candle-like glow emanating from my body
 visual perception sharpened
 perception of space sharpened
 hallucinations while walking
 able to perceive vibrations of air around me
 sparkles of light while walking at night
 colors more intense

double vision
perception of space heightened

Experiences with the eyes *closed* include:

camera-like flashes of light
vision of Buddha
colored lights
saw a spotlight shining at me
cloudy then white
blue, white lights
see white light when concentrated
light and whiteness
flashes of light, green and white, very bright and short
great brightness
seeing images of body cells, organs
see the Buddha
vision of radiating cross
see colors-orange, yellow
visual snowfield
great brightness
see spots of light

*visual
perceptions,
eyes
closed*

In addition to experiences reported as "unusual," there is a normal flow of visual phenomena that is not reported as *special* experience. These phenomena are described frequently in interviews as visual thoughts, dream-like images, mental pictures-moving and still-and patterns of colors and visions, from simple subjects to complex visual mandalas. Also, it is commonly reported that certain visual themes appear regularly in meditators' minds, such as visions of Buddha or Christ or various religious imagery, or for some, visions of bodies and corpses and death. For others, spontaneous visions of violence or of lustful scenes and other vivid visual material is often reported as associated with strong emotional discharges,

If we look at the data in the category of "unusual mental perceptions," there is a wide range of reported experiences, some related to cognitive, others to affective, intuitive realms. *Noting* these experiences follows traditional Buddhist psychology, in that the mind is a sense organ with which we perceive mental sense objects. Data reported as "unusual mental perceptions" have therefore been grouped according to those classes of experience most frequently reported and those which seem important for understanding the meditative process.

*frequently
reported
classes
of
experience*

The first category includes reports of strong emotions and emotional swings. Meditators commonly experienced intense

feeling states and frequent dramatic changes of mood. While almost every meditator noticed strong emotions and some mood changes, 47% of the most complete student questionnaires reported especially dramatic mood swings. Typical experiences are as follows:

strong emotions and mood changes

heavy sadness
huge release of anger
sat through screaming mind trips
flatness, boredom
sick *of* so many changes
incredibly strong hate-deep rooted, also fear and tension, always changing
restlessness, aversion, sleepiness, quiet, then it starts over
all up and down, up and down
anger, violence, sexual fantasies and sleep alternate
seeing incredible flatness of it all, then sometimes so solid ...
so it goes up, down
fear, anger, lightness-sometimes incredible appreciation
mood swings from burning coals to cool breeze
highs of bliss and very depressed lows-it's all just happening
doubts, bliss, pain, boredom, serenity, joy, aversion, pain. serenity-always changing
intense emotions of anger, fear, sadness, and joy-the roller coaster ride-soh, my mind
everything more intense
move through emotional states faster now
fantastic mood swings
much turbulence of mind, then still
one day is hard work-the next is easy as if being drawn by magnet
very up and down, sharp changes in emotions
huge extremes of moods
days of acute anxiety depression-days of real highs
seeing change everywhere
boredom, interest, all change
violent crying
yesterday watched some old sorrow come into consciousness without knowing why (no incident) ... it was very strong, crying came, then it all passed
restlessness
intensely bored
hellish
waves of sadness for no reason
laughing at little absurdities
like an open cut-things are so raw-so sensitive; feels as though hell, heaven, day, night are crystal clear.

feelings of aloneness, loneliness, insecurity, desperation, absurdity-but no depression.
 amazing and anxious thoughts of imminent pain, terror, disease and grief--I'm really scared.
 mental states very strange-deep, deep fog alternating with shaky feeling and speedy intense rushes and buzzing, heaviness and exhaustion
 tears, laughter, tears
 feeling like a leopard-killing, eating people in fantasies.
 thousands of questions-dntense desire to doubt, think, question
 depression, anxiety
 intense homesickness
 such boredom
 waves of emotion passing through me
 had extremely vivid image of huge festering sore on my chest and a large spoonful being scooped out; felt deep anguish, though not physical pain; shook and cried-very intense though it seems pretty permanent, hell passes away, then it comes back again
 waves of emotion passing through me
 rapture and pain alternate
 alternation between a growing sense of just sitting, just walking, and slight boredom, distraction
 anger, violent feelings, laziness, frustration, despair, surrender, calm

Another commonly reported category of experience is "rapture and bliss." While at least some blissful experience is reported by almost all long-term meditators, including 95% of three-month students who reported fully, 40% of two-week students also noted some experience of bliss or rapture. The reports usually associate blissful states with periods of no or low body pain, bodily lightness, and an "opening" of posture and full unconstricted breathing. Significantly, bliss is almost always associated with concentration of mind. **In** traditional Buddhist psychology, concentration is seen as a direct cause for the arising of these states (Buddhaghosa, 1976). Here are some descriptions:

experienced a few moments of what I call pure love, only glimpsed, but it was such bliss
 luminous mind
 body and mind became very light-sometimes I lose body contact
 light and blissful feeling while walking
 all is light, surreal and dream-like
 such joy in the clarity of how all things pass
 very blissful when concentration is good
 prolonged bliss and openness

*rapture
 and
 bliss*

feelings of great power in the mind
malleability of mind, when concentrated-I can move the mind,
shape it, great bliss
overcome with overwhelming gratitude or with the tremendous
beauty of the simplicity of some activity like walking
tingling and body lightness, very nice
intense joy in calm spaces
ecstatic clarity of bare attention-all things equal in rapture
joy in each step
insights, followed by elation or peace and happiness
bliss is frequent guest
I can "play" with what is happening to me now
rapture in walking-each step being such joy
great joy, radiant face, calm, empty, no tension at all
intense calm-no other bliss compares to this
radiant mind
malleable mind, joy in the practice
waves of rapture

*general
patterns
of
change*

The sample data presented here indicates the richness of reported experiences in all 22 categories. General patterns of change found in sequential interviews and questionnaire reports of students included unusual experiences in these areas:

Somatic/body oriented data
Sight, hearing, taste, and smell
Sleep and eating patterns
Emotions-affective changes
Concentration
Mindfulness
General learning patterns
Patterns of non-successful students
Classical meditation patterns

CONCLUSIONS

Some of the conclusions based on the data collected in this study reflect clear-cut statistical information supplied by our questionnaires, while others are the result of a more general analysis of patterns of information which reflect the basic process of intensive mindfulness meditation. Although these conclusions are in certain cases very simple, they are intended to remedy some basic misunderstandings about the meditative process itself.

1. Meditation itself is not an altered state of consciousness, but

can be seen as a series of mental exercises designed to effect certain changes in how a person sees or relates to the world. As such, we cannot study a meditative state, but only examine the kinds of states, experiences and changes produced by various meditative practices. In meditation research therefore, precision and clarity are most important in describing the technique being studied. Ideally, such descriptions might develop a comprehensive typology of exercises and goals. Without this precision, it becomes superficial and misleading to compare current and traditional meditative techniques-se.g., T.M., Zen, visualization, prayer-vas though one were studying identical or even similar procedures.

*precise
and
clear
descriptions
needed*

2. *Mindfulness* meditation is much more than a process of simple relaxation. In the process of mindfully attending to the breath and other predominantly natural experiences, a wide range of altered states and unusual experiences may arise. Although profound relaxation is reported by students at times, usually this meditative relaxation is perceived as only one among many spontaneous and often dramatic changes in ception and experience. These varied experiences may arise in relation to any or all sensory modalities, and often include periods described by students as "unusually clear" or "enhanced sensitivity in perception."

*more
than
relaxation*

3. Unusual experiences, visual or auditory aberrations, "hallucinations," unusual somatic experiences and so on, are the *norm* among practiced meditation students. These experiences are frequently described in the traditional literature (Vijanana, L960;Sobhana, 1965; Buddhaghosa, 1976),and are commonplace for long-term meditators. Over 80% of our three-month students reported such experiences as part of their normal meditation process. From our data it seems clear that the modern psychiatric dismissal of these so-called "mystical" and altered states as psychopathology-referred to as ego-regression to an infantile state-or labeled as psychic disorder, is simply due to the limitations of the traditional Western psychiatric mental-illness-oriented model of mind (G.A.P., 1976). Rather, these experiences are normal perceptual changes happening in predominantly healthy individuals as part of a rigorous and systematic mental training of concentration and mindfulness.

*unusual
experiences
are
the
norm*

4. The data show a strong positive correlation between student reports of higher levels of concentration (focused and steady mind-states) and reports of "unusual altered states and perceptions." It appears that the build-up of concentration is a major factor in increasing the frequency and duration of altered states. This concentration, focused on the changing ob-

*altered states
and
concentration
correlated*

jects arising in meditation, appears to develop simply through the cultivation of mindful attention on the breath and predominant sense experiences.

*practice
increases
mindfulness*

5. The development of the insight practice appears to have increased the frequency of moments of mindfulness in the retreat environment. At first, new meditation students report being surprised at how infrequently they are able to be aware of their experiences throughout the day. As the retreat progresses, students describe the ability to be mindful becoming easier and more frequent.

*emotion
and
mood
changes
common*

6. Likewise, intense emotions and mood swings are a universal part of the practice reported in mindfulness retreats. In addition, frequent changes and swings were reported in most other areas of experience, particularly changes in moods, motivation, cognitive capabilities, perceptual clarity, concentration, inner stillness, sleep needs, food consumption, self-image, and bodily comfort. These dramatic changes are the most common pattern of experience for retreat students.

*spontaneous
body
movements
common*

7. Spontaneous body movement, often described as "un-stressing" and "energy release" is commonly reported during mindfulness retreats. At times this will take subtle forms such as tremors, body vibrations, or slow spontaneous head and arm movements. Many others reported more dramatic releases: violent shaking, facial and body contortions, streams of sensations within the body and so on. Some of this movement appears to be related to the release of deeply held body tension, while other experiences were described as an arousal of internal energy through the mindfulness and concentration itself.

*bodypain
reported
frequently*

8. Body pain is reported as a frequent meditation experience. Many students describe finding new ways to relate to their pain as a result of mindfulness practice. Some report experiencing increased detachment or ability to mentally release or control pain and its accompanying tension. Others report a greater ability to surrender to and concentrate fully on pain without feeling fear or mental discomfort.

*rapture
and
bliss states
common*

9. Rapture and bliss states are also common at insight retreats and are usually related to reported increases in concentration and tranquility. They are described as arising whenever concentration is focused and strong even when the meditation object is intense body pain. A much higher percentage of three-month students reported these experiences than were noted during the two-week retreats. This may perhaps be explained by the fact that many more of the three-month stu-

dents reported development of strong concentration at some-time in their retreat than was experienced and described by the shorter-term students.

10. Marked decreases in sleep and eating occurred during the practice at intensive retreats. Data from the three-month retreat showed a 25% average sleep drop among students who reported more fully, and a decrease of one-third in food consumption reported by the kitchen. Among students who described periods of very strong concentration and mindfulness (approximately half of our data sample) 62% reported a sleep and eating decline in conjunction with their periods of greatest mindfulness. We may speculate that when strong concentration and mindfulness occur, the mind is energized, alert and balanced. This alert and balanced (or non-reactive) state may result in less accumulation of physical and psychological tension, thus requiring less sleep. Similarly, such a state of possibly reduced tension might require less energy for daily tasks and therefore result in reduced food consumption. Often retreat students report a sense of physical lightness, greater energy and well-being during periods of strong concentration/mindfulness, and feel a decreased need of food to meet their energy needs.

*decreases
in
sleep
and eating*

11. Exceptionally vivid dreams and nightmares are a very common experience during insight retreats. Also reported are general increases of awareness before, during and immediately following sleep times.

*vivid
dreams
and
nightmares*

12. There are few reports of spontaneous psychic phenomena in the sample studied. Experiences described as "out-of-the-body" travel are the kind most commonly noted.

*psychic
phenomena*

13. Meditation does not appear to be a linear learning or developmental process. Instead, the "mindfulness" meditation appears to include periods of regression, restructuring and reintegration as part of the basic growth pattern. This appears to take place in regard to personality patterns and development, and on more fundamental levels such as growing awareness and integration of the inevitability of death. Students report that unresolved internal conflicts often arise in practice, and when these and their associated feelings are noticed and experienced, they are frequently resolved spontaneously.

*non-
linear
learning
process*

It seems important to emphasize that it is essential to recognize the non-linear process of growth in meditation in order to construct proper research models. Unfortunately much previous research has viewed meditation as if it would produce

simple growth curves based on measuring one or more psychological or psycho-physiological variables over time. Upon recognizing the meditative pattern of periodic regression, restructuring and reintegration, it becomes clear that *to take* an average measure of a population of meditators over time will not account for those sample members who are experiencing the extremes of regression or of advanced concentration, and would result in a meaningless average. Care must be taken in research design *to* acknowledge the complexity of this growth process, and to design sufficiently sensitive or long-term studies to measure changes while allowing *for* this non-linear development to take place.

*adaptation
to
fluctuating
experience*

14. One of the most frequent developments reported in mindfulness practice is a growing ability to adapt easily to a large range of fluctuating experiences. This is noted as a growth of equanimity and calmness in the face of extreme bodily and mental changes. In deeper levels of practice, characterized by strong concentration and mindfulness, meditators often experience periods of strong fear and insecurity. These are usually resolved by surrender, by fully experiencing them, leading to a greater development of equanimity. This process of fear, surrender and equanimity seems central to the growth of insight. Some of the most important learning reported in the retreats take place in relation to such intense negative states as rage or terror.

Deep practice also involves mindfulness of death-like experiences, reported as feeling a dying of the body, death of illusions, of self-images, of ideals, of past and future, and the idea of one self as permanent or solid at all. One of the experiences most commonly described as powerful or transformative is the insight into the moment-to-moment changing nature of the self. Students report experiencing themselves as simply a flowing process *of* sense perceptions and reactions, with no sense of a fixed self or person existing apart from this process at all. The development of equanimity in relation to death-like and dissolution-of-self experiences described by students is in keeping with the traditional portrayals of meditative growth (Sobhana, 1965).

15. Descriptions of meditators' experiences were compared to several traditional Buddhist texts which purport to describe the usual development of meditation practice. These *texts* start their description at a point of already quite advanced concentration and attainment, in which discursive thought is absent or very infrequent and noticed as soon as it arises. A limited number (perhaps 30%) of the three-month meditators seemed

to progress to these higher levels of concentration, a considerably lower number than reported by similar three-month trainings in Asian meditation centers (Sobhana, 1978). Our sample population contained a small number of students (10%) who became highly concentrated above these levels, a small number (8%) who reported themselves as not at all successful, and a large group who fall in between these two extremes.

The meditators who did reach higher levels of practice described in the traditional texts reported very profound experiences and noted spontaneously a number of perceptions which followed the traditional progress of "insight" (Vijanana, 1960; Sobhana, 1965)-that is, the traditional sequence of altered perceptions which students of intensive mindfulness training purportedly experience upon developing strong concentration in practice. While this study did not collect enough data to confirm these classical stages of "insight," several students replicated parts of it, leading to the conclusion that it remains a useful model to be studied, using those few students who are able to cultivate very high levels of concentration and awareness.

*comparisons
to
advanced
levels
of
practice*

In general, the data collected in this study maps the range of typical student practice from the beginning of meditation to the early stages of the traditional literature. These initial stages include a wide variety of unusual experiences and insights and are often overlooked in traditional Buddhist meditation cartography, yet are essential to an understanding of the meditation practice now found in the West.

16. Control Study: The control group study clearly indicated that the wide variety of unusual experiences and patterns of somatic, affective, sleep, eating and other changes reported by subjects must result from the intensive meditation practice itself combined with the effect of the silent retreat environment, and are not a result of lectures, beliefs, interviews or the participation in a spiritual community.

Identical questionnaires were gathered from 21 persons in a 5-week control group. This group, students in a non-retreat meditation class at a Buddhist university, was composed of a similar age range, sex distribution, spiritual background and interest as the retreat students. In addition, during a two-hour class which met three times per week for five weeks, the control group was exposed to identical instruction, interviews and lectures as the retreat students; and although they lived together in a spiritually oriented community, they practiced meditation only one to two hours daily instead of the twelve-to

*control
group
subjects
and
methods*

fifteen-hour norm at retreats. The difference between the retreat and non-retreat students was that retreat students practiced meditation many more hours daily and lived in a silent retreat environment.

*clear
differences
between
control
group
and
retreat
students*

The questionnaires collected from the control group, however, differed markedly from the retreat students. Only 2 out of 21 controls reported sleep decreases, while two reported an increase. By contrast, intensive retreat students (70%) reported sleep decrease in a similar period. Similarly, eating patterns, which decreased in almost all of the three-month students over five weeks, were reported as diminished in only 5 out of 21 controls. That it was even this high may be related to the slow mindful eating practice stressed early in the control class, rather than to a special meditation effect. Only one student in the control group reported any overall strengthening of concentration, others simply noted fluctuations in their initial ability to be mindful or to concentrate at all. In contrast, after five weeks, most intensive retreat students had reported at least some periods of strong mindfulness.

Lastly, the control group reported only two unusual perceptions and six instances of stronger than normal emotions during meditation. This can be compared to a huge variety of unusual perceptions, body movements, mood swings and insights which were reported by almost 70% of the students from whom data was collected during the first five weeks of the three-month retreat.

What the control group seems to show quite dramatically is that the vast array of experiences reported by intensive retreat students comes not from the social or instructional set, but from the retreat practice itself—the intensive meditative exercises combined with a disciplined silent retreat setting.

*short-
term
altered
states,
long-
term
trait
changes*

17. Follow-up questionnaires returned by students several months after the end of the three-month retreat indicated that most altered state changes and unusual perceptions or concentration effects were short-lived, and had vanished by the time of the follow-up study. Students reported more positive, long-lasting changes in the area of such traits as openness, equanimity, and a relaxed attitude toward life. The long-term trait changes reported seemed more related to the development of mindfulness and equanimity than to concentration. Many reported that after leaving the retreat they experienced some difficulties integrating back to their more worldly lives, yet many noted that this integration of mindfulness and practice into daily life was for them a crucial part of their whole meditative growth process.

The general purpose of this study is to begin to chart the wide range of experiences and processes which accompany the practice of meditation. Although much more detailed information has been analyzed in the thesis upon which this paper is based, the material presented here gives a general overview of the kinds of data, patterns and conclusions coming from this study.

In the past, Western research has often viewed meditation as a simple, linear learning process. In view of the data presented in this study, it can be seen that growth through intensive meditation practice is a complex, non-linear phenomenon involving somatic, affective, perceptual, cognitive changes, and more. Such growth cannot be fully understood using the models from any single branch of psychology, but will require the employment and synthesis of many psychological tools and approaches for a significant understanding. To study meditation is to study the human growth process and to expand our understanding of the limits of the human mind. By starting with the direct experiences and being open to their range, frequency, and as well, to the very infrequent but unusual phenomena, we map the necessary ground which precedes further investigation and understanding.

*mapping
of
direct
experience
precedes
investigation
and
understanding*

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