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STATES OF CONSCIOUSNESS AND
THE SPORT EXPERIENCE

DISSERTATION

Presented in Partial Fulfillment of the Requirements for
the Degree Doctor of Philosophy in the Graduate
School of The Ohio State University

By

Sue Marilynn Durrant, B.S., M.S.

* * * * *

The Ohio State University
1976

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"And Who May Compete?" Quest XXII (June 1974), pp. 104-110.


"Basketball: Components of Offensive and Defensive Patterns." An instructional syllabus (mimeo), distributed, Montana State University, Bozeman, Montana, 1975.

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A Cup of Tea

Nan-in, a Japanese master during the Meiji era (1868-1912), received a university professor who came to inquire about Zen.

Nan-in served tea. He poured his visitor's cup full, and then kept on pouring.

The professor watched the overflow until he no longer could restrain himself. "It is over-full. No more will go in!"

"Like this cup," Nan-in said, "you are full of your own opinions and speculations. How can I show you Zen unless you first empty your cup?"

A Zen story (47)
CHAPTER I

INTRODUCTION

Who can understand what sport is to man? Why it exercises over him the "power of maddening," why he seems never to be satisfied, for seemingly fulfilled he returns again and again to seek more and more. (116:83)

It is becoming apparent that the significance of the sport experience may lie in its intrinsic value rather than in the achievement of extrinsic goals and objectives. Perhaps if we return to the fundamental level of immediate human experience, we will be able to understand how each individual influences this realm. An existential perspective assumes that each of us controls our own reality, i.e. inasmuch as we control our attitudes and feelings towards it, so we control the effects of that reality. One's state of consciousness determines the interpretation of one's view of reality at that point in time. What are the states of consciousness which are a part of human experience? What states of consciousness are experienced while participating in sport. What might an understanding of the states of consciousness indicate about the significance of sport experience?
Knowledge that human beings can and do alter their states of consciousness probably is as old as mankind itself. It is the acceptance of such happenings which has been slow to occur in the Western world. This may be because the altering of one's state of consciousness became synonymous with the taking of illegal drugs. Recently, it has been acknowledged that the taking of drugs is but one way (method) which can be used to alter consciousness. In fact, Rosenfeld (48) has identified 250 methods for altering consciousness without drugs! The literature and practices of the exoteric traditions of the Middle and Far East, and the development and implication of instrumentation for biofeedback training have begun to influence the interest in and the pursuit of understanding of one's own inner spaces. Weil suggests that not only do human beings experience altered states of consciousness, but that there seems to be "an innate human drive to experience periodic episodes of nonordinary consciousness." (64:13) The realm of sport has been recognized as an important medium for such experiencing, for as Rosenthal noted, "It is like being addicted; you feel you must go back and know it again." (90:83)

We know from referring to descriptions of sport experiences as given by participants, that what is experienced by the performer and what is observed simultaneously by others are not on the same dimension. Harper (99), in an analysis of movement and moving, discussed differences
between what is experienced and the experiencing of it. He pointed out that "a movement . . . must always be a movement of some object." (99:93) Thus, what we perceive (observe) are the contents of moving (i.e. the movement) and not the process of moving. This same type of distinction can be made between what is seen and seeing, between sound and hearing, between thought and thinking. Sartre used touch. "To touch and to be touched, to feel that one is touching and to feel that one is touched—these are two species of phenomena which it is useless to try to reunite by the term 'double sensation.'" (49:304)

Research in the area of sport has been concerned primarily with the movement, i.e. the action, the skill, the technique. Even the performer has been treated as a "thing-body,"¹ i.e. just as another object in the world. In this view, when we collect psychological and sociological data or we measure biological and physical parameters, while the performer is either at rest or in motion, it is done from an observer's perspective. As Sartre noted,

[The] problem of the body and its relations with consciousness is often obscured by the fact that . . . the body is from the start posited as a certain thing having its own laws and capable of being defined from outside, [while] consciousness is then reached by the type of inner tuition which is peculiar to it. (49:303)

¹Harper (99) used this term to distinguish the objectified body from the subjectively experienced "lived-body." It is also Sartre's "being-for-others."
When observing, it "indeed is appropriate to [use] empirical methodology because [the performer] can be mathematized, photographed and measured with no other limit than available technology." (99:95) The performer, when thus objectified, is a "thing-body." However, the performer also can be viewed from the perspective of "lived-body." Harper points out that "it is imperative to notice that movement and moving are, though given together, not identical." (99:97) Sartre has stated that we are dealing with two essentially different orders of reality,

... we must keep constantly in mind the idea that since these two aspects of the body are on different and incommunicable levels of being, they can not be reduced to one another. Being-for-itself must be wholly body and it must be wholly consciousness; it can not be united with a body. Similarly being-for-others is wholly body; there are no "psychic phenomena" there to be united with the body. There is nothing behind the body. But the body is wholly "psychic." We must now proceed to study these two modes of being which we find for the body. (49:305)

There has been some research which has attempted to consider aspects which might contribute insight into how the participant experiences participation in sport. Hunt (101) in 1964, documented the importance of expanding the concept of human movement beyond the scope of kinesiology, body mechanics, exercise physiology, and sport skills. She noted that these approaches focused observation only on "what" was done and excluded "how" it was done. She

1 Harper (99) used this term when referring to the body as it is immediately experienced by that individual.
indicated that "movement behavior" should place emphasis upon the nature of the movement response, i.e. on the style of the movement which distinguishes one person from others. Actually, this expanded model only evaluated an additional aspect of the movement, for it too utilized observation techniques.

Other studies have attempted to consider the experiencing aspects of activity. Such topics as the relationship of mental practice to physical practice, and the relationship of mental image to the actual physical performance of the same skill have been explored. While more attention needs to be given to these areas, these studies still have not addressed this issue of what is involved in the experiencing of the mental practice, of the physical practice, or of the physical performance. Perhaps this is because the methods utilized continued to be those of observation and quantification.

Actually if after grasping "my" consciousness in its absolute interiority and by a series of reflective acts, I then seek to unite it with a certain living object composed of a nervous system, a brain, glands, digestive, respiratory, and circulatory organs whose very matter is capable of being analyzed chemically into atoms of hydrogen, carbon, nitrogen, phosphorus, etc., then I am going to encounter insurmountable difficulties. But these difficulties all stem from the fact that I try to unite my consciousness not with my body but with the body of others. (49:303)

This type of scientific abstraction has continued to reinforce a strict dualistic view of reality, i.e. of "I"
and "World" existing as separate entities. These empirical procedures have allowed for many scientific advances, but to say that this view of reality is the only one is both limiting and misleading. The interrelationship of the "I-World" also needs to receive attention, for as Sartre has stated, "My body as it is for me does not appear to me in the midst of the world." (49:303)

As we in the West have specialized in an objective impersonal approach to knowledge, those in the East have specialized in a personal experiential approach. Both traditions have sought to transcend the limits of personal biases and distortions, one by a restriction to studies of external phenomena, the other by an attempt at the removal of the internal biases themselves. Neither methodology, however, is reducible to the other, nor are they necessarily antagonistic to one another, as has been previously thought. (44:21)

However, until recently, the acceptance of data not open to replication or to direct observation had been viewed with skepticism. Even the field of psychology restricted its scope of investigation of consciousness and behavior in attempting to gain scientific respectability. The approaches of behaviorism and of psychoanalysis maintained a stronghold until the recent emergence of humanism as psychology's "third force." This followed the research of Abraham Maslow with "normal" individuals, and the publication of Toward a Psychology of Being. (35) This returning to experience as a basic avenue for investigation has fostered the growth of a "fourth force" in the field of psychology--the transpersonal. The statement of purpose of The Journal of
Transpersonal Psychology reflects the new conceptions:

The Journal of Transpersonal Psychology is concerned with the publication of theoretical and applied research, empirical papers, articles and studies in meta-needs, transpersonal process, values and states, unitive consciousness, peak experiences, ecstasy, mystical experience, being, essence, bliss, awe, wonder, transcendence of self, spirit, sacramization of everyday life, oneness, cosmic awareness, cosmic play, individual and species-wide synergy, the theories and practices of meditation, spiritual paths, compassion, transpersonal cooperation, transpersonal realization and actualization; and related concepts, experiences, and activities. (138).

This same phenomenon seems to have occurred throughout the social sciences in recent years. The recognition of the importance of studying humans as subjects and not merely as objects has led to the designing of investigations which focus on the experience of the person acting, in addition to the traditional research designs which emphasize observation of what people are doing.¹

It may have been the concept of "complementarity" as discussed by Niels Bohr (3), a Danish physicist, that finally legitimatized alternate approaches to the study of the same phenomenon. Bohr used this concept to account for such phenomena as light behaving like a particle on one occasion and like a wave on another. He noted that the two aspects were functions of different conditions of observation, and that an experiment could not be devised that

could demonstrate both aspects in a single observational condition. (15:319) Similarly, the two realms of movement and of moving may be viewed as representing complementary aspects of the performer. The conditions of observation of the movement are those of the sensory apparatus (vision, hearing, touch, smell, taste), whereas the moving is "observed" by the non-sensory (memory, thought, imagery, and "intuitive" processes). These two frames of reference mutually exclude each other, but they also complement each other. As was suggested by Wolfgang Pauli as quoted in Koestler, "It would be the more satisfactory solution if mind and body could be interpreted as complementary aspects of the same reality." (28:55)

In order to gain insight into why one participates in sport, and into what influences one during the various stages of participation, it is necessary to look at what occurs during the process of experiencing, i.e. of moving. A return to the subjective dimension of sport may enable us as participants, as interested observers, as teachers, and as coaches to rediscover this "lived-body" experience which, after all, is a human mode of being-in-the-world.

The self is not its definition or description but rather the central being of the individual person. The self is not definable in words. Any verbal analysis tends to categorize or segment the self into communicable aspects or parts. The self can only be experienced. (39:11)
Purpose

The purpose of this investigation is to examine the various states or levels of consciousness which have been identified as occurring in the subjective dimension of human experience; to relate these to the experiences which occur during sports participation; and to synthesize a framework which might aid in the understanding of the subjective dimension of sport performance.

Assumptions

It is assumed for the purpose of this investigation that various states of consciousness are experienced while engaging in sport.

It is assumed that the participant can recognize that a certain state of consciousness is being experienced or has been experienced during the actual engagement in the sport experience.

It is assumed that certain characteristics can be identified and utilized as a basis for delineating the various states of consciousness which are experienced in sport.

Acknowledging that there is no substitute for experiencing directly, experiential description has been selected as the next best method available for this study. It is assumed that within the limitations of language available to each person, that their descriptions, as written, correspond to the lived experience of that individual. In addition, it is recognized that all symbols fall short of representing
the whole for which they stand.

Limitations

This investigation is concerned with the subjective dimension of human experience. Primary emphasis is placed on implications for the realm of sport. This study recognizes the complementarity of the movement and of the moving, of the experience and of the experiencing, of the being-for-others and of the being-for-itself, which is inherent in the phenomenon of sport participation.

The main concern of this study is to identify and to comprehend what is happening rather than what should happen.

This study does not attempt to answer such questions as to whether or not various states of consciousness are essential to mental health, to the development of what has been called the human potential, or to the self-actualization process.

This investigation is limited to the various states of consciousness revealed in the literature of humanistic and transpersonal psychology and of existential philosophy.

As participation in sport occurs during the waking states of consciousness, the major emphasis of the investigation is limited to these phases of consciousness.

The experiential descriptions of sport experience obtained are from secondary sources. It is hoped that these accounts have not been distorted through journalistic style. Selection is limited to those accounts which place emphasis
on perception and the precognitive experience as it existed.

**Procedure**

A variety of sources from philosophical and psychological literature concerning the nature of consciousness are reviewed.

The various formats for the classification of states of consciousness reviewed include those delineated and/or discussed by Sartre, Maslow, Tart, Grof, Masters and Houston, Assagioli, Lilly, Ornstein, and Fisher.

In exploring the experiences of various states of consciousness, the following areas are included: The drug-induced states of consciousness; the use of meditation as a means for changing the state of consciousness; biofeedback, or instrumentation to aid awareness of and to achieve regulation of one's internal states; and participation in sport as a way to experience altered states of consciousness.

Various components experienced in ordinary and non-ordinary states of consciousness are utilized from this selected review of literature. The components selected emphasize the subjective realm and include relationships of the body and consciousness, and of the self and world.

Selected issues of popular sports magazines as well as the sports section of various newspapers were scanned for personal descriptions of sport experiences. A wide variety of sports are included. An attempt was made to include a wide range of skill level as well.
Finally a synthesis presenting a framework for states of consciousness experienced in sport participation is offered, and comparisons are made between selected sports descriptions and the components identified with these states of consciousness.

Definitions

**Consciousness.** This term is used in both general and specific contexts. The general context implies the constant background awareness which is present at all times. The specific context is referred to as a state of consciousness in which certain contents are noticed and pulled into the foreground by attention.

**State of Consciousness.** The subjectively felt overall patterning of psychological functioning which is or can be recognized by the individual.

**Normal State of Consciousness (NSC).** That pattern of psychological functioning in which you spend the major part of your waking hours.

**Altered State of Consciousness (ASC).** The condition where one views the world (reality) as if it were put together in a fashion different from the way it is "normally" viewed; where there has been qualitative change in the overall pattern of mental functioning.

**Experiential Description.** The verbal recount of one's personal experience(s) explained in a manner representative of how it was immediately experienced at the time.
Paranormal. The term used to include such psychic events as telepathy, clairvoyance, and precognition. The science that studies these phenomena is called "Parapsychology" or "Psychical Research."
CHAPTER II

CONSCIOUSNESS

When one turns to the literature in an attempt to gain an understanding of consciousness, it is immediately apparent that such an endeavor can lead in many diverse directions. "Consciousness" seems to be a very ambiguous term and descriptions about consciousness are almost as numerous as those who have written on this topic.

Philosophical analyses have resulted in viewing consciousness either as a process, i.e. as "awareness of awareness," or they have turned to a discussion of the contents of consciousness, e.g. intentionality, imaging, emotion, feeling, thought, etc.

We have . . . in every sensation two distinct elements, one which I call consciousness, and another which I call the object of consciousness. This must be so if the sensation of blue and the sensation of green, though different in one respect are alike in another: blue is one object of sensation and green is another, and consciousness which both sensations have in common, is different from either. (38:17)

Consciousness has often been equated with "thought" in Western writings, but consciousness is no more thought than it is emotion, sensation or movement. It is none of our functions but is an awareness of our various activities at the moment at which they are occurring in us. (61:14)

Even within these two perspectives there is no consensus. This can be seen in discussions on "intentionality."
For Sartre, intentionality is consciousness, whereas for Husserl intentionality is one essential feature of any consciousness. (68:22) Sartre insists that consciousness has no contents, but is simply a spontaneity, i.e. a sheer activity transcending toward objects. "Thus, all so-called 'image,' 'representations,' ideas,' 'phenomena,' 'sense data,' etc., are objects for consciousness, not contents in consciousness." (68:21)

There seems to be some consensus that consciousness itself cannot be defined, i.e. that it cannot be reduced to something more fundamental. Moore explains that "... the moment we try to fix our attention upon consciousness and to see what, distinctly, it is, it seems to vanish: it seems as if we had before us a mere emptiness." (38:25) Evans indicates:

A sense of "Consciousness" is basic of a person's being conscious in that sense does not entail his being conscious in any other sense, whereas his being conscious in any other sense does entail his being conscious in that sense. (19:41)

In reviewing the psychological literature, we note that during certain periods in time, "consciousness" did not exist as a field worthy of study. Not only was the field of inner experience, of consciousness, of personal self, not thought to be of importance, George Mead indicates the attitude of John Watson "as that of the Queen in Alice in Wonderland--'Off with their heads!'--there were no such things." (37:2-3)

The study of the experience of the individual was done from the point of view of observable conduct, particularly
the conduct which was observable by others. Where behavior
could not be observed by others, the "observations" were
done by the individual. The emphasis still was on "observable" behavior; the method of observation was not qualita-
tively different. This direction in psychology has been
attributed to the influence of studies in animal psychology,
where one must study external conduct, as it is not possible
to appeal to an animal's introspection.

Later, psychologists limited their interest in "con-
sciousness" to those psychological processes which could be
explained in terms of central nervous system functions.
Only recently has psychology rekindled an interest in the
study of mental phenomena in general and of "consciousness"
in particular. This has been in response to the feeling
that something had been left out during the time when psy-
chology became interested only in problems which were amen-
able to solution by behavioristic methods. (44)

The current thrust in psychology has been toward the
humanistic, the existential, the transcendent, the exper-
iential. One approach within this movement developed by
Roberto Assagioli is psychosynthesis. This is a dynamic
conception of our psychological life, "which it portrays as
a constant interplay and conflict between the many differ-
ent and contrasting forces and a unifying center which ever
tends to control, harmonize and utilize them." (2:30)

Assagioli's model of the structure of the individual
psyche (see Figure 1) illustrates the location of the
Figure 1: Assagioli's Model of the Psyche (2:17)
personal self as the focal point of consciousness. It is stressed that the personal self is not the contents of consciousness; it has and uses them, but it is not identical with them.

Within the ovoid which is representational of the individual psyche, the Lower Unconscious (1) controls the basic biological functioning; the Middle Unconscious (2) contains all the facts, skills, memories and ideas which are readily available to consciousness and to the self; the Higher Unconscious (3) is the source of higher feelings such as altruistic love, ecstasy, illumination and contemplation; the Field of Consciousness (4) represents the limited contents of consciousness at any one time; the Conscious Self or "I" (5) is the center of consciousness and of will. It is not the contents, but it has these contents. The Higher Self (6) is the link between the individual psyche and all that lies beyond it. The Collective Unconscious (7) lies outside the ovoid. The dotted lines of the ovoid should be regarded as "delimiting" but not of "dividing." (2:17-19; 98:26-27)

Assagioli acknowledges that the concept of two selves may seem to be confusing. He explains that the personal self is acutely aware of itself as a distinct individual and there is a sense of solitude and separation. In contrast, "the experience of the spiritual Self is a sense of freedom, of expansion, of communication with other Selves and with reality, and there is the sense of Universality."
It feels itself at the same time individual and universal." (2:87)

In psychosynthesis, the personal self is not only the center of consciousness, but also of will. This center can "maintain awareness of the body and its sensations; of the mind, its thoughts, and its feelings, of one's roles, one's possessions; and can use, control and direct all these aspects and possessions for its own consciously chosen purposes." (98:30)

Awareness is the ground of our conscious life. It is not the same thing as thoughts, sensations, or images. For example, visual activity is usually experienced as being identical with awareness. But, look straight ahead, then close your eyes. What remains? Sounds and bodily sensations may be recognized as still present. But if you imagine these as being absent, you still find awareness in the background.

We can't speak about consciousness when we are in thought association. When you are in the process of thinking you are that thinking. Only when it is stopped are you aware of yourself. (135:79)

We note that discussions of "self" have become linked with "consciousness." Also, that "awareness" is being viewed as extending beyond the individual. "The awareness that each individual believes to be his own is, in fact, an awareness that extends throughout existence, for it is the organization of reality." (15:321) It is our local mind-functions which are responsible for the separating of ourselves conceptually from other people, from the universe.
When the thinking activities are quieted, the individual awareness becomes the general awareness. Although, White suggests, on the basis of his own experience, "that in the highest state of consciousness, there is no difference between the content of consciousness and consciousness itself." (66:xv)

It is obvious from this overview that discussions about "consciousness" can and do occur from many perspectives. We have briefly considered three: consciousness as basic awareness of elements (contents of consciousness), and consciousness as a conceptual construct for analysis of various states of awareness. Often it is difficult to avoid slipping from one context into another. The English language has not provided ways to distinguish between the varieties of meanings "consciousness" can assume even in philosophical discussions. At times it is necessary for us to use the intuitive mode of understanding to grasp the implied meaning. To illustrate:

Awareness in any particular state of consciousness is seen as a light playing on dark waters, constantly subject to disciplining forces. The light can be bright or dim, sharply focused or vaguely diffused, and the experiences it produces vary qualitatively as images or perceptions or memories, etc.; the pattern of awareness and differences among them would describe different states of consciousness. (27:168)

Adding to the difficulty are the everyday uses of the term. "Conscious" and "consciousness" often are used instead of words as "embarrassed" (e.g. self-conscious), "realize" (e.g. become conscious of the consequences),
"insensitive" (e.g. to become unconscious of pain), etc. Also, "consciousness" is used in such contexts as "social consciousness," "historical consciousness," "political consciousness," "fashion consciousness," ad infinitum.

The question, "What is consciousness?" does not seem to be answerable via the usual modes of observation, reason and intellection. Perhaps, as Ornstein suggests, it is very much like the question "Who am I?" in which "the answers must come personally, experientially." (42:ix) Weil seems to agree for he states that "all of us are working on the problem of consciousness on some level, and the conclusions we come to determine what we think about ourselves and the universe, how we live, and how we act." (63:2) Also, he indicates that he cannot "see the value of trying to understand consciousness through methods that exclude the most immediately relevant source of information: direct experience of one's own inner states." (64:11-12) Additional support for this position is offered by Evans:

In the ordinary sense of "consciousness" the presence or absence of consciousness is not something that we can only detect after taking great pains. On the contrary the impact of the presence of consciousness is powerful and immediate . . . . (19:40)
CHAPTER III

STATES OF CONSCIOUSNESS

The preceding chapter discussed the meaning of consciousness and identified various perspectives which have been used. This chapter will look at the topic of "states of consciousness" even though, on the basis of the preceding discussion, it may have been better to refer to these as "states within consciousness." The specific areas considered are bimodal consciousness, "ordinary" consciousness, and the highest state of consciousness.

Evans talks about "experiences [i.e. elements] of which consciousness is comprised," and indicates that "consciousness if given a structure by attention." (19:67) Elements of attention occupy a foreground in consciousness relative to others which form its background. Those elements which together make up the background of consciousness, Evans named "unprojected consciousness." (19:104) Thus, in consciousness, we have those elements which form the object of attention and those which do not.

Bimodal Consciousness

In 1268, Roger Bacon wrote that "there are two modes of knowing, through argument and experience." (50:xxvi) These two modes often are referred to as the "intellectual"
and the "intuitive." Our culture has placed a high value on the former which has resulted in this mode receiving greater emphasis and exploration. However, present considerations suggest that these two modes should be viewed as complementary, for together they form the basis of consciousness. The verbal-intellectual is one mode, and it involves reason, language, analyses, and sequence. The other mode is the non-verbal and sensuous, which has primary responsibility for spatial orientation, body awareness, artistic talents, and recognition of faces. The discovery that these two modes of consciousness have a physiological basis and are not simply a reflection of culture or of personal preference has had a significant impact. The two modes of knowing correspond to the two hemispheres of the brain, and recent investigations concerning the two hemispheres of the brain have provided a new perspective for the interpretation of mind-functions. The implications for the experiential realm of human experience seem vast indeed.

The importance of language function in our culture has lead to the terminology of "major" hemisphere in reference to the left side of the brain, and "minor" hemisphere when referring to the right side. Such labels lead to misconceptions. The often devalued "sensuous" mode (right hemisphere) has been found to be an essential component of one's highest capabilities and also has been linked with mystical experiences. (16) Indeed, as Ornstein (120) suggests, it
may be that each hemisphere is "major" depending on the mode of consciousness under consideration.

Joseph Bogen presented the first paper by a neurologist attacking the bias against the "other" side of the brain. (43:64) He stressed that not only were the functions of the two hemispheres different, but also that the mode of information-processing was different. (75) The right side processes information simultaneously, in contrast to the linear, ordered, logical fashion of the left side. Bogen suggested the words "appositional" to describe the capacity of the right hemisphere and "propositional" to describe the capacity of the left hemisphere. He further noted;

The extent to which appositional ability develops must depend on the nature and extent of environmental exposure, just as the development of propositional capacity is highly culture-dependent. (75:150-151)

Evidence of the specialization of the two hemispheres originally came from observations of persons who had incurred brain damage or who had undergone the radical surgery in which the corpus collosum\(^1\) was severed. It was observed that damage to the left hemisphere interfered with language ability while damage to the right hemisphere resulted in loss of spatial awareness and the recognition of others. Although almost no abnormalities showed up in the everyday lives of "split-brain" people, subtle testing revealed the separate specialized functions of the two hemispheres. For

\(^1\)The bundle of fibers which join the two hemispheres and through which the two hemispheres communicate.
example, when the person held a pen in the right hand (hidden from sight), it could be described verbally, but not when the pen was held in the left hand. Selection of objects and drawing of spatial figures could be done by the left hand. (75:120)

Further studies have indicated that up until around the age of six (144:16), each side of the brain possesses the potential for both modes of thought. Brain damage to the left hemisphere in very young children often means that the right side will develop language.

There is a current interest among many researchers to perform studies with subjects who have intact central nervous systems. In one study, Hilliard found that the "accuracy of facial recognition was significantly better when the faces were presented in the left visual field than when they were presented in the right." (100:253-254) Bakan (71) studied the eye shift (to the left or to the right) which takes place in response to mental activity, and suggested that the direction of eye shift is dependent on which hemisphere of the brain is involved in the problem solving. Ornstein and Galin (120) studied the electroencephalogram (EEG) changes which occur while thinking verbally and spatially. They found that there was increased alpha rhythm in the right hemisphere when the person was involved in verbal tasks.\(^1\) If a spatial problem was involved, then the

\(^1\)Increased alpha production is a sign of decreased information processing.
alpha rhythm increased in the left hemisphere.

It is possible to view these two modes of knowing as corresponding to Evans' "interrogative attention" and "executive attention." Interrogative attention is propositional and is guided by thought. "It comes into operation whenever one is puzzled by something, wondering about it, or determined to find out about it." (19:100) Executive attention is that which is needed for performance of skills and is evaluated in terms of a completed performance that has been well done. (19:101)

Assagioli stated,

The essential distinction between cognition by way of intuition and cognition by way of the thinking or feeling functions is that intuition has the following characteristics: it is immediate and direct, not mediate and progressive as is thinking; it is synthetic or holistic, i.e., it is an immediate apprehension of a whole, one could say of a Gestalt, and not of different parts later put together to form a whole. Intuition in its purest manifestation is devoid of feeling in the ordinary and right meaning of the nature of emotion, of a warm reaction of the personality—generally either positive or negative toward the object apprehended. (2:218)

Deikman (84) also has discussed bimodal consciousness, but used the terminology of "action-mode" and "receptive-mode." The action mode, according to Deikman, is organized to manipulate the environment and is characterized by focal attention, heightened boundary perception, object-based logic, dominance of formal characteristics over the sensory, shapes and meanings have preference over colors and textures, the EEG shows beta waves, and there is increased tension over the baseline state. The receptive mode is used to receive
the environment. This mode is not "regressive"; it does not ignore or retreat from the world. When in this mode, attention is diffuse, boundary perception is decreased, paralogical thought processes are evident, sensory qualities dominate over the formal, the EEG shows more alpha and theta waves, and muscle tension is decreased from the baseline state. (16:77-78)

In Western cultures, the action mode has been given more importance and has come to be regarded as the "normal" one for adult life. Deikman stated, "Switching to the receptive mode permits the operation of capacities that are non-functional in the action mode." (16:83) He proposed that during most of our lives what probably occurs is a mixture of these two modes, and that "we need the capacity to function in both modes, as the occasion demands." (16:86)

The emphasis should be that these modes of consciousness should be viewed as complements, not opposites. Expression of complementary relationship is found in other cultures and in many ancient traditions. In the Chinese I Ching, we find that Ch'ien gives forth, and K'un receives. Each complements the other, and "so the things in the universe ever change and transform." (11:xliii) These are the Yang and Yin of Oriental philosophy which correspond to the Tao of Taoism. "The Tao is the great spontaneous stream of life through which all things are produced." (11:xli)
"Ordinary" Consciousness

By "ordinary" consciousness we mean that normal, daily, waking state in which we spend the greater portion of our waking hours. This condition is taken as the baseline state. States which are recognized as being significantly different from this are referred to as altered states of consciousness (ASCs). These differences which are experienced as qualitative shifts in the pattern of mental functioning may include a quantitative shift (more or less, sharper or duller, etc.), and/or a change in some quality or qualities of the mental processes. (56:1-2)

The normal state of consciousness (NSC) is assumed to be similar among all normal individuals. Whether the state of consciousness considered "normal" by one individual is or is not the same as that considered "normal" by another, is open to conjecture. However, we find that we have no difficulty in recognizing when we are in our NSC.

In the "normal," or usual state of consciousness the individual experiences himself as existing within the boundaries of his physical body (the body image), and his perception of the environment is restricted by the physically determined range of his exteroceptors: both his internal perception and his perception of the environment are confined within the usual space-time boundaries. (97:49)

Our ordinary mode of consciousness can be called the action mode, organized to manipulate the environment and featuring an acute consciousness of past and future time. Its basic reference point is the experience of a separate, personal self. (16:86)

That the NSC is a dynamic rather than a static condition becomes obvious as soon as we turn our attention inward.
James (26) referred to this as "the stream of consciousness" for it was (and is) ever-changing, ever-moving, and never the same from moment to moment.

It should be recognized that the NSC is the resultant of living in a particular environment, both physical and psychosocial. Lee, as a result of her work with the people of the Trobriand Island, concluded,

The assumption is not that reality itself is relative; rather that it is differently punctuated and categorized, or that different aspects of it are noticed by, or presented to the participants of different cultures. (111:89)

The culture conditions the individual to "screen-out" much of the information available at any given moment. This selective and restrictive process may have survival merit, but it also influences our expectations and our interpretations of experiences. White viewed this process as a challenge. He stated:

... if we are normally in a state of sensory repression, it is of equal importance in the study of consciousness to note that man's capacity to modify or edit his sensory processes means that he is capable of exaggerating or enhancing them ... as well as inhibiting them. (66:xii)

Kerns (148) delineated the characteristics of the NSC as:

1. Experiencing the personal self as existing within the boundaries of the physical body.

2. Experiencing the personal self as being separate from other objects.
3. Perceiving the internal and external world as confined within the usual time-space boundaries. Time seems to go on pretty steadily and regularly. Space is experienced as steady with a sameness throughout.

4. Perceiving time as being composed of the past, present, and future.

5. Experiencing the range of emotions as being from almost nothing up to mildly strong emotions. The affect is relatively moderate.

6. Noting that the functions of memory are very adequate in most instances.

7. Experiencing susceptibility to suggestion as staying within certain bounds even though this may vary among individuals.

The alteration, addition, and/or deletion of any portion or combination of these elements may be sufficient to produce the "shift" into an ASC.

**Highest State of Consciousness**

Probably the state of consciousness which has received the greatest amount of attention is that referred to as the "highest" state, the "mystical" state, the "spiritual" state. In Eastern cultures this is known as "the absolute Tao" in Taoism, "samadhi" in Yoga, and "satori" in Zen Buddhism. By whatever name, it is experienced as a state which is very different from the normal state of consciousness.
"The basic characteristic of mystical experience is the intuitive perception that we are a part of a universe that is a unified whole." (16:68) The highest state of consciousness is "a self-transforming perception of one's total union with the infinite." (66:vi) This Unity can be viewed as "dedifferentiation that merges all boundaries until the self is no longer experienced as a separate object and customary perceptual and cognitive distinctions are no longer applicable." (83:330)

For the purposes of description, Deikman grouped these experiences into three categories: (16:68-71)

1. "Untrained-sensate" applies to experiences occurring in persons not regularly engaged in contemplation. Frequent precipitating factors might include nature, drugs, music, and sex.

2. "Trained-sensate" refers to those experiences occurring in religious persons who have deliberately sought "grace" and "enlightenment" by means of long practice in meditation and religious discipline.

3. "Trained-transcendent" refers to the experiences of the "ultimate goal"--which goes beyond the affect or ideation of the trained-sensate. This occurs only in association with long training.

Deikman hypothesized that these changes were a result of "deautomatization": "an undoing of the usual ways of perceiving and thinking due to the special way that attention was being used." (16:73) He distinguished between an "action mode" and a "receptive mode" of being. The mystical
experience is identified as "a sudden, sharp, and extreme shift to the receptive mode: decreased self-object differentiation, heightened sensory intake, and nonverbal, non-logical thought processes." (84:486) He stated that the primary techniques used for producing this intuitive experience which is "beyond the scope of language to convey," are a form of contemplative meditation and renunciation. Meditation is a method for changing the way of perceiving. Renunciation can be viewed as relating to a change in attitude: "it is a shift from doing to allowing, from grasping the world to allowing the world to enter us." (16:77)

One of the most popular accounts of the highest state of consciousness is found in Maslow's description of the "peak experience." The Occurrence of these experiences in the lives of self-actualizing persons gave respectability to this altered state of consciousness. It became known as a supraconscious state rather than a pathological state. The open admission of such experiences has lead to the investigation of the possibility and availability of such experiences occurring in many aspects of life.

Maslow identified the following as components of "peak experiences": feeling more integrated that at other times; a sense of merging with the world; a feeling of using all one's capacities to the fullest; a feeling of effortlessness; the feeling of being the prime mover or creating center of one's activities; a removal of inhibitions, fears, and doubts; being more spontaneous, expressive and relaxed;
being more "creative"; an extreme uniqueness and individuality; existing in the most "here-now"; becoming more a pure psyche and less a thing-of-the world; feeling that everything happens in its own accord without striving, needing, or wishing; expression and communication often becoming poetic and mythical; understanding the experience as a completion-of-the-act; a playfulness that may be expressed as delight with both the smallness and largeness of being human; and a feeling of luck, good fortune, grace. (35:103-114)

Maslow stated that there were two distinct kinds of physical reactions to peak experiences: one, an excitement and high tension; the other, a relaxation, peacefulness, quietness, the feeling of stillness. (35:114) Maslow, in the Preface to the 1970 edition of Religions, Values, and Peak-Experiences, emphasized that transcendent experiences are not limited to only dramatic, orgasmic, transient, "peaky," events. "There is also the high plateau, where one can stay 'turned on.'" (34:xvi) This plateau-experience is less intense than the peak-experience, and "more often experienced as pure enjoyment and happiness, . . . a very pleasant, continuing contemplative experience rather than as something akin to a climactic explosion which then ends." (34:xv) Maslow indicated that plateau-experiencing can be learned and achieved, and that it is more voluntary than peak-experiencing. "Peaks are not planned or brought about by design; they happen." (35:113)
Another psychologist, Roberto Assagioli,¹ has indicated that in the highest state of consciousness, the phenomenon of Unity is emphasized. In Assagioli's model, this Unity is the personal self merging with the spiritual Self. This "state of consciousness of Self-realization is characterized by joy, serenity, inner security, a sense of calm power, clear understanding and radiant love." (2:53) Assagioli has made a distinction between the personal self, the superconscious, and the spiritual Self. The superconscious constitutes the higher aspect of the person of which the self normally is not aware. But at times the conscious self may rise to that higher region (see Figure 2). When this happens, specific experiences of states of "spiritual" awareness occur. At other times, contents from the superconscious "descend" into the area of the normal consciousness producing experiences of "inspiration." (See Figure 3) (2:38)

The highest state of consciousness is clearly an altered state of consciousness. Deikman, in citing examples of self-reports, noted that these persons have recognized a qualitative shift in their experiencing of their mental processes. They reported "perceiving a new brilliance to the world, of seeing everything as if for the first time, of noticing beauty which for the most part they may have previously passed by without seeing." (83:330)

¹For a discussion of Assagioli's model of the psyche, see Chapter II.
1 The Lower Unconscious
2 The Middle Unconscious
3 The Higher Unconscious or Superconscious
4 The Field of Consciousness
5 The Conscious Self or "I"
6 The Higher Self
7 The Collective Unconscious

Figure 2: Assagioli's Model of Self-realization (2:200)
1 The Lower Unconscious
2 The Middle Unconscious
3 The Higher Unconscious or Superconscious
4 The Field of Consciousness
5 The Conscious Self or "I"
6 The Higher Self
7 The Collective Unconscious
8 The Contents of the Superconscious

Figure 3: Assagioli's Model of Superconscious Experience
(2:201)
Five principle features of the mystic experience have been delineated by Deikman, (83:332-337)

1. Intense realness. This intensity of the feeling of realness is not correlated with corresponding variability in the everyday world.

2. Unusual sensations. These are not a part of the continuum of everyday experience.

3. Unity. This is experiencing one's self as one with the universe.

4. Ineffability. This may be due to the difficulties which language presents and/or to the complexity of vividness of the experience.

5. Trans-sensate phenomena. The loss of the "self" or the "I" of normal consciousness. The experience goes beyond the ordinary sensory pathways.

Deikman concluded that the "content of the mystic experience reflects not only its unusual mode of consciousness but also the particular stimuli being processed through that mode." (83:338)

It is apparent from these discussions of the highest state of consciousness that there are variations within transcendent experiences. The plateau-experience and the peak-experience of Maslow, the Self-realization experience and the superconscious experience of Assagioli, and the three categories of Deikman, are examples of these differences. The intent here is not to resolve the question of which is truly the "highest" state, but only to identify
Pahnke, from a historical survey of the literature of spontaneous mysticism, did derive the following nine interrelated categories as indicative of an experience of mystical consciousness: (123:177-183)

1. Unity. The transcendence of the subject-object dichotomy.

2. Objectivity and Reality. The experience carries its own sense of certainty.

3. Transcendence of Space and Time.

4. Sense of Sacredness.

5. Deeply-felt Positive Mood.

6. Paradoxicality.

7. Alleged Ineffability.

8. Transiency.

9. Positive Changes in Attitude and/or Behavior.

Pahnke and Richards (123) noted that all forms of non-ordinary consciousness were not mystical. In non-mystical forms, the empirical ego generally exists as "the subject viewing objects of a visionary nature, or pondering objects of a cognitive nature; . . . " (123:184) Examples of these nonordinary states of consciousness include the following types of experiences: aesthetic, psychodynamic, psychotic, cognitive, psychosomatic, parapsychological, electrical, photic, evolutionary, somatic change, altered perception of time, and consciousness of bodily processes. Thus, it seems that Pahnke and Richards suggest a range of states
of consciousness where the normal state of consciousness is at one extreme and the state of mystical consciousness at the other, with many types of non-mystical states of consciousness falling somewhere in between. Perhaps it could be suggested that it might be indicative of extreme left hemisphere functioning in the normal state of consciousness to an extreme right hemisphere functioning in mystical consciousness.

Summary

This chapter has discussed bimodal consciousness, "ordinary" consciousness, and the highest state of consciousness. It was noted that research in bimodal consciousness focuses attention on both right hemisphere and left hemisphere "thinking." The non-verbal and sensuous mode of knowing (right hemisphere functioning) has not received much attention in the past due to our cultural emphasis on the verbal-intellectual mode of knowing (left hemisphere functioning). "Ordinary" consciousness is that state in which we spend the majority of our waking hours, although there is speculation that this state is not experienced in the same way by everyone. The highest state of consciousness is classified as an altered state of consciousness, for the experiences during this state are qualitatively different from those "normally" experienced. In between the state of "ordinary" consciousness and that of the highest state of consciousness are many other nonordinary experiences which represent other states of altered consciousness.
CHAPTER IV

ALTERED STATES OF CONSCIOUSNESS

This chapter considers altered states of consciousness (ASCs). The discussion will include characteristics of ASCs, the range of possible experiences of ASCs, and the efforts made in the development of taxonomies for ASCs. The main emphasis will be on the ASCs which are within the "waking" realm of consciousness of "normal" individuals.

Characteristics of ASCs

An altered state of consciousness has been defined as one in which the individual clearly feels a qualitative shift in the pattern of mental functioning. This includes not only a quantitative shift within certain components, but also a different quality or qualities of mental processing. (56:1-2)

A number of writers including Tart (56), Ludwig (113), Ornstein (42), Weil (64), White (66), and Kerns (148) have stated that ASCs appear to enrich one's experiences in many areas of life; they seem to play a very significant role in one's experience and behavior.

Ludwig (113) has listed ten features, which in greater or lesser degree, are characteristic of most ASCs:

1. Alterations in thinking. This is experienced as timelessness, slowing, or acceleration of time.
2. Disturbed time sense: This is experienced as timelessness, slowing, or acceleration of time.

3. Loss of control. This is moving toward the receptive mode of being.

4. Change in emotional expression. These can be experienced either as emotional extremes, or as detachment and uninvolvelement.

5. Body image change. These may include: dissolution of boundaries, depersonalization, or a schism between mind and body; a change in size; and dizziness, weakness, blurred vision, numbness, tingling.

6. Perceptual distortions. These may include hallucinations, increased visual imagery and subjectively felt hyperacuteness of perception.

7. Change in meaning or significance. There are feelings of profound insight, illumination and truth.

8. Sense of the ineffable. The inability to communicate the nature or essence of the experience.

9. Feelings of rejuvenation. These are not experienced in all ASCs. There is a sense of new hope or rebirth.

10. Hypersuggestibility. This is the uncritical acceptance or responding to the directions of someone else.

**Taxonomies**

The number of discrete states of consciousness subsumed under the general heading of ASCs is very large. Within the Western culture we commonly have used "trance," "hypnosis,"
"dream," "ecstasy," etc. to indicate an ASC, but these words have not been defined very clearly. Kerns has stated that "one of the central problems in consciousness research is the lack of a taxonomy of consciousness." (148:267) He indicated that many of the classifications just don't have enough categories in them to account for all the different states of consciousness. Freud's two part division of consciousness into 1) the conscious and 2) the unconscious, is an example. Another problem has been that of trying to find a basic principle to use in the assigning of states of consciousness to categories. In addition, the English language has not evolved many terms which can be applied to conscious states. Tart pointed out that Sanskrit has about twenty nouns which we translate as simply "consciousness" or "mind." (56:3)

**General classifications.** General taxonomies include the broad range of states of being normally experienced by all individuals as well as those experiences which go beyond this range or are experienced by only certain portions of the population. The writings of Walker (61), Westcott (65), and Krippner (29) have grouped these experiences into broad categories.

The five different levels of consciousness discussed by Walker are:

1. The level of deep sleep devoid of all dreams.
2. The level of lighter sleep troubled by dreams.
3. The ordinary level of consciousness, a state of waking sleep, maintained during the day.
4. The state of true Self-awareness which we may seldom attain even momentarily.

5. The highest level of Cosmic or Universal Consciousness, that is to say, a state of Supra-consciousness. (61:15)

The first three states are experienced automatically by everyone. "The fourth and fifth states of consciousness do not occur automatically and they are relatively rare experiences." (61:15) Wescott called these five states of consciousness simply waking, sleeping, dreaming, entranced, and released. (65:29)

Krippner (29) compiled an expanded list of twenty states of consciousness which he felt were worthy of further study. He noted that these were not without considerable overlap.

1. The Dreaming State
2. The Sleeping State
3. The Hypnagogic State
4. The Hypnopompic State
5. The Hyperalert State
6. The Lethargic State
7. The States of Rapture
8. States of Hysteria
10. Regressive States
11. Meditative States
12. Trance States
13. Reverie
14. The Daydreaming State
15. Internal Scanning
16. Stupor
17. Coma
18. Stored Memory
19. "Expanded" Conscious States

Again, this classification includes the ASCs which are experienced regularly by all individuals as well as others which are experienced only rarely, if at all, by most individuals.

With the development of the electroencephalograph, an increasing number of studies have explored the range of states which are experienced within "sleep." (56) The results of these investigations are described primarily in terms of physiological parameters.

Categorizations of states of consciousness on the basis of electroencephalograms (EEG) have been attempted. Some of the states described by Krippner used this technique. However, in other situations there has been only limited success for "the wide variety of electrical patterns observed has made the relationship between cortical electrical activity and states of consciousness a very complicated one." (29:1) Another restriction of this approach is that it does not provide any information on the way the state of consciousness was experienced by the individual: its intensity, strength, interest, emotional overtone, clarity, etc.
Psychologists have suggested utilizing the causative agents as the basis for classification, e.g. natural, hypnosis, alcohol, psychedelic agents, sensory deprivation, meditation, etc. While this has some obvious advantages in research, this procedure also fails to indicate anything about the wide range of experiences which occur within each category, or whether the same state of consciousness might be attained via different agents.

For many researchers, not only has the internal structure of the states of consciousness begun to assume importance, but also the content of the states of consciousness.

**Waking States.** Various writers have turned their attention to describing and classifying the waking states of consciousness which are qualitatively different from the normal state of waking consciousness. The writings of Sartre (49), VanDenBerg (59), Campbell (6), Masters and Houston (36), and Grof (97) exemplify this avenue of study which has emphasized the content of consciousness.

Sartre, in his distinguishing among three dimensions of the body, actually has provided descriptions of three states of consciousness. Sartre's three divisions are: 1) the body as "being-for itself"; 2) the body as "being-for-others"; and 3) the body as "being-known-by-others."

The first dimension would be classified as an ASC. There has been a "shift" to the "receptive" mode of being, a "passing-beyond-in-silence," a merging with the landscape.
As illustrated by VanDenBerg,

The mountaineer who outlined his plans the day before and discussed his wish to reach a difficult top with his friends, destroys his intentions as soon as he takes his first step on the difficult ground. He no longer thinks of his shoes to which an hour ago he still gave such great attention, he "forgets" the stick that supports him while he climbs and with which he tests the reliability of a rock point, he "ignores his body" which he trained for days together beforehand with an eye to this trip, nor do his thoughts dwell on the closely calculated plan that occupied him so intensely the day before. For only by forgetting, in a certain sense, his plans for his body, will he be able to devote himself to the laborious task that has to be performed. (59:107)

The second dimension, the body as "being-for-others," could be associated with the normal state of consciousness (NSC). This is indicative of the action mode—the direction of movement is outward to the world, to control and to manipulate. One's own body is viewed by others, or by one's self, as a "thing-body."

Seeing him climb I concentrate on the very thing that the mountaineer himself must forget for the sake of the work he is doing. I see his boots that enable him to keep his footing on steep slopes. I can tell that his body is trained by the adroit movements of his body, legs, and arms. I see the scratches and the bruises that he sustains. I see his body, and the whole landscape with which this body contends is centered in this moving living "object." (59:112)

The third dimension, the body as "being-known-by-others," has not received much attention in most of the psychological literature on consciousness, although there are limited discussions concerning being "self-conscious" in the context of embarrassed, uncomfortable, awkward. Perhaps this state has been viewed as falling within the normal state of consciousness. However, it seems that this state should
be identified as an ASC rather than the NSC for there has been a qualitative "shift" in mental processing. This shift has been to the receptive mode of being.

. . . the mountaineer dislikes the regard of the other. He begins to feel hindered, because he knows that the other sees and criticizes just that which he himself must forget in order not to fail in his climbing. He feels vulnerable in an absolutely defenceless (sic) domain. It is inevitable that he should to a certain extent adopt the look of the other, now and then or continuously; he does not succeed any more in becoming entirely absorbed in the wall that is to be climbed. (59:114)

VanDenBerg identified additional states which represent two other dimensions of the body. To Sartre's third dimension, he added the "look of another that influences the "passing beyond" for good: that makes the world bloom and renders the body straighter and suppler." (59:115) Thus, the anticipation of either approval or criticism is a part of the setting which contributes to the experiencing of the ASC. VanDenBerg also delineated another dimension—Van Leenep's "primary appreciation of the body and in particular of the parts of the body (e.g., the calf, the legs, hair, hands, nose, eyes), . . ." (59:116) This appreciation of the body, both one's own and those of others, might be viewed as being within the NSC for that person; for in the NSC, we are able to look at and to evaluate ourselves as "objects."

In this section, Sartre's and VanDenBerg's descriptions of various dimensions of the body have been classified as states of consciousness. Two of them, the body as
"being-for-others" and the "primary appreciation" of the body, were placed within the category of the NSC; and the other three, the body as "being-for-itself" and the two dimensions of the body as "being-known-by-others," were classified as ASCs.

A discussion of taxonomies would not be complete without including mention of those associated with the search for the underlying unity of all things and all knowledge. In general, the dissatisfaction with a strictly materialistic orientation to life has led to a renewed interest in "The Search for Something Else." ¹ This search has been based on the belief that there is more to life than mere everyday existence. The search is for happiness, inner peace, "enlightenment"; a restoration of the lost wholeness in our view of ourselves and the world; a quest for self-knowledge.

A technique which has received much attention in the "search" is that of Transcendental Meditation. This method of meditation has been attributed to Maharishi Mahesh Yogi. On the basis of the Maharishi's teachings, Campbell (6) developed a conceptual scheme which illustrated the progressive movement through the levels of awareness which occurred with the continued practice of transcendental meditation (see Table 1). The first three states--dreamless sleep, dreaming, waking--he grouped as those in which we ordinarily pass our lives. He discussed how "these three are in reality

Table 1: The Seven States of Consciousness (6:110)

<table>
<thead>
<tr>
<th>State</th>
<th>Awareness of Self</th>
<th>Awareness of Outer World</th>
<th>Absolute-relative Paradox</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Dreamless Sleep</td>
<td>Absent</td>
<td>Absent</td>
<td>---</td>
</tr>
<tr>
<td>2. Dreaming</td>
<td>Absent</td>
<td>Hallucinatory</td>
<td>---</td>
</tr>
<tr>
<td>3. Waking</td>
<td>Absent</td>
<td>Present</td>
<td>Discoverable by intellect</td>
</tr>
<tr>
<td>4. Transcendental Consciousness</td>
<td>Present</td>
<td>Absent</td>
<td>Absent</td>
</tr>
<tr>
<td>5. Cosmic Consciousness</td>
<td>Present</td>
<td>Present</td>
<td>Present to perception</td>
</tr>
<tr>
<td>6. God Consciousness</td>
<td>Present</td>
<td>Present</td>
<td>Partially resolved</td>
</tr>
<tr>
<td>7. Unity</td>
<td>Present</td>
<td>Present</td>
<td>Resolved</td>
</tr>
</tbody>
</table>
modifications of a single undifferentiated 'ground' state" (6:95) which he called pure awareness. This was classified as the state of Transcendental Consciousness, the fourth state, which at first is gained only intermittently. The fifth state, Cosmic Consciousness, eventually is reached when one is able to maintain the state of pure awareness along with the three "relative" states. With continued practice of transcendental meditation, one develops an awareness of the subtler perceptions of the world which leads to God Consciousness (sixth state) and to Unity (seventh state). (6:95-102)

States four through seven may be viewed as types of "mystical" experiences. These states were experienced as blissful, which Campbell described as the peace attained when one moves away from a condition of relative turmoil.

Campbell likened this progressive attainment of the various levels of consciousness, as attaining Maslow's self-actualization and beyond. (6:70) He stated that the emphasis in meditation was to produce a natural growth of the personality, and that with this there seemed to be a general increase in what might be described as a sense of inner security and stability. (6:163-4)

In turning attention to another area of research, we note that many persons have proposed classifications for that division of ASCs commonly referred to as "expanded" conscious states or transpersonal experiences. Perhaps these could
include those experiences within Walker's states of "Self-awareness" and "Universal Consciousness," Wescott's "entranced" and "released" states, and Campbell's four "mystical" states. Grof defined transpersonal experience as "experience involving an expansion or extension of consciousness beyond the usual ego boundaries and the limitations of time and space." (97:49).

A great deal of attention has been given to transpersonal experiences which have been induced via psychedelic (mind-manifesting) agents. The taxonomies which have been based on psychedelic research include those of Masters and Houston (36), and Grof (97).

Masters and Houston, on the basis of 206 guided sessions involving various kinds of psychedelic drugs, hypothesized four different categories which corresponded to four different levels or "layers" of consciousness. The categories were based on actual phenomenological analyses of the states of consciousness themselves, and not on the causative agents or merely on the physiological correlates. These states progress through sensory, recollective-analytic, symbolic, and integral. The sensory level is the most superficial of the four and subjective reports indicate alterations in time, space, body image and sensory impressions. The next stage, the recollective-analytic stage, includes the emergence of ideas and thoughts concerning one's interests, life-goals, and personal problems. At the symbolic level there is identification with symbols which are mythical,
historic, legendary, ritualistic, or "archetypal." The integral level is the deepest level, which is very rarely reached. It is the level of mystical or cosmic ecstasy where one experiences a dissolving into the energy field of the universe, of being in communion with the cosmos, the I-Thou mode of being. (36:142-150)

Grof, as a result of his extensive work in psychedelic research, proposed a tentative classification based on the distinction of whether or not the content of the transpersonal experience consisted of elements of the phenomenal world (or "objective reality") as we know them in our NSC. Experiences within the framework of "objective reality" were further subdivided on the basis of whether the extension of consciousness they involved could be understood in terms of alterations of the dimension of time or of space. The outline of this taxonomy of transpersonal experiences follows: (97:77-78)

1. Experiential Extension (or Expansion) Within the Framework of "Objective Reality"

A. Temporal Expansion of Consciousness

Perinatal Experiences
   Cosmic Unity
   Cosmic ENGulfment
   "No Exit" or Hell
   Death-Rebirth Struggle
   Death-Rebirth Experience
Embryonal and Fetal Experiences
Ancestral Experiences
Collective and Racial Experiences
Phylogenetic (Evolutionary) Experiences
"Past Incarnation" Experiences
Precognition, Clairvoyance and "Time Travels"
B. Spatial Expansion of Consciousness

- Ego Transcendence in Interpersonal Relations
- Identification with Other Persons
- Group Identification and Group Consciousness
- Animal Identification
- Plant Identification
- Oneness with Life and All Creation
- Consciousness of Inorganic Matter
- Planetary Consciousness
- Extra-Planetary Consciousness
- Out-of-Body Experiences, Traveling Clairvoyance, "Space Travels" and Telepathy

C. Spatial Constriction of Consciousness

- Organ, Tissue, and Cellular Consciousness

II. Experiential Extension (or Expansion) Beyond the Framework of "Objective Reality"

- Spiritistic and Mediumistic Experiences
- Experiences of Encounters with Supra-Human Spiritual Entities
- Experiences of Other Universes and of Encounters with Their Inhabitants
- Archetypal Experiences
- Experiences of Encounter with Blissful and Wrathful Deities
- Activation of the Chakras and Arousal of the Serpent Power (Kundalini)
- Consciousness of the Universal Mind
- The Supracosmic and Metacosmic Void

One of the more inclusive taxonomies based on the structure of ASCs was developed by Fisher (87). He suggested a continuum which included two ways of traveling (see Figure 4):

Starting from the NSC, one way proceeded along the perception-hallucination continuum, and the other, along the perception-meditation continuum. He called the former the "ergotropic" continuum and the latter, the "trophotropic" continuum.¹

¹As cited by Fisher (87), these terms were introduced by W. Hess. Ergotropic arousal denotes behavior patterns preparatory to positive action and is characterized by an
Figure 4: Fisher's Cartography of Conscious States (87:898)
On the right of the diagram are the increasing tranquil states of relaxation, Zazen (sitting meditation) and Yoga samadhi, while on the left of the diagram are the increasingly high energy states, moving from the normal to creative, psychotic, and ecstasy experiences. Kerns suggested that this taxonomy could be viewed as one continuum ranging from low energy states on the right through the normal energy states to the high energy states on the left. (148:277) For Fisher, the loop connecting ecstasy and samadhi represented the rebound from ecstasy to samadhi, which was observed in response to intense ergotropic excitation. (87:898) The numbers refer to the EEG correlates: numbers 35 to 7 specify the decrease in variability of the EEG amplitude as ergotropic arousal increases; numbers 26 to 4 refer to the beta, alpha and theta waves. The states along the ergotropic continuum "are marked by a gradual turning inward toward a mental [subjective] dimension at the expense of the physical [objective]." (87:897) Fisher described: 1) the creative states is characterized by an increase in both data content (a description of space) and rate of data processing (most intense time); 2) the psychotic (or "hyperphrenic") states may result in a "jammed computer" situation as the increased data content always is not matched by an increased rate of data processing;

\(^{1}\) (Continued)

activated psychic state. Trophotropic arousal denotes behavior patterns that conserve and restore energy and show a decrease in sensitivity to external stimuli.
and 3) "at the peak of ecstatic rapture, the outside (physical) world 'retreats to the fringe of consciousness,' and the individual reflects himself in his own 'program.'"

(87:897)

This taxonomy focuses primarily on the structure of consciousness. The concept of a continuum does emphasize that states of consciousness do not always occur in sharply differentiated categories. Also, the mutual exclusiveness of the two types of arousal in which the extreme experiences in each appear to be similar, opens other avenues for speculation and exploration.

Kerns made an interesting observation which has implications for many areas including the realm of sport. He noted,

... psychic arousal or energy level is sometimes noticed to be quite at variance with somatic energy level; so that a person in a state of deeply relaxed hypnosis may report a psychological state of intense activity and high energy, while his body is obviously quite relaxed. Or, to take the opposite side of the matter, somatic energy level may be quite high and psychological energy level low, as is sometimes reported in the frenzied activity of the dervish dance. There the body is most obviously in a state of high arousal and yet the psychic conditions can be reported to be one of extreme quiet and passivity. (148:278-9)

Fisher acknowledged this same phenomenon. He illustrated the high or low sensory to motor ratios which occur within a behavioral state by citing the extreme examples of the catatonic hallucinatory state with its extremely high sensory involvement and no motor performance, and the sprinter's performance during a running race with the very
high motor to sensory ratio. There would be an infinite variety of behavioral states between these two extremes. (20:178-9) While indicating that the ratio expresses the type of experience an individual has within that specific state, Fisher does not imply that the ratio is the same for each person at the various points along the continuum.

Lilly (33) uses a relationship resembling that of Fisher's "I" and "Self." Whereas specific points on Fisher's continua represent variations in the "Self"-to "I" ratio, Lilly indicates that the states of consciousness reflect the position of the "self" along an "Essence-Ego" scale (see Figure 5). Lilly, on the basis of personal experiences, not only supplies this structural format for understanding the states of consciousness, but also provides experiential content for the recognition of each state or level. The following is a summary of the main levels.

**Level 48.** This is a completely rational state, without either positive or negative emotion. The emotions are in a neutral state yet the energy can be high. This would not be the usual normal state of consciousness for most people. Lilly states that top physical conditioning is a must, for one's inner impulsive "noises" decrease as physical condition improves. Both mental and physical exercises are needed to achieve this level where one is a unitized entity with a single, well-organized direction. This is the basic teaching, learning, integration, and storing level.
Figure 5: Lilly's Quantitative Relations between Self, Essence, and Ego Metaprograms
(Note: Self is mobile. Essence and Ego are fixed.) (33:168)
Positive Levels:

Level +24. This is the basic positive state. Lilly refers to this as the "professional" state because one only needs to practice one's profession. A profession, for Lilly, includes all human activities that a person knows very well in his own right. This is the practice of "doing" level. "We lose our self in practice." There is an enjoyment plus the experiencing of the automatic nature of what one is doing. The planning which one carried out at Level 48 is put into practice in Level +24. It is essential to stay in +24 for the duration. A return to Level 48 reinstitutes greater thought processes, while a shift to Level +12 would change the set of dimensions being enjoyed.

Level +12. At this level, one is still in one's body, but there has been a shift away from functioning on the "planetside." There are feelings of cosmic love, divine grace, cosmic energy, and bliss. The sensations are those of expansion and of movement.

Level +6. The focusing of one's consciousness down to a small point occurs at this level. There are no words. One is totally immersed in nonordinary reality—experiencing directly, knowing directly without any intervening of the thinking processes. In +12, the body is still present, but in +6 it is not, even though one is still oneself. The experiencing of one's own eternal nature.

Level +3. There is the moving from one's own Essence into all other Essences in the universe. This is the
classical Satori-Samadhi.

**Negative Levels:** The negative spaces do not seem to have a real location. Lilly states that each is imagined as located in the same region as the corresponding positive space.

**Level -24.** In the -24 state, one is forced to do that which one knows well, but some condition (e.g. negative emotion, negative motivation, negative reinforcement) makes it a negative performance. Pain, fear, guilt predominate during the performance.

**Level -12.** This is a bad inner state where one is still in the body, but the awareness is only in the present in one's pain, e.g. the pain of an intense migraine headache. The pain is such that one cannot work or do one's usual duties.

**Level -6.** This state is similar to +6 except that it is extremely negative. Fear, pain, guilt, and meaninglessness are prominent.

**Level -3.** This is like +3 in that one is united with another entities throughout the universe, but these are all bad and one's self is bad and meaningless.

Lilly indicates that the achievement of desirable states of consciousness are partly matters of technique which have been empirically tested and proved by one's own experience. However, one's own beliefs tend to preprogram to a certain extent what will happen. One of the major messages Lilly gives about inner trips is,
In the province of the mind, what is believed to be true is true or becomes true, within limits to be found experientially and experimentally. These limits are further beliefs to be transcended. In the province of the mind, there are no limits. (33:5)

In considering the structure of consciousness, Tart (58) seems to take a view similar to Lilly's. Tart utilizes the term "discrete states of consciousness (d-SoCs)." This he defines as a dynamic system where parts of it are changing all the time, but which maintains an over-all pattern/organization that is its nature. (58:121) Thus a d-SoC represents a region of experiential space, but there are degrees of variation of experiences within that space even though the overall pattern remains recognizably the same.

In Tart's theory, the states of consciousness are the result of the interplay of what he calls "structures." Structures are relatively permanent patterns of mental operations and each structure has its unique appropriateness. One's state of consciousness is composed of all the structures that are active at any given moment. There are many states and each one is noticeably different from the others. Tart has stated that the main purpose of this theory is organizational--it collects and relates many formerly disparate bits of data. In addition, it focuses on numerous methodological implications for guiding future research. (58:172)

Our NSC, which often is viewed as a natural "given," is a construct according to Tart. This state has been influenced by certain fixed structures which are part of
being born a human being, and by certain learned structures which are the result of enculturation.

An ASC represents a different d-SoC although "most altered states of consciousness that we know do share some psychological structures with our ordinary state of consciousness." (58:110) Figure 6 projects a schematic arrangement of how Tart viewed the spectrum of experiential potentials. Tart indicated that the pattern of differences between d-SoCs have some reasonable stability over time. He noted that there has been only limited work done on the transition period from one d-SoC to another d-SoC.

Tart delineated ten subsystems for summarizing present knowledge. These were: exteroceptors, interoceptors, input processing, memory, subconscious, emotions, evaluation and decision making, time sense (which perhaps should be expanded to a time-space sense), sense of identity, and motor output. (58:127) According to Tart, these subsystems do show important variations over known discrete altered states of consciousness.

Tart stressed the importance of studying d-SoCs in one individual at a time because of enormously important individual differences. Other researchers also have acknowledged this point:

Every such experience is in many significant ways very individual and depends for its structure and content upon what the subject brings to the session in the way of personal history and frame of reference—"who he is" at that time. The other principal determinants of the experience will be the
Figure 6: Tart's Spectrum of Experiential Potentials (57:42)
physical environment and the person or persons present. . . . (36:6)

Although ASCs share many features in common . . . personal motivation and expectations (mental set), and the specific procedure employed to induce the ASC all work to shape and mold a mental state with a unique flavor of its own. (113:15)

Summary

This chapter has reviewed a number of taxonomies for the classification of nonordinary experiences. Most of these have approached consciousness and states of consciousness from different perspectives, or to meet different purposes. Included were general classifications and classifications for waking states of consciousness which emphasized content and/or structure. It is at this point that we may appreciate Tart's observation that the difficulties encountered in the study of consciousness are due to the fact that "the science of consciousness is in its infancy." (58:119)
In this chapter, we turn our attention to a description of some of the techniques and agents which are capable of inducing ASCs. The emphasis will be on the experience per se, rather than on a physiological analysis of how the specific technique or agent induces the ASC. Kerns, in his investigation of ASCs, concluded,

The capacity for experiencing the world under the various possible forms of consciousness . . . is a capacity necessary for the living of a full human life, and the restriction of the mode of one's perception to the realm of the standard and ordinary represents a radical stricture on one's ability to live and perceive fully. (148:173)

Methods for inducing ASCs are numerous. The range of techniques and agents includes hypnosis, deep relaxation, meditation, physical illness, alcohol intoxication, psychedelic chemical agents, exhaustion, sensory deprivation, sensory bombardment, dreams, chanting, dancing, etc. Rosenfeld (48) identified 250 ways of inducing ASCs without drugs. Ludwig noted that in inducing an ASC, these methods

. . . interfere with the normal inflow of sensory or proprioceptive stimuli, the normal outflow of motor impulses, the normal "emotional tone," or the normal flow and organization of cognitive processes. There seems to be an optimal range of exteroceptive stimulation necessary for the maintenance of normal, waking
consciousness, and levels of stimulation either above or below this range appear conducive to the production of ASCs. (113:225)

Ludwig grouped the techniques for inducing ASCs into five broad categories: 1) Reduction of exteroceptive stimulation and/or motor activity, 2) Increase of exteroceptive stimulation and/or motor activity and/or emotion, 3) Increased alertness or mental involvement, 4) Decrease alertness or relaxation of critical faculties, and 5) Presence of somatopsychological factors. (113:226-227)

This chapter will discuss three methods for altering the state of consciousness in greater detail: psychedelic chemical agents, meditation, and biofeedback training. These methods were selected on the bases of their being employed voluntarily by the individual, of their influence being on the phases of waking consciousness, of their having received a great deal of publicity within the past ten years, and of their having greater implications for the study of the states of consciousness which occur during sport participation. In addition, these methods seem to be representative of Ludwig's five categories.

Psychedelic Chemical Agents

Acceptance seems to be growing for the position that human beings have a vast potential for various ways of experiencing reality. In general, this means allowing our perceptions not to be limited by what has been defined as biologically or socially useful. Words are useful in
representing or indicating what can be experienced, but
"if we want to know it directly we must do so by immediate
sensory contact." (62:35) It is generally recognized that
psychedelic chemical agents are the most direct techniques
for opening new realms of awareness.

Psychedelic chemical agents are one of three major
classifications of psychotropic chemicals, i.e. chemicals
which affect one's "state of mind." (148:68) The other two
classifications are the central nervous system stimulants
(e.g. nicotine, amphetamines, etc.) and the central nervous
system depressants (e.g. alcohol, morphine, barbiturates,
etc.). The former have been referred to as "uppers" or
"speed drugs," while the latter are the "downers." These
two classes possess great potential for physiological ad-
diction. Psychedelics, on the other hand, are not physio-
logically addictive although they do have other dangers.
Even though positive experiences are much more common than
negative ones, the use of such powerful chemical agents
should include serious consideration and preparation.

The main psychedelic chemical agents are d-lysergic acid
diethylamide-25 (LSD), mescaline, psilocybin, and THC
(marijuana). Of these, LSD-25 is the most potent and mari-
juana is the least potent. (148:70) The Bruin Humanist
Forum (1967) summarized,

Whereas LSD drastically alters thoughts and per-
spectives, often "jarring" the user into heightened
awareness, marijuana "suggests" or points the way
to a moderately deepened awareness. The user is free
to follow these potentials or not, as they present
themselves. (4:334)
Tart (56) classified the psychedelic chemical agents as "minor psychedelic drugs" (such as marijuana, carbon-dioxide, and nitrous oxide) if they met the following criteria:
1) the effects were felt to be under a fair amount of volitional control by most individuals who use the drugs;
2) the duration of action was usually short; 3) the after-effects were generally mild or nonexistent; and 4) the effect of the drug experience was rarely strong enough to cause the user to actively try to convince others that they must have this experience themselves. (56:327) Agents not meeting these criteria were classified as "major psychedelic drugs," e.g. LSD-25, mescaline, and psilocybin.

A great deal of public controversy has surrounded the use of these chemical agents in the United States. However, professionals and researchers who are thoroughly familiar with them, see them as having immense positive potential for personal, psychological, and religious growth if they are administered under proper conditions. Kerns states these conditions as including: 1) effective guiding; 2) proper selection of subjects; 3) a comfortable, secure setting for the session; 4) an effective overall structure for the session; and 5) the proper drug in the proper dosage. (148:71) Tart indicated that the characteristics of the minor psychedelic drugs make them highly suitable to research as the subject's welfare is not threatened in most cases and the elaborate and costly schemes for protecting subjects are not as necessary as with the major psychedelic drugs. (56:327) Watts
emphasizes that the major psychedelic drugs should be taken only under favorable conditions, which means: 1) a setting which is socially and physically congenial, 2) sufficient time allowed for the experience plus the immediate follow-up, and 3) a qualified supervisor. (63:17-18)

The subjective effects experienced when using psychedelic chemical agents are highly individual. Factors influencing the experience include the user's personality system, the intentions and expectations, the physical and interpersonal setting, and prior use of the agent. Fisher (87), from experiments noting the perceptual variability of individuals prior to ingesting a psychedelic drug and then dividing them according to the magnitude of their perceptual variability, concluded that the experience of time is overestimated by subjects with large standard deviations (i.e. it "flies" or contracts) and is underestimated (i.e. it "drags" or expands) by those with a small standard deviation. The former he labeled as "minimizers" for they seem to prefer to decrease sensory data content and its rate of processing, and the latter as "maximizers" for they seem to prefer to increase data content and its rate of processing. Thus, the answer to the question as to whether time "flies" or "drags" is dependent on the individual. (87:899-900)

Pines states,

The drugs only produce a state of arousal, or a general "priming" of the body. How a person interprets these changes depends both on cues from the environment and his own past experiences. Instead of being a passive recipient of drugs, each person actively builds his own reality. (45:106)
Even though the specific effects are individual, the types of effects experienced in using psychedelic drugs can be grouped for purposes of discussion. The following discussion notes the main effects of some of these agents.

When using marijuana, experiences will seem "timeless" when consciousness is completely passive and non-time elements fill attention; or they will seem to have "slowed" if some consciousness processes and associations are maintained, for attention will move among the various contents. In addition to time distortion, there is an intensity of sensory experience. This seems related to whether attention is involved in conscious cognitive processes or in awareness of the sense experience. "Both the intensification of sensory experience, and the expansion of time are part of an increased attentiveness to immediate experience in contrast to memories of the past or plans for the future." (1:351) Other changes experienced include the relaxation of inhibitions and suppressions which allows emotions, thoughts, memories, and fantasies to flow more freely; and the reduction of the processes of associations, e.g. social meanings, expectancies, goals, etc. As was mentioned earlier, for marijuana to have these effects, the user must cooperate with it, i.e. one must learn to allow oneself to respond.

Watts noted that the subjective effects of LSD-25, mescaline, and psilocybin are rather similar although LSD-25 requires only a minute dosage to produce its characteristic
results. (63:15) Deikman reports that LSD experiences reveal a cluster of characteristics which identify them with the receptive mode: a marked decrease in self-object distinction, the loss of control over attention, the dominance of paralogical thought forms, and intense affect and vivid sensory experience. (84:487) Watts concisely summarized the effects these major psychedelic drugs had on his own experiences,

Consciousness-changing drugs are popularly associated with the evocation of bizarre and fantastic images, but in my own experience this happens only with closed eyes. Otherwise, it is simply that the natural world is endowed with a richness of grace, color, significance, and sometimes, humor, for which our normal adjectives are insufficient. The speed of thought and association is increased so astonishingly that it is hard for words to keep pace with the flood of ideas that come to mind. Passages that may strike the reader as ordinary philosophical reflections are reports of what, at the time, appear to be the most tangible certainties. So, too, images that appear before closed eyes are not just figments of imagination, but patterns and scenes so intense and autonomous that they seem to be physically present. (63:30)

These effects are maintained from five to eight hours. Rather than being psychologically addictive, as many persons believed, the experience is often so deeply revealing that the person hesitates to approach it again until it has been thoroughly assimilated, which could be a matter of months. An extensive account of how mescaline was used to "open" awareness to alternate realities is detailed through Castaneda's books (7;8;9;10) which describe the author's training under don Juan, a Yaqui shaman. Don Juan leads Castaneda in the discovery of an alternate perspective of
reality far different from our own, and so vivid that he could never again take our ordinary reality as the only one. For additional personal accounts of drug-induced experiences, the reader is referred to Watts (1970), The Joyous Cosmology: Adventures in the Chemistry of Consciousness; Lilly (1972), The Center of the Cyclone: An Autobiography of Inner Space; and Huxley (1954), The Doors of Perception.

The subjective experiences reported by users of psychedelic drugs and by some practitioners of Zen and Yoga meditations appear to match with respect to the heightened sensory awareness and the sense of uniqueness in perceptual experience. Kerns noted that the ability to initiate an ASC oneself often leads one to turn to the techniques of meditation and biofeedback training. (148:76) Gellhorn and Kiely reported that individuals who had substituted daily practice of meditation for psychedelic drug use described "a heightened sense of inner-directed self-control as a result of their meditation practices in contrast to the anxiety-provoking loss-of-control experienced under the influence of psychedelic and other drugs." (92:403) Watts stated that "psychedelic experience is only a glimpse of genuine mystical insight, but a glimpse which can be matured and deepened by the various ways of meditation in which drugs are no longer necessary or useful." (63:26)

**Meditation**

The term "meditation" is being used here to indicate a
specific sort of mental practice or discipline. It is not used in the sense of merely "thinking about something," which is often implied when we say that "we will meditate on it."

Meditation is a very old technique. For centuries, various forms of meditation have been practiced in the Orient. These usually have been connected with certain religious beliefs and were intended to encourage a state of mind conducive to spiritual insight and to religious experiences. Some of these forms of meditation are becoming known in the Western world; but where they are being practiced, it is done apart from any particular religious affiliation.

All forms of meditation do seem to have points in common. They require daily, or almost daily practice; most forms require a relatively quiet setting in which one sits comfortably for a period of twenty to thirty minutes; and most forms ask the meditator to focus attention wholly on a single point of interest, such as a sound (mantra), a point within the body, or a visual point of focus. It is on the perception of this point that attention is focused, not on the cognition of it. This process, i.e. this returning to a perceptual base, is referred to as "deautomatization" by Deikman (84). At first, this practice is difficult because of the internal distractions such as thoughts, memories, images, etc. as well as external disturbances. When these occur, it is suggested that one simply accept the fact that one has strayed from the instructions and bring oneself gently and firmly back to the point of focus. The ability
to dispel these wanderings does increase with practice, but as LeShan emphasized, "The important thing about a medita-
tion is how hard and consistently you work on it, not how well you do it." (32:52)

LeShan describes four "paths of meditation": 1) the path through the intellect, which uses the intellect, the will, and the thought processes to transcend themselves; 2) the path through the emotions, which concentrates on loosening the feelings and expanding the ability to relate to others, to care, and to love; 3) the path through the body, in which one utilizes one's body and bodily movements (this includes Hatha Yoga, Tai Chi, and the Dervish dances of the Sufi tradition); and 4) the path of action which uses various skills, such as archery, flower arranging, aikido, and karate. (32:32-40) Herrigel's Zen in the Art of Archery (24) gives a detailed account of the practice of a "path of action" meditation. In this path of action, LeShan notes, "The real goal is to help you grow and develop as a total human being, not to become a better archer or karate expert." (32:38)

The emphasis in meditation is the pure concentration on doing what you are doing and being aware of nothing else. Deikman (84) refers to this as the "receptive mode" of being, as the emphasis is on the experiencing, on enduring, on being. This is impossible in our everyday way of being, and it takes practice to force this new way into conscious existence. Experiencing one's ordinary sense of linear
time change to something which might be described as timeless, is one of the effects of meditation noted by Deikman. (16:82) Schwartz explains that "when a person concentrates on a single stimulus, it seems to eventually disappear, leaving pure attention without any specific content." (133:43) Tart related that one of the results of his practice of transcendental meditation was that he could rather easily still his mind for periods of fifteen or twenty seconds. (140:139)

LeShan's book, How to Mediate (32), dispels much of the mystery surrounding the practice of meditation. He identifies the two goals of meditation as, "the attainment of a second way of comprehending reality and the increased serenity and competence in being." (32:26) He discusses many examples of meditations and encourages the reader to begin with the one which seems most suitable for them. "All lead to the same place eventually." (32:32) He cautions against expecting immediate results but does indicate that a test of a meditation or meditation program is that generally it should make you feel better when you do it than when you do not do it. However, Schwartz believes, "The fact that the meditator controls the experience almost ensures that it will seem worthwhile." (133:44)

LeShan notes that it is not unusual to experience paranormal occurrences (such as telepathy, clairvoyance, and precognition) during meditation. As Deikman noted, "It may be that paranormal phenomena require the development of the
As the purpose of meditation is the task of growing and developing oneself, to pursue these paranormal events for their own sake is likely to lead only to a dead end. These events should be acknowledged, but one should be encouraged to return to the task at hand, i.e. to the meditation. However, it may be that the purpose of the meditation could be to produce high feelings and unusual perceptions, called "siddhis" by the Buddhists. While this purpose will not lead to the type of self-development pursued in the traditional system, it may have application to other areas.

Three meditational techniques which have received increasing attention in the Western world are Zen, Yoga, and Transcendental Meditation (TM). In Zen, one strives to exist in the here-and-now, in the immediacy of the phenomenal world. Tart explained that this is much different from the Yoga philosophy where the yogin must learn to transcend the phenomenal world which is viewed as all illusion and ensnarement. TM differs from both the system of Zen and of Yoga in that it claims to be relatively easy to learn. Denniston states that the TM technique "is an effortless, natural, mental practice that accomplishes the goal of 'yoga' (complete integration of the mind, body, and activity) in the most comfortable, effortless way." It is stressed that the TM technique is practiced "for its results in activity, not for any particular experience during the practice."
Zen. Reps (47) explains that Zen was brought to China from India in the sixth century and was carried eastward into Japan by the twelfth century. This form of meditation is known as Zen in Japanese, Ch'an in Chinese, and dhyrana in Sanskrit. It is not a sect, but an experience. It aims, through meditation, "to realize that Buddha himself realized the emancipation of one's mind." (47:86) A Zen story cited in Reps will help to illustrate this experience.

Great Waves

In the early days of the Meiji era there lived a well-known wrestler called O-nami, Great Waves.

O-nami was immensely strong and knew the art of wrestling. In his private bouts he defeated even his teacher, but in public he was so bashful that his own pupils threw him.

O-nami felt he should go to a Zen master for help. Hakuju, a wandering teacher, was stopping a little temple nearby, so O-nami went to see him and told him of his trouble.

"Great Waves is your name," the teacher advised, "so stay in this temple tonight. Imagine that you are those billows. You are no longer a wrestler who is afraid. You are those high waves sweeping everything before them, swallowing all in their path. Do this and you will be the greatest wrestler in the land."

The teacher retired. O-nami sat in meditation trying to imagine himself as waves. He thought of many different things. Then gradually he turned more and more to the feeling of the waves. As the night advanced the waves became larger and larger. They swept away the flowers in their vases. Even the Buddha in the shrine was inundated. Before dawn the temple was nothing but the ebb and flow of an immense sea.

In the morning the teacher found O-nami meditating, a faint smile on his face. He patted the wrestler's shoulder. "Now nothing can disturb you," he said. "You are those waves. You will sweep everything before you."
The same day O-nami entered the wrestling contests and won. After that, no one in Japan was able to defeat him. (47:11)

Richard Baker, in the "Introduction" to Suzuki's Zen Mind, Beginner's Mind, states,

The practice of Zen mind is beginner's mind. The innocence of the first inquiry—what am I?—is needed throughout Zen practice. The mind of the beginner is empty, free of the habits of the expert, ready to accept, to doubt, and open to all the possibilities. It is the kind of mind which can see things as they are, which step by step and in a flash can realize the original nature of everything. (55:10)

Yoga. According to Asrani (69), the object of all yoga is to reach the condition of mental stability called the Sthita Prajna state. Within this state one is "free, buoyant, unmoved, unconcerned with self and with all desires and attachments." (69:13) There is more than one system of achieving mystical union or enlightenment within this meditational form. Asrani noted that each system is suited to a different temperament: 1) Karma Yoga is the yoga of selfless action, surrendering the fruits of activity to God; 2) Hatha Yoga is the yoga of physiological exercises; 3) Raja Yoga is the yoga of physiological exercises coupled with philosophical acceptance; 4) Jnana Yoga is the yoga of rational and philosophical meditation; and 5) Bhakti Yoga is the yoga of devotion to a personal God.

Transcendental Meditation (TM). The philosophy underlying transcendental meditation stresses that all thought comes from a single source. This source is a field of pure energy deep within the mind. As Denniston explains, the
TM technique "is a simple, natural, effortless process that allows the mind to experience subtler and subtler levels of the thinking process until thinking is transcended and the mind comes into direct contact with the source of thought." (17:40)

TM is a procedure which is taught throughout the world. The procedure consists of attending introductory sessions, going through an initiation, being assigned a personal mantra, practicing the technique regularly, and experiencing the changes which occur. While results of TM usually are described in terms of physiological changes, Tart described his personal experiences with this technique as including: 1) no personal experiences of bliss consciousness; 2) a processing of unfinished psychic business; 3) a loss of response to alcohol; 4) a resistance to cold which was experienced as physical warmth; and 5) a mind which was quiet but alert, with increased sensitivity and less tension. (140:136-139) Tart stressed the "psychic lubricant" function of TM which seemed to predominate during the first six months of his TM practice. By this he meant,

... normally we carry out all sorts of activities with insufficient attention and/or insufficient awareness of our own reactions to them. This results in building up a tremendous backlog of partially processed experiences, unfinished business. The psychic-lubricant function of TM is to allow these things to come back into consciousness during meditation and, by virtue of now being conscious, to have the processing of them completed. Thus they no longer block other psychic processes. (140:137)
There is much controversy surrounding the merits of TM. ¹ Perhaps, this is because this system has been commercialized; and, although promoted as educational and having tax-exempt status, it charges a large initiation fee. With seeming reference to TM, LeShan states, "The mantra will probably work but certainly not because it is designed for you, but because you use it as a mantra." (32:67) Otis (121) cited a study done at the Stanford Research Institute where TM was compared with sitting quietly, sitting quietly and repeating a "mock mantra," and controls who did not change the daily rhythm of their lives. This study concluded,

The controls who simply relaxed twice daily for 12 to 20 minutes, using no mantra at all or repeating a mock mantra, found comforts in the experience that did not differ significantly from what the meditators found. (121:46)

In concluding this section on mediation, it is important to emphasize that the practice of meditation does seem to have personal growth and therapeutic value—physical, psychological, spiritual. It is a practice which can be done alone, in a group, with a teacher, or in a school. LeShan reminds us, however,

... the most important thing [is] to remain clear to your purpose, to remain clear that the discipline is to help you find, accept and sing the best in you, a best that is unique, individual and yours alone. A best that you share with all those of the human race who, in one way or another, have made the search, but that is for each person something different and special. (32:108)

¹For additional information, see Goleman (95).
Biofeedback Training

Biofeedback operates on the premise that we are able to control any internal activity that we can monitor. Body processes generate specific electrical waves which can be measured by electronic sensors and reported by an indicator. We can follow what is going on inside us by watching the indicator. However, even though biofeedback training enables us to control even a single cell, we still are unable to describe just how this takes place. The internal cues are far more subtle than what is admitted to consciousness.

Biofeedback research began in earnest in 1966 although there had been a number of earlier studies using similar concepts. The discovery of this technique seems to provide the lost link between the mind and the body for the scientist. Now there is "proof" that there is more to man than the physical self. Through the human "will" one can control physiological functions by conscious choice. Biofeedback seems to have marked the rediscovery of the "will" for scientific research. Brown states,

It has produced the physically identifiable, higher intellectual processes of the unconscious. The effect of these discoveries may soon assist the evolution of man from a state of behavior control by others to a state of true self-control, a state much more in harmony with the infinite order of the universe. (76:83)

One of the reasons cited for the rapid acceptance of biofeedback training in the United States is that the results can be obtained so quickly. For example, compared with the
Progressive Relaxation techniques of Edmund Jacobson or the Autogenic Training of Oskar Vogt, biofeedback training gives the person an objective way of "seeing" the muscle tension and, thus, a way of focusing on the desired area. In this area, the studies by Thomas Budzynski and Johann Stoyva which used muscle relaxation for reduction of tension headaches are considered classics. (76:81) Other research has included the regulation of bodily processes such as heart-beat and blood pressure, and the assessment of skin changes which are identified with awareness of emotions, of mental activity, and of the autonomic nervous system.

Biofeedback training also is used in enabling us to recognize our own brain waves and to learn to control them. This is done via an electroencephalograph (EEG) where we can "watch" (usually visually or auditorily) the changing states of electrical activity. Four states of electrical activity, i.e. four types of brain-waves, have been distinguished: beta, 13 to 26 cycles per second (cps); alpha, 8 to 12 cps; theta, 4 to 7 cps; and delta, less than 4 cps.

Alpha feedback has had its greatest popular attraction as an aid to meditation. As the subjective phenomena and brain wave patterns did resemble those reported for certain Zen and Yoga states, biofeedback did go through a fad stage where it was advertised as Electric Zen or as Instant Alpha. It has been shown that both alpha training and meditation can produce sensations of separation from the material universe, loss of individual identity, and an awareness of the
unifying thread of life. (76:106) However, while many researchers interpret alpha as any brain-wave frequency between 8 to 13 cps, the experienced alpha investigator is concerned with the mental and emotional correlates, and is aware that there are almost an infinite number of alphas—small, fast, slow, location, etc. Pines states, "It may turn out that the most interesting changes in consciousness come not from being in alpha more of the time, but from changing the frequency of one's alpha waves, or going into theta." (45:70) For many persons, the alpha state is experienced as quite pleasant, a feeling of comfortable relaxation. For some persons there is a flow of considerable imagery, while others lose awareness of their environment and all awareness of time. "Each person appears to have highly individual patterns." (76:105) Dr. Joe Kamiya, a psychologist of Japanese descent who is associated with the San Francisco Langley Porter Neuropsychiatric Institute, is quoted by Pines as stating,

The alpha state itself is probably not creative. . . . [It] is a state of attention directed towards letting things happen. . . . Its probably best described as a shift in the focus of attention. . . . You remain alert, expanding your focus of attention in all directions. (45:64)

The potential of biofeedback may be unlimited, or it may be merely a step toward a new reality. At present, it appears to be a powerful and effective tool with enormous implications for medicine, meditation, education, etc.
[It is a way] to expand self-awareness, extend self-exploration, and improve self control. Biofeedback training can serve as an adjunct to meditation, as a complement to drug experience, as a method of treatment for some stress- or anxiety-related disorders, and as a technique for producing relaxation of mind and body. (117:103)

Stateboundness

States of consciousness may be described as being "state-bound." This means that each experience (i.e. state of consciousness) arises from the binding or coupling of 1) a particular state or level of arousal with 2) a particular symbolic interpretation of that arousal. (88:159) The significance of an experience of an ASC is highly individual. It is apparent that the experiences within one state of consciousness only have limited application within another state of consciousness. Fisher, after having studied these experiences extensively, concluded that "meaning is 'meaningful' only at the level of arousal at which it is experienced, and every experience has its state-bound meaning." (87:902)

In studies of the changes which occur in certain constancies of the normal state of consciousness, particularly those of the spatial and temporal dimensions, Fisher (87) noted that when one is in the normal state of consciousness, the outside world is experienced as separate from oneself, i.e. visual space and chronological time are ordered "out there." As one moves away from this normal state of consciousness, either along the hyper- or hypo-arousal continua,¹

¹See Chapter IV for a discussion of Fisher's Cartography.
there is a gradual turning inward with a corresponding
diminishing of this "separateness" until at the peak of
ergotropic or trophotropic arousal, these states are experi­
enced as timeless and spaceless, i.e. as "in here." Thus,
when we depart from the "I" along either the ergotropic or
the trophotropic continuum, the separateness of object and
subject gradually disappears and the interaction becomes the
principle content of the experience. During the "Self"-
state, which is the highest level of arousal along either
continuum, the meaning can no longer be expressed in the
dualistic terms which are characteristic of the "I"-state.
Aristotelian logic and language become meaningless, and the
symbolic language of art, literature, music, religion,
often become the vehicle for communication.

Being "state-bound," these experiences can be recalled
either through symbols of the content of the experience
(e.g. imagery, melodies, etc.), or by inducing that partic­
ular level of arousal which prevailed during the initial
experience. Fisher and Landon state that "remembering an
experience implies reference to a particular spatio-temporal
configuration, a dimensional and sequential ordering
representation, of the content of consciousness." (88:163)
Individuals vary in their ability to recall a state-bound
experience. Fisher and Landon have identified three broad
categories as representative of this range of ability to
recall: 1) "Recallers," who are able to recall the
experience with an intensity indistinguishable from that of the original experience; 2) "Performers," who only "remember" an experience, but are not able to "re-experience" it; and 3) "recapturers," who fall somewhere in between, neither exclusively "re-experiencing" nor "remembering" an event. It was discovered that "recallers" possess a larger perceptual-behavioral or interpretive repertoire than the others. This was indicated by their larger standard deviations on perceptual and/or behavioral tasks. (88:163-165)

Fisher and Landon have indicated that they view biofeedback training as the most technologically advanced device for establishing state-bound experiences, for one can learn the induction and the control of particular levels of arousal. (88:162)

Summary

As we have seen, the three methods discussed in this chapter—psychedelic chemical agents, meditation, biofeedback training—have many variations. The selection and use of any one technique, or combination of techniques, can produce marked shifts from what we experience as our normal state of waking consciousness. Regardless of the technique selected, the individual is central to the experience, i.e. the kind of experience is dependent upon the individual's personality, intentions, expectations, setting, agent selected, previous experience, etc. The experience will have its own level of arousal and particular symbolic representation which will allow it to be recalled, remembered, or recaptured.
CHAPTER VI

SPORT EXPERIENCE AND STATES OF CONSCIOUSNESS

In previous chapters we have looked at the status of research relating to classification schemes for states of consciousness, and we have considered some of the ways of inducing these nonordinary states of awareness. In this chapter, we turn our attention to the realm of sport. It is acknowledged that sport and nonordinary consciousness seem to occur together. This chapter is divided into parts. In Part I, we will explore participation in sport as directly influencing changes in one's level of awareness as well as looking at the realm of sport as providing the setting where it is possible to experience various states of consciousness. In Part II, the writer outlines and describes a set of categories for the classification of the states of consciousness which occur during sport participation. In addition, a brief review is included of suggested techniques for inducing some of these states of consciousness in sport.

PART I

Sport and Mind Control

Archery, running, and tennis are three sport forms which various individuals have used in direct conjunction with the
practice of a formal meditation system.

Herrigel, who pursued a six-year course of instruction in the art of archery molded by Zen, came to the realization that "all right doing is accomplished in a state of true selflessness in which the doer cannot be present any longer as 'himself.'" (24:67) D. T. Suzuki refers to this as the "art of self-forgetfulness." (54:11)

If one really wishes to be master of an art, technical knowledge of it is not enough. One has to transcend so that the art becomes an "artless art" growing out of the Unconscious. (54:10)

For Spino, his running time is his thinking time, his art form. "Running offers increased vitality and awareness; it is my yoga and from it I have found new energy for the requirements of my daily life." (52:41) Spino's objective is to join the reflective discipline of meditation with running so as to achieve mind/body integration, to discover our larger selves. He experiments with various sequences of meditation and types of running; he conducts workshops and classes so that others may begin to experience the inner-spaces of running, and he discusses types of training programs which are oriented toward developing not only greater self-awareness but also the awareness that we may be a part of a vast oneness. Spino says,

During a run over a number of miles many thoughts pass through the mind. As an individual becomes more fit he spends less time concentrating on the physical activity and has the possibility of transcendence. With optimum fitness altered states of consciousness are possible. The state the mind enters when you are in excellent condition and running freely is similar in some ways to the mental set achieved in meditation. (52:77)
Rick Champion, known as Baba Rick, combines tennis and Yoga. This "Yoga-Tennis," which appeared in 1972, promotes a tensionless tennis plus a more relaxed lifestyle. It is meditation in movement. Yoga is used to help one relax, to find one-pointedness of mind, and to flow better. (12:9) Champion also is pursuing the development of a program which will combine Yoga, Tai Chi, Aikido, and other forms of meditation with tennis.

Champion explains that the concept of \( \text{Ki} \) is central to the Yoga-Tennis approach. \( \text{Ki} \) is the center of the unit of energy known as the self—body, mind, and spirit. The center of the physical body, what we call the center-of-gravity, is that point through which the mind directs the body's activities, and the mind must be in unison with those movements. (12:25)

While Herrigel, Spino, and Champion have published accounts of their searches into sport, other sport figures also are exploring the incorporation of mind techniques into sport. Smith (51) in his book \textit{Powers of Mind}, includes a section on "Sport as Yoga." He relates some experiences of Michael Murphy's pursuit of the "funny spaces" which occur in sport; of his own experiences with Tim Gallwey's egoless approach to the teaching and learning of tennis; and of conversations with Torbin Ulrich, a Danish tennis pro, who says things like, "In music I try to let the sound take over and consume my concentration, and the same in tennis." (51:205)
Diana Nyad, a marathon swimmer, is striving for what she calls "physical intelligence" in her swimming. (11) She explains that physical intelligence is where her imaginative and intuitive faculties interact more fully with her rational problem-solving faculties. She states that she is aiming to develop right hemisphere "thinking," and that the people she most admires all have it. Muhammad Ali has it. Diana says,

He's got his strategy, but he doesn't say to himself, "Okay, I'm going to make my feet dance and then the left punch." He's in a mesmerized world. He's floating. Evonne Goolagong has it, but Chris Evert doesn't. I'm sure that at any given moment all she's thinking about during a game is beating that person on the other side of the net. (110:39)

While some athletes are pursuing the joining of these various mind techniques with sport, other athletes just are practitioners of some of the mind science disciplines. Joe Namath, Bryan Salter, Willie Stargell, and Ron LeFlore are among those using Transcendental Meditation. Others have pursued Silva Mind Control or Arica. Clint Jones has tried all three, and states, "I'm interested in doing a comparative study of these techniques to see what they're doing and then putting them together in a package which I feel is more appropriate for the common man." (132:98) While the main purpose is learning these techniques for these individuals seems to be for the enhancement of their lives generally, some do state that there is a specific influence in their sport activities. For example, pro football player Bryan
Salter says, "T.M. enables me to use all of my potential and get the most out of my ability." (132:99)

Sport as a Realm for Experiencing

Utilizing sport in direct conjunction with meditation or with one of the other mind control systems seems designed for producing altered states of consciousness. However, not all nonordinary experiences in sport can be tied to such pursuits. We do acknowledge that experiences of nonordinary states of consciousness do occur within people's lives in general. As sport is a human mode of being, it seems reasonable to assume, therefore, that such incidences are capable of occurring within the realm of sport.

Michael Murphy is direct in incorporating descriptions of nonordinary states of consciousness into his writing. His book, Golf in the Kingdom (40), has been called "either a book about golf seen through mysticism or a book about mysticism seen through golf, or maybe both." (136:37) The fact that it is a novel does not detract from the authenticity of its Eastern influence. Besides relating his encounters with Shrivas Irons, who directs, "When ye swing, put all yer attention on the feelin' o' yer inner body--yer inner body," (40:81) Murphy includes, in other sections of the book, some of Shrivas' suggestions for "hearing the inner sounds and rhythms and letting them enter your play."

Since the time his book was published, Murphy states that he increasingly has become aware of the large number of similar incidents which occur throughout the sports realm.
He observed that "relatively few sports-people have the language or philosophy to interpret altered states like these, and very little of it finds its way into their biographies or into their reports to the media." (41:99) In one of the most widely quoted articles, a discussion between Murphy and John Brodie (118), former quarterback for the San Francisco 49ers, Brodie states,

There is a side to the game that really hasn't been described yet— that "hidden" side of sport you talk about in your book, things having to do with the psychological side of the game, with what we might call "energy flows," and the extraordinary states of mind performing athletes sometimes get into. I've been reluctant to talk to sportswriters about these things because I'm afraid they would reduce them to categories they were more familiar with. (117:19)

Brodie goes on to give examples of non-ordinary states of awareness which include experiencing time in slow motion and such paranormal phenomena as telepathy and psychokinesis.

Recent research by physical educators and/or by sport philosophers also has produced evidence for what might be interpreted as occurrences of nonordinary states of awareness.

Davis (146) noted changes which occurred in the experiencing of fear and of enthusiasm during the rock climbing activities of the high rappel and the vertical rock climb. He surveyed the graduates of five Outward Bound Schools regarding the intensity of fear and of enthusiasm experienced at each of thirteen stages within these activities. Davis found that it was possible for each individual to indicate particular moments as more or less fearful (or enthusiastic)
than others. Ludwig (113) has identified that changes in emotional expression when experienced as extremes may be indicative of a shift to an altered state of consciousness.

Stone (150) explored the kinds and sources of meanings found in the acts of surfing and skiing by means of an analysis of published materials relating to the experience of these acts. Descriptions of specific encounters, sorted according to the content of each, resulted in the emergence of features which could be indicative of a shift to an altered state of consciousness. These included: time, spatial aspects, the wave/ski slope, external forces perceived, danger, sensations, emotions, feelings, events happening to the performer, etc. Stone found that the descriptions which were intellectually- and/or feeling-laden, rather than functional, were significant in determining the sources of meaning.

Through the use of techniques for self-analysis, Thomson (152) and Kelly (147) explored their own sport experiences. The phenomenological method based upon the works of Merleau-Ponty was selected by Thomson. She tested its usefulness as a technique for self-analysis of sport experience through application of it to her experience in golf. Kelly's study, based on the writings of Marcel and of Merleau-Ponty, examined and clarified the phenomenal body as it is self-experienced. Her analysis of her experienced body in swimming revealed three main concepts: 1) A person experiences one's own body as being oneself; 2) a person's
movements are experienced as being the completions of one's conscious intentionality; and 3) a person experiences one's own moving body as being in a spatial-temporal relationship with external phenomena. (147:201-202)

Ravizza (149) examined athletes' most wonderful, most blissful, most joyous moment of their sport experiences in order to determine whether or not the phenomenon of the peak-experience, as described by Maslow, occurs in sport. From interviewing twenty athletes about their greatest experience in sport, Ravizza analyzed their descriptions for common characteristics. He found only four characteristics common to these twenty peak-experiences in sport—uniqueness of the experience, non-voluntary aspect, transience, and self-transcendence. Ravizza reported that only two of the twenty described their experiences as being of the nature where ultimate truth was experienced, and only two of the twenty referred to their experiences as being "religious" or "sacred" for them. (149:112-113) One, a cyclist, stated,

It is like a moonbeam, it doesn't belong to anyone, it belongs to everyone. You can't hold it in your hand, because when it is there, you lose it. (149:113)

As Maslow identified many other features of the peak-experience in addition to these four, it appears that the experiences which were reported in this study, while being indicative of altered states of consciousness, were not all of the dimension of the mystical state of consciousness implied in Maslow's "peak-experience."
Thomas (151) identified four criteria necessary for the occurrence of the "perfect moment" in sport as an aesthetic experience--authenticity of intent, expertise, the concept of the whole person acting, and the individual's total involvement with and relation to the sport experience. As described by Thomas,

The perfect moment is complete. It has a harmony, a relationship of parts. . . . There is nothing left to be done and there is a sense of wholeness and correctness in its occurrence. (151:122)

It appears that one's state of consciousness during the perfect moment may be similar to that of the highest state of consciousness; however, Thomas states that "although the perfect moment borders on being mystic, it is not. . . ." (151:120) No explanation is given for this determination.

The necessity to plan for the sport participation, including one's own skill level as well as the strategies to be employed, while not a guarantee for aesthetic experience, was deemed by Thomas to be integral to establishing an environment in which transcendence might occur. This influence of the set and the setting upon the ensuing experience appears to be the same phenomenon as that which has been noted in the studies on altered states of consciousness.

The importance of the difficulty of the activity and the skill level of the athlete also have been discussed by Ravizza and by Csikszentmihalyi. Ravizza notes, "The athlete must have a basic skill necessary for the

1See Chapter III for a discussion of the highest state of consciousness.
2See Chapter V.
for the activity." (149:164) Csikszentmihalyi (13) states that if the activity is either too simple or too demanding for the ability of the person, anxiety or boredom results, not "flow." "Flow" is the merging of awareness and activity. "When we get totally immersed in a sport or creative act, we lose sense of time and the external world." (91:35) The characteristics in "flow" outlined by Csikszentmihalyi include an intense centering of attention, alterations in the sense of time, clarity of response, and an extraordinary sense of control.

With the exception of Csikszentmihalyi, the previous investigators have focused on sport experiences as "experiences" rather than as indicative of states of consciousness. Murphy (41) is another of only a very few writers to date who has delineated specific attributes of these altered states of consciousness which are experienced in sport. He notes that the reports of transcendence by athletes are similar in many ways to those of shanans, Sufis, Zen masters, and yogis. Murphy also draws our consideration to experiences which might be interpreted as "siddhis" in sport. "Siddhi" refers to the extraordinary powers or occurrences which emerge when one practices a meditational discipline. Murphy delineated a set of "Physical Siddhis."

This set encompasses many types of physical experiences, not just those which might be classified as "sport."

1. Extraordinary control of the body processes.
2. Ability to change shape, size, and mass.
3. Invisibility.
4. Auras, lights, the odor of sanctity, emanations of energy.
5. Levitation.
6. Bilocation, being in two places at once.
7. Stigmata, tokens of espousal and other signs on the body.
8. Ability to pass through solids.
9. Incombustability and impassability.
10. Incorruptability at death, and freedom from the aging process.
11. Androgyny; ability to change sex; the 32 male and 32 female signs of the perfect Buddha.
12. Precognition, prophecy, retrocognition, time travel.
13. Clairaudience.
14. Telepathy, clairvoyance.
15. Synaesthesia.
16. Psychokinesis; moving objects at a distance through psychic power.
17. Feats of extraordinary strength and endurance. (41:106-110)

For Murphy there is no doubt that altered states of consciousness have and do occur in sport. He indicates that the following are characteristics which might be found during such experiences:

1. Extraordinary clarity.
2. Extraordinary focus and concentration.
3. Emptiness. A sense of nothingness or void.
4. Deautomatization.
6. Accesss to larger energies, insights and behaviors.
7. Communication with or perception of disembodied entities.
8. Ecstasy, delight, supreme aesthetic enjoyment. (41:100-104)

PART II

You look at where you're going and where you are and it never makes sense, but then you look back at where you've been and a pattern seems to emerge. And if you project forward from that pattern, then sometimes you can come up with something. (46:162)

The normal state of consciousness usually is defined as the one in which that individual spends the major part
of his or her waking hours; and, anything which is not within
the range of that state of consciousness, is viewed as being
indictive of a shift to another state of consciousness,
commonly referred to as an "altered" state of consciousness.
Some writers, in the area of sport research as well as in
psychological research, have described characteristics of
subjective experiences which are indicative of the occurrence
of these various states of consciousness. Models are being
developed for identification and classification of these
various states of consciousness. In this investigation,
the writer reviewed a number of these which seemed to have
implications for the realm of sport.\footnote{See Chapter IV for the discussion of taxonomies.}

Each of the models for the classification of states of
consciousness which was reviewed had some elements which
seemed relevant to the realm of sport, but none of them
seemed to be applicable in their entirety. The discussions
of Sartre and VanDenBerg, while providing excellent analyses
of some of the differences among states of consciousness as
they are experienced, did not lead to a classification
system. Some of the characteristics described in Campbell's
seven levels of consciousness do resemble those occurring
in some sport experiences; however, his model indicates
that these states are on a continuum and that they are
experienced in a definite sequence. The categories delin-
eated both by Masters and Houston and by Grof are based
upon subjects' reports obtained in psychedelic research
studies; and, while reflecting the experiential contents of these reports, they emphasize a high state of mental involvement and infer only a low or nonexistent amount of physical involvement. Both Fisher and Lilly suggest models based upon a variety of ways for experiencing nonordinary states of consciousness. Fisher's cartography is oriented to explicating the range of ways for experiencing altered states of consciousness and provides little information on how the various points or states are subjectively experienced. The schema outlined by Lilly is based on the subjective contents of his personal explorations which encompass a broad spectrum of ways for experiencing nonordinary realities; but, it extends well beyond the types of experiences occurring in sport. However, the depth of analysis provided by Lilly, and further delineated by Tart, identifies that there is a range of experiences within each state of consciousness; that there are many states of consciousness each of which is noticeably different from the others; and that each state represents a region of experiential space.

States of Consciousness in Sport

Within certain research studies and theoretical writings, there are some discussions which allude to the experiencing of various states of consciousness during sport participation. In addition, a number of participants have indicated that it is the subjective dimension of the experience which makes certain sport experiences so meaningful,
and which provides the incentive for continued participation. However, very little has been written about consciousness and sport experience per se; and, at present, there is no format for the classification of the various states of consciousness which are experienced in sport.

It has been suggested both by Murphy (40) and by Krippner (79) that experiences of nonordinary states of consciousness seemed tied to right hemisphere functioning. This may explain part of the difficulty one has in securing verbal descriptions of these experiences. Kleinman has noted that "complete engagement in an act, any act, is essentially a nonintellectual affair," (108:94) but faithful description brings forth significance of the act to consciousness. (107:33) Further, such descriptions probably come closer to capturing the concreteness of the experience—"its spirit and essential nature, than any intellectual abstraction or after-thought." (108:94)

Although not prolific by any means, there are many descriptions of personal experiences in sport, which appear in print, in which one could denote that an altered state of consciousness has been experienced. These seem to go unrecognized by the reader. It is suggested by this writer that a classification system would provide a different perspective for the interpretation of these accounts.

Using portions of Lilly's schema as a guide, acknowledging the influence of the various researchers cited, and reflecting upon the sport experiences themselves,
this writer proposes the following model as a means for conceptualizing the various states of consciousness experienced in sport participation. (See Table 2.) The model identifies five distinct states of consciousness—Dissociated, Neutral, Detached, Fused, and Transcended—to encompass the range of states of consciousness in sport experience. These states are viewed as being discrete states in accordance with Tart's definition which indicates that a discrete state of consciousness represents a region of experiential space where there are degrees of variation of experiences even though the overall pattern remains recognizably the same. (58:121) In addition, there has been no attempt to identify any one of these categories as indicative of one's normal state of consciousness, for what may be "normal" for one individual may be viewed as an altered state of consciousness by another. Also, all of these states might be identified as altered states of consciousness if participation itself precipitates a shift away from one's normal state of consciousness.

**Dissociated State of Consciousness.** This state is associated with lack of integration of mind and body functions. One seems prone to distractions, to shifting the focus of attention away from oneself. There seems to be a lack of central focus—a fragmentation.

As explained by nationally ranked gymnast Jani VanEman, you can work your body all day long and gain nothing when your mind is not together,
Table 2: STATES OF CONSCIOUSNESS IN SPORT EXPERIENCE

<table>
<thead>
<tr>
<th>State of Consciousness</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dissociated</td>
<td>Lack of unity between mind and body functions; distractions; frustration; impatience; lack of focus; a restlessness; fragmented. Doing more than one thing at a time. One lacks internalization in this state.</td>
</tr>
<tr>
<td>Neutral</td>
<td>One is a unitized entity with a single, well-organized direction. Neither in a positive nor a negative emotional state, but neutral. The state for doing teaching and learning with the maximum facilitation; for receiving, reflecting, and integrating of skills, strategies, etc.; the planning state; objective, completely rational.</td>
</tr>
<tr>
<td>Detached</td>
<td>Intensity of central focus; lack of awareness of peripheral elements; the doing of one thing at a time; functioning in the &quot;here-now&quot;; increased awareness of body and mind functions. The doing state. Usually a neutral state but may have negative or positive overtones depending on one's felt level of control.</td>
</tr>
<tr>
<td>Fused</td>
<td>All is operating smoothly, automatically; blending with the activity; pure experiencing; being in control but not &quot;trying&quot; to control (no conscious control). The merging of action and awareness in &quot;flow&quot;; one's identity is lost in activity. Usually experienced as a positive state. Siddhis may be experienced.</td>
</tr>
<tr>
<td>Transcended</td>
<td>Blissful state; cosmic love; cosmic energy; a blending with the universe; &quot;oceanic.&quot; There is a loss of external reality dimensions. Usually in response to a culminated or completely harmonious performance.</td>
</tr>
</tbody>
</table>
... I was on a team in Tulsa where we were doing tricks over and over for five hours. Now I just stop and say to myself, "Think about it!" (143:56)

Bert Blylevan, pitcher for the Texas Rangers,

It's so easy for me to lose my concentration. Sometimes it's something that happens before a game. Mostly it's something during a game. If things are going easily for me I start to think ahead a few batters, maybe to the end of the game and what I'm going to say to the reporters after I pitch a shutout.

(104:50)

Golfer Arnold Palmer explains,

I know I am more sensitive to distractions than I used to be; I find it harder to do what a golfer must do, which is to put everything out of his mind except the task at hand. (124:30)

Shirley Babashoff, when asked how she passed the time while swimming long distances in practice, answered,

Sometimes you sing songs, or look at the gum on the bottom of the pool. . . . (128:33)

1972 Olympic track hopeful Steve Williams commented on his performance in a 100-meters race,

The first part of the race was just terrible. I ran like a spectator. I was too concentrated on how the other runners were doing. (131:22)

In marathon running, it has been observed,

The best runners are those that attend strictly to business once they are on the course. The less successful long-distance men tend to be those who "disassociate," who admire the scenery or who let their minds wander. (82:87)

This state probably is experienced more often than any other, not only during the learning process but also during much of our routine participation in sport activities.
This may be a reflection of our lack of attention to, or practice in mental discipline. We may not even realize that we are thinking about tomorrow's examination, yesterday's school board meeting, a letter to be written, etc. while at the same time trying to improve a golf swing, shoot free-throws, or run two miles. In addition, we may be unaware that we are preoccupied with anticipating and looking for the approval or criticism of others rather than focusing on ourselves and on the performance itself. In fact, it seems that some people actually plan to become frustrated, to merely "go through the motions," to fail.

When energy is expended on such unrelated tasks as these, there is less available for the execution of the activity being performed at that same time. While we are capable of doing more than one thing at a time, we must realize that this may not lead to the attainment of a designated objective. Statements, such as those cited above, often show the effects of dissipating energy in more than one direction at a time. While most of these statements concern competitive situations, it is easy to see the relationship to practice settings, to learning experiences, and to noncompetitive environments.

Neutral State of Consciousness. In the Neutral state one functions as a unitized entity with a single, well-organized sense of direction. A key feature of this state is that there are absolutely no positive or negative emotions; it is neutral, objective, and completely rational.
This is Lilly's Level 48. When one functions at an optimal level in this state, there is efficient execution of teaching, learning, integrative, and reflective activities. This is the level for planning game and race strategies.

The importance of this state may be more evident in high risk activities. Bil Gilbert, who engages in spelunking, observes,

Self-possession takes various forms. One is knowing what you can do if you take hold of yourself firmly. Another is knowing what you cannot do, the limit beyond which mind-over-matter games become dangerous fantasies. (94:91)

John F. Roskelley, a member of the first American conquest of Mt. Dhaulagiri, the sixth highest peak in the world, comments on climbing,

After 10 years of climbing you become an expert in your sport. You have to look at it with perfect objectivity ... without any emotional feeling. You look at it like a painting; what it needs next to be a piece of art. (78:13)

However, the ability to assume this state of consciousness is needed in many other sports as well. Frank Shorter, Olympic marathoner, explains about race preparations,

To start with, you can't go out and get psyched up for the thing. The best way to prepare emotionally is to be very calm, almost back into it. (82:86)

And former tennis star Sidney B. Wood Jr., states,

It's essential to have a sort of game plan against your opponent, whatever the level of play. It increases one's attention; the player concentrates more because he has a design in mind. (129:104)

Often there is the necessity for returning to this Neutral state of consciousness even during competition. As
Barbara Ann Cochran, gold medalist in the slalom during the 1972 Winter Olympic Games, relates,

... I was leading after the first run! I had a chance to win! But I had to calm down. I had another course to memorize— one more run to go... finally I was calm... I could learn it now. (81:31)

Lilly states that this level is improved through exercises for quieting the mind and for improving physical conditioning. (33:165) Dick Dorworth, who competes in speed skiing where the record is 114.068 mph agrees,

Much of the conditioning, equipment maintenance, practice routines, and relaxation is designed as much to convince the mind as to condition the body. (85:47)

As we can see, the Neutral state of consciousness is needed in a variety of situations. Often during the course of an event, game, or match, it will be essential to return to this state to evaluate what has occurred, to assess the situation, and to plan the next move. Many activities seem to have planned for this as they incorporate natural "breaks" within the course of the activity— football, basketball, golf, tennis, volleyball, field events, etc. Some even allow for extended breaks to be requested, e.g. the "time-out" in basketball and in football.

Returning to this state while in the middle of a performance may have a negative effect on the outcome. In actual skill performance, it is essential to allow the right hemisphere functioning to dominate. Many bits of information must be handled simultaneously for smooth execution to be possible. This "automatic" aspect is disturbed by
verbal, logical thought processes. Although this point may best be understood when referring to high risk activities like springboard diving and gymnastics routines, it is undoubtedly just as evident in other activities.

This state can be very beneficial for analyzing one's own performance and/or the performances of others. It can be used in mimetic practice, in slow-motion rehearsal of certain techniques, or in focusing on certain phases of a total skill during practice. If this state could be utilized in place of the Dissociated state of consciousness, we would have all one's energies at that point focused on a single task. This would seem to suggest improved efficiency both in the learning and in the practicing of these techniques.

**Detached State of Consciousness.** When in this state there is an intensity of central focus, of being concerned with the present moment, the "here-now." Peripheral elements cease to be of concern as the span of attention is narrowed to only essential components. There is an increased awareness of the totality of mental and/or bodily functions. However, in this state one has not merged into the activity. There is the retention of one's identity as being separate from that which is being performed. This state is usually emotionally neutral, but it can have negative or positive emotional overtones depending on one's felt competence to handle the situation.

A person must be in this Detached state, or in the Fused state, for successful execution of physical skills.
There must be a shift in the direction of right hemisphere functioning; a willingness to cease to analyze, to pass judgment, or to remember past events. This is a shift to awareness of the total skill and the "continuous" performance.

Narrowing of the span of attention to exclude peripheral elements is one of the characteristics often recognized by athletes. Olympic competitors Nadia Comaneci, Romanian gymnast, and Norway's Bjorn Wirkola, ski jumper, relate their awareness of having closed out the crowd.

I think so much of what I must do, I do not hear the crowd. (119:21)

I do not even become aware of the crowd until I land, and then I hear them roar and suddenly know they're there. (122:46)

And Erwin Thaler, Austrian Two-Man bobber, states,

... once the sled gains speed and I know that the man behind me has pushed properly and jumped on correctly, every thought except that of the winding road of ice has vanished. (137:38)

It is only after returning to the Neutral state that one is able to provide a verbal account of the nonverbal, sensuous awareness which is being experienced during performance. Former ski racer, Betty Bell, recounts this dimension of awareness which she experienced when in the starting gate for a race,

I feel everything: my kneecaps against the snug pull of my pants; my ribs against the skin-like top; the extra pressure of the number which stretches across my chest and back and ties beneath my arms; the straps of my poles pulling down at the base of my thumbs and wrists; each finger within my gloves secure around the grips.
My mind starts down the course. I see myself as though I am a spectator . . . the initial thrust with my poles . . . the quick skate . . . the folding into a tuck down this first, steeply falling-away traverse. (72:25)

One needs to be highly aware of the various bodily states being experienced, including those of physical discomfort. It is important that these be recognized for they are important monitors of physiological conditions. Knowing that these are going to occur and recognizing when they happen are important aids to performance in many activities, particularly endurance activities. For example, marathon swimmer Diana Nyad acknowledges the kinds of conditions which occur in training,

Just getting in that pool for seven straight hours is unbearable to me. I can't stand it. I'd do anything else instead of swim. All those boring hours up and down the pool. It's grueling. There's nothing physically pleasurable about it. If you're doing a hard workout, you're throwing up in the gutter. At night you cling to your pillow and just hope that your body revives before you have to go back and do it again. (110:37)

And racewalker Larry Young describes his awareness during a race,

I try to stay relaxed, to be as smooth as possible. You have to, if you're going to maintain your pace over a long period. But sure, I'm hurting out there just like everybody else. (77:34)

There are times when pain or fear are encountered, sometimes unexpectedly. It still may be possible to remain in this Detached state of consciousness providing that one is able to maintain a central focus and a reliance on nonverbal information processing. To illustrate, Bjorn Borg played
in a tennis match with a groin muscle injury.

I continued to play because I thought that perhaps I was just a little bit stiff. It got worse and I had problems in moving up and down the court. I started feeling pain by the fifth game. I was difficult for me to go to the net. You have to get under the ball on grass but I couldn't do it. There was no way I could bend my knees, there was so much pain. (102:14)

Pro golfer Sandra Palmer recounts,

I key myself to when I'm in contention coming down those last few holes. It is a miserable, sick, lonely feeling. You're so scared, sometimes you can't see. (127:80)

It is evident that this state of consciousness includes a wide range of experiences; however, there is a common thread or organizational pattern among them. This denotes a resemblance even though these experiences are far from being identical.

**Fused State of Consciousness.** In this state there has been a merging of awareness and action; one's identity has been blended into the activity. This state has been referred to as "pure experiencing" or as "beling in flow." It is Lilly's Level +12. Everything is operating smoothly, automatically, harmoniously. There is a sense of being in control without controlling. This state is usually associated with positive emotional overtones. "Siddhis," the extraordinary occurrences and powers which are manifestations of your awareness, can occur at this level.

The "perfect moment" in sport described by Thomas, and the "passing-beyond-in-silence" noted by VanDenBerg, are examples of this state of consciousness. There no longer
is any identification or separation of the self and the performance. You are the gold swing, the back handspring, the forward pass.

This state is not experienced as often as the Detached state. This may be due to lack of mental practice in shifting to the receptive mode of being, an unwillingness to give up total rational control, or an inability to recognize when such a state actually has happened. Then too, we do not have verbal terminology which seems to reflect adequately the felt intensity of these subjective experiences. According to Stone, former Canadian Olympic skier Nancy Greene Raine feels that

... no serious skier would think of discussing his feelings about skiing. ... if the listener does not ski then he will not understand what the skier is saying anyway; if he does ski, then the skier need say nothing at all. (150:114)

Not all skiers or other athletes are as resistant to describing their experiences, but most note that there is no substitute for experiencing per se. The reader must try to assume an "intuitive" level of understanding concerning verbal accounts of this state. Some examples include ski jumper Bjorn Wirkola recounting the events from the moment of take-off,

One must not uncoil until one is about to start floating. And then! Suddenly you meet a flow of air coming up the hill. You can feel it hit your belly as you uncoil. Wonderful! And you actually ascend slightly before you start to descend. You lay out over your skis, arms back at your sides, and lie perfectly still. (122:46)
Marathoner Frank Shorter notes,

It's like reading a good book. After a while you're not really conscious of reading. It's just images racing through your head. It is the same with running the marathon. . . . I get so seriously involved with the race, with what my body is doing, I don't have time to notice things around me. (82:87)

Hal Cohen, a high school basketball player from the state of New York, shot 598 consecutive free-throws at the end of practice one day. He recalled, "After 25, I really had a good feeling, I was in a groove." (114:3B)

Speed skiing enthusiast Dick Dorworth talks about experiencing speed,

There is a point in big speeds, when feelings and impressions (experience?) break through acquired limitations of skiing. At one speed, you're involved in a fast, tough schuss; a few kilometers more and you are hurtling through space as if time didn't exist. A quiet, insistent roar follows you. If you have maintained position, you have surpassed your own limitations. I have known happiness there. (85:47)

Surfer Laura Blears Ching recalls,

It's you and the wave and the board. It's a flowing free kind of feeling. Trying to be one with the wave. Each wave has a personality, it's a moving thing. You be as smooth as you can. You go to the lip and go to the foam. You feel really good. (145:60)

Pro golfer Janie Blalock, who finds it hard to describe her state of mind during a tournament, says,

I'm almost in a hypnotic state, oblivious to everyone and everything. I lose track of time. I walk around in a daze. Inside, it's mellow feeling. No highs, no lows--it's a perfect frame of mind for competition. I don't always have that calm feeling. Sometimes I get so charged up before a tournament I'm burned out by the time I get to the first tee. (73:24)

The recognition of an experience of a "siddhi" reflects an awareness of the types of unusual occurrences which can take place when one is in this state of consciousness. Pro
football quarterback Terry Hanratty relates his awareness of a change in his perception of time as he drops back to pass,

"It's amazing how many people you can look at, and pump. You're talking to yourself through your mind. "Uh-oh, linebacker's swooping to the outside, I better throw inside... Dirty sonuvabitch fooled me—I though he was going to be man and he rotates a zone on me--so better come back to the inside and see how the out-in looks..." You do all that talking in your mind in three seconds. (74:69)

A widely quoted occurrence happened to John Brodie,

"After I came to the line of scrimmage and started my snap count, I saw the defense shift into a position that might not happen in the game again. I gave the team a basic pass audible and gave Gene [Washington] a little signal we had worked out, faded back, and threw him that pass. When I threw it I knew it was going to connect..."

'Pat Fisher, the cornerback, told the reporters after the game that the ball seemed to jump right over his hands as he went for it. When we studied the game films that week, it did look as if the ball kind of jumped over his hands into Gene's. Some of the guys said it was the wind--and maybe it was. (118:20)

Transcended State of Consciousness. This state is characterized by a high level of affect. It may be experienced as extremely blissful, "oceanic," cosmic love, cosmic energy, a blending with the universe. Everything feels ideal. There is a moving beyond oneself or one's immediate world. In sport, this transcendence goes beyond one's immediate participation, although it is the result of that participation. This may occur in response to a culminated or completely harmonious performance.
Diana Nyad was asked why she continued marathon swimming. She answered,

In the most concrete sense, the reason I keep doing it is for the tremendous rush I get at the end of any great swim. . . . I'm sure there are comparable intellectual experiences, but nothing else gives me this absolute orgasmic high. I'm overwhelmed by the strength of my body and the power of my mind. For one moment, just one second, I feel immortal. (110:38)

Mountain climber John Roskelley relates,

Once atop Dhaulagiri or any other difficult climb, the feeling is just a fantastic relief. (78:12)

Mark Cameron, 23-year-old weight lifter, in reaction to the 352-pound snatch,

How does it feel with all that weight over my head? Euphoric, man, I feel euphoric. (134:34)

Frank Shorter comments,

Only a great feeling of thankfulness sweeps over you. There is no sense of conquest, none of this business about vanquishing anybody. My only thought is, "Here we are, dammit! We made it!" (82:78)

Pro quarterback Terry Bradshaw says,

When I throw a good pass I feel it all over. It's the most beautiful feeling. When you throw with a good whoosh, a good bjonng. Just turn it loose and a perfect spiral, just super pride, it fills you up inside, . . . Even if its intercepted. You drop back not worrying about a thing and see that pattern and throw that thing and hear the crown roar—that's a feeling nobody can have but yourself. (74:68)

The experiencing of this state seems to be a rare occurrence in sport. Ravizza noted that only ten percent of the athletes he interviewed described their experiences as being "religious" or "sacred" for them. It may be that this state is reached only through the type of long arduous mental and physical disciplining which is engaged in by top level
athletes. This position would be consistent with that ex pressingly by most researchers investigating mystical states of consciousness. Another possibility is that because this state involves a transcendence of the dimensions of external reality, performers seek to maintain the Detached or the Fused state of consciousness in order to retain the type of awareness needed for successful performance.

**Changing States of Consciousness.** Top level athletes usually are aware of their state of consciousness and/or changes in their states of consciousness. In fact, it appears that many even look for certain components in their experience that alert them to the fact that they are in a different state of consciousness from their ordinary one.

Golfer Janie Blaclock states,

> When your game is on you don't have any doubts. You have a good feeling over the ball, a clear mental image of the shot you're about to hit, and you hit it. But when your game is off, you can't find that good feeling— it's just not there. Then you lose sensitivity. You put your hands on that club and it feels like you're holding a telephone pole. (73:21)

Julius Erving, known as "Dr. J," plays pro basketball for the New York Nets. It has been said that the Doctor's best games have a certain rhythm, and that it is his habit to save his incredible moves until after the first quarter. Dr. J explains,

> I don't like to get into the offense too quickly. I prefer for the guards to get into it first. That way I can determine the flow and my best course of action. Then I can let the game flow toward me. By the second quarter I'm ready to start swooping. But it's important for me to go with the flow, and not force it. (130:26)
Richard (Rick) Slager, college quarterback, relates the effects of pregame planning on his performance in the game itself:

I made up my mind I was going to be relaxed and cool for the opening game. It worked great. I slept good. I wasn't a bit nervous. I was so cool for Boston College I didn't get up for the thing. I was like in a trance the entire first half. (142:17)

These various states of consciousness seem to be conveyed to others as well. Arnold Palmer relates his observations concerning various pro golfers,

I keep thinking of fine students of golf I have known who analyzed the game as painstakingly and thoroughly as a scientist analyses an experiment in his laboratory--yet never became good players. And of others who knew nothing about the fundamentals of the game but simply invented a new and rather unlikely swing that happened to fit their physical talents, practiced it faithfully--and became Hall of Famers. (124:28)

Honoré Bonnet, Coach of the 1968 French ski team, said

With each racer, I won't know what he or she will do until just before the start. Then, I can tell by their eyes if they will be good. If I see that Killy's eyes are cold and flashing just before the start, I will not have to worry. He will do something wonderful. (103:37)

**Methods for Inducing States of Consciousness in Sport**

Lilly points out that "it is easier to reach a level of consciousness or a psychic space once you have been there before." (106:77) He states that the basic skill for self-exploration of these spaces is in the establishing of the "fair witness" or the "witnessing self," which Lilly describes as "becoming an observer and watching the operation of the programs which are governing your thinking and
behavior." (106:92)

Although it is not the main intent of this investigation to explore ways for inducing states of consciousness in sport, the approaches being suggested by Gallwey (21), Leonard (30), Suinn (139), and Csikszentmihalyi (13:96) appear to offer some paths in this direction.

In the "Introduction" of his book, The Inner Game of Tennis, Gallwey explains,

Every game is composed of two parts, an outer game and an inner game. The outer game is played against an external opponent to overcome external obstacles, and to reach an external goal. . . . [The inner game] takes place in the mind of the player, and it is played against such obstacles as lapses in concentration, nervousness, self-doubt and self-condemnation. . . . it is played to overcome all habits of mind which inhibit excellence in performance. (21:13)

Gallwey explains that the key to the inner game is the development of "relaxed concentration," a mindlessness.

Concentration is the act of focusing one's attention. As the mind is allowed to focus on a single object, it stills. As the mind is kept in the present, it becomes calm. Concentration means keeping the mind now and here. (21:90)

Gallwey discusses several features of "relaxed concentration" in tennis, including letting go of judgments, learning to see your performance as it is, and trusting your body. Also, Gallwey explains techniques for developing this art of "relaxed concentration" such as the use of images, tips for becoming absorbed in the activity, and reminding us to "not try." It has been reported that Billie Jean King meditates upon a tennis ball; (136:40) and, that prior to a football
In The Ultimate Athlete, George Leonard (30) recommends participation in Energy Body workshops as a means for beginning to sense forms of energy and for becoming aware of shifts in one's own body-mind states that previously had not been recognized. In describing this awareness, Leonard says,

Sensing the Energy Body and practicing energy awareness is dancelike in its every particular—the concentration on breathing and balance, the openness to existence that comes from awareness of hara, or center, the Energy Body itself, constantly changing in size, shape, and density, and the ineffable but somehow festive energy streamers that seem to join all things. (30:238)

This approach, strongly influenced by Eastern philosophy and practices, is used to explore both the inner and the outer being. Leonard's "Ultimate Athlete" is anyone who, among other accomplishments, "joins body, mind, and spirit in the dance of existence." (30:256)

The 1976 Winter Olympic Games marked the first time that the United States provided on-site psychological services for their athletes. Richard Suinn (139) head of the department of psychology at Colorado State University, successfully utilized his "visuo-motor behavior rehearsal" method (VMBR) with such athletes as cross-country skier Tim Caldwell and Lyle Nelson, member of the Biathlon team. Suinn classifies his method as an "imagery-rehearsal" technique used in conjunction with relaxation as a means for
reducing stress. He has developed various 'thought-stopping' techniques to combat the negative, doubting thoughts that sometimes lower an athlete's confidence and interfere with performance. For example,

I had one skier practice to a melody with a strong driving beat. Whenever a negative thought appeared, the skier first thought, "Stop!" to prevent a repetition of the thought; he then immediately recalled the music and focused his attention on skiing to the beat. (139:43 emphasis mine)

Mihaly Csikszentmihalyi provides a formula for inducing "flow" which includes ways for changing oneself as well as one's environment. The elements include matching the difficulty of the challenge with the person's ability to meet it; focusing of attention; focusing on the moment so that one can respond to feedback from the immediate situation; and staying relaxed, but alert. (96) Terry Bradshaw, pro football quarterback, seems to have mastered these ingredients,

"Relax. Confidence. Concentrate. Keeping a cool." I say those words to myself, and try to think about 'em, and they have an effect on me. I say 'em and stop letting people bother me. I'm totally committed to the football game. I can say the words right now and have a feeling come over me. (74:68)

Evidence that flow had stopped is provided by golfer Janie Blalock,

I was still hitting the ball very well, knocking it close every time, but I started missing my putts. I didn't understand it. There was no reason for it. So I started trying a little harder. I started forcing things to happen. When they didn't, I became tense, then angry with myself for missing. (73:21)

Gallwey's art of "relaxed concentration," Leonard's sensing of the Energy Body, Suinn's "imagery-rehearsal"
technique, and Csikszentmihalyi's merging of awareness and action into "flow," emphasize that there is more to sport performance than just physical conditioning. Mental conditioning, including awareness of one's states of consciousness and a willingness to "go with" the experience, are important too. In seeking the proper route for shifting to these other realms of awareness, it seems that Shivas Irons has provided the starting point: "... put all yer attention on the feelin' o' yer inner body--yer inner body." (40:81)
Summary

Sport performance falls within the concept of "complementarity," for the alternate approaches for studying this phenomenon are functions of different conditions of observation, which appear to be mutually exclusive. The movement, i.e. the technique or the bio-mechanical or the physiological aspects, is analyzed via empirical methodology. The moving, i.e. the process or subjective experience, is accessible only through subjective reflection. For complete understanding, these two frames of reference are viewed as complementing each other. This investigation was concerned with the moving, with the subjective dimension of sport.

The purpose of this investigation was to examine the various states of waking consciousness which have been identified as occurring in the subjective dimension of human experience; to relate these to the experiences which occur in sports participation; and to synthesize a framework which might aid in the understanding of the subjective dimension of sport performance.

A variety of sources from philosophical and psychological literature concerning the nature of consciousness
were reviewed. Consciousness, while being a respected topic for philosophical analyses, came to be ignored by the field of psychology for it did not lend itself to the empirical methods of science. Thus psychology turned exclusively to the study of behavior which could be observed. Recently, in response to the feeling that something had been left out, some individuals within psychology and in medicine began to rekindle the interest in the study of mental phenomena generally and of "consciousness" in particular. Also, the study of the personal realm of human existence in psychology has moved away from the exclusively pathological. Emphasis now is placed on understanding of the normal and the "self-actualized" individuals, and on transpersonal and paranormal experiences.

The question, "What is Consciousness?" seems only to be answered through reference to the personal and experiential. "Consciousness" is viewed both as indicating that one always is aware of being aware, and as focusing upon the particular contents which are in awareness at any one point. This investigation examined the areas of "ordinary" consciousness, bimodal consciousness, the highest state or mystical consciousness, taxonomies for classifying altered states of consciousness, ways for inducing various states of consciousness, and states of consciousness experienced during sports participation.

"Ordinary" consciousness is that normal, daily, waking state in which we spend the greater portion of our waking
hours. It had been assumed that the way in which this state was experienced was identical for all "normal" individuals. Recent writings emphasize the individual uniqueness of this state of consciousness. Common features of this state, as elaborated by Kerns, include: 1) Experiencing the personal self as existing within the boundaries of the physical body; 2) Experiencing the personal self as being separate from other objects; 3) Perceiving the internal and external world as confined within the usual time-space boundaries; 4) Perceiving time as being composed of the past, present, and future; 5) Experiencing emotions as being relatively moderate or absent; 6) Noting that the functions of memory are very adequate in most instances; and 7) Experiencing susceptibility to suggestion as staying within certain bounds. (148:252-255)

The alteration, addition, and/or deletion of any portion or combination of these elements may be sufficient to produce a shift into an altered state of consciousness. An altered state of consciousness is one that is recognized by the individual as being significantly different from one's normal state of consciousness.

The highest state of consciousness, or mystical consciousness, is one example of an altered state of consciousness. As has been explained, this state is indicative of "a self-transforming perception of one's total union with the infinite." (66:vi) This area of experience has received a great deal of attention in both the general and
the professional literatures. The research reviewed in this area of interest included the writings of Maslow, Assagioli, Deikman, and Pahnke and Richards.

Research in bimodal consciousness emphasizes that there are two modes of knowing. These correspond to the two hemispheres of the brain. The verbal-intellectual mode, the left hemisphere, involves reason, language, analysis, and sequence. The non-verbal and sensuous mode, the right hemisphere, primarily is responsible for spatial orientation, body awareness, artistic talents, and facial recognition. The importance of language function in our culture has led to an over-emphasis of the verbal-intellectual mode of knowing, where in fact, the importance of the mode is reflective of the type of information being processed. The "sensuous" mode has been found to be an essential component of one's highest capabilities and also has been linked with mystical experiences.

General classifications of nonordinary states of consciousness encompass a variety of different states ranging from the level of deepest sleep, through ordinary waking consciousness, to the highest level of Cosmic or Universal Consciousness. Krippner compiled a list of some twenty states. The development of the electroencephalograph (EEG) has resulted in an increasing number of studies in various areas of consciousness. The difficulty of this approach is that it does not provide any information on how the particular state was experienced by the individual.
A review of the taxonomies developed for the waking states of consciousness yielded a variety of approaches, each designed to meet a different purpose. The extensive studies on psychedelic drug induced experiences provided the bases for the classifications suggested by Grof and by Masters and Houston. Campbell's conceptual scheme of the progressive movement through seven levels of awareness was based on the writings of Maharishi Mahesh Yogi, founder of the Transcendental Meditation movement. From an historical survey of the literature on spontaneous mystical experiences, Pahnke identified nine interrelated features of mystical consciousness, and Pahnke and Richards identified other experiences which, while being forms of nonordinary consciousness, were not mystical. Fisher provided one of the most comprehensive analyses of the range of stages of waking consciousness in his "Cartography of Ecstatic and Meditative states." Approaching the task from far different experiential sources, Sartre, VanDenBerg, and Lilly used the procedure of "reflection" to arrive at their categories or dimensions of awareness based on their own experiences. While some of these taxonomies were very detailed, others were only in outline form. Although taxonomies seem to imply that experiencing a specific level of consciousness will be the same for all persons, most of these researchers emphasize the importance of individual differences which result in each experience having a uniqueness of its own. Tart stated that discrete states
of consciousness each have an over-all pattern or organization, and that these patterns are dynamic, not static.

Weil (64) has suggested that human beings not only experience altered states of consciousness, but also seem to seek out such experiences. Three methods for inducing altered states of consciousness examined were psychedelic chemical agents, meditation, and biofeedback training.

Psychedelic chemical agents, while not being physiologically addictive, should not be used without proper preparation and guidance. These drugs are very potent agents which are designed to open new realms of awareness for the user. The moving into these various realms of awareness is not under the same measure of personal control as is found with the use of meditation or biofeedback training.

There are many meditation forms available, some based on esoteric traditions, and others only utilizing some of their techniques. The meditational systems receiving increasing attention in the Western world include Zen, Yoga, and Transcendental Meditation (TM). All emphasize the development of pure concentration, of focusing on doing what you are doing and being aware of nothing else—the objective being to still the mind.

Biofeedback training is a recent phenomenon. The discovery of this technique has provided science with "proof" that there is more to man than just the physical self—one can control physiological functions by conscious control! Because the subjective phenomena experienced in controlling
certain brain-waves resembled that previously attained only through sustained practice of one of the traditional meditation systems, biofeedback training went through a fad stage of being promoted as Electric Zen or Instant Alpha. Numerous studies are currently in progress in the fields of medicine, psychology, and education. It remains for the future to evaluate the impact of this technique.

The attention devoted to these three techniques indicates the importance of each in providing information about various realms of consciousness. Regardless of the technique employed, the individual involved is the main influencer of the subsequent experience.

The realm of sport has provided both a direct relationship for experiencing altered states of consciousness and a setting where, due to the requirements for successful performance, nonordinary states of awareness often occur. Many persons with relatively successful backgrounds in sport participation are involved in incorporating specific mind control techniques with sport participation. These include Spino's "inner spaces of running," Champion's "Yoga-Tennis," and Nyad's development of "physical-intelligence" in marathon swimming. Recent investigations by physical educators and sport philosophers have begun to reinforce the relationship of sport participation and nonordinary states of awareness. Murphy has noted that there are similarities between reports of nonordinary sports experiences and reports of shamans, Sufis, Zen masters, and
yogis; Davis found that individuals are able to identify differences in the experiencing of fear and of enthusiasm when rock climbing; Stone explored the kinds and sources of meanings found in the acts of surfing and of skiing; Thomson and Kelly used procedures of reflective analyses to elicit features which occurred in their personal experiences in sport; Ravizza examined the occurrence of the phenomenon of the peak-experience in sport; and Thomas delineated criteria for the classification of the "perfect moment" in sport as an aesthetic experience.

As there was no format for the classification of the various states of consciousness which are experienced in sport, and none of the systems utilized in other fields of study, which were reviewed in this investigation, could be applied directly to sport, this writer proposed a conceptual model for this purpose. The model--States of Consciousness in Sport Experience--outlines five states of consciousness which appear to encompass the range of kinds of experiences which occur during sport participation.

1. Dissociated State of Consciousness. This state is associated with a lack of integration of mind and body functions. One seems prone to distractions, to shifting the focus of attention away from oneself. There seems to be a lack of central focus--a fragmentation.

2. Neutral State of Consciousness. In the Neutral state one functions as a unitized entity with a single,
well-organized senses of direction. A key feature of this state is that there are absolutely no positive or negative emotions; it is neutral, objective, and completely rational. When one functions at an optimal level in this state, there is efficient doing of teaching, learning, integrative, and reflective activities. This is the level for planning game and race strategies.

3. Detached State of Consciousness. When in this state there is an intensity of central focus, of being concerned with the present moment, the "here-now." Peripheral elements cease to be of concern as the span of attention narrows to only essential components. There is an increased awareness of mental and/or bodily functions. In this state one has not merged with the activity; there is the retention of one's identity as being separate from that which is being performed. This state is usually emotionally neutral, but it can have negative or positive emotional overtones depending on one's felt competence to handle the situation.

4. Fused State of Consciousness. In this state there is a merging of awareness and action; one's identity has been blended into the activity. This has been referred to as "pure experiencing" or as "being in flow." Everything is operating smoothly, automatically, harmoniously. There is a sense of being in control without trying to control. This state is usually associated with positive emotional overtones. "Siddhis," the extraordinary occurrences and powers which are manifestations of your awareness can occur at this level.
5. Transcended State of Consciousness. This state is characterized by a high level of affect. It may be experienced as blissful, "oceanic," cosmic love, cosmic energy, a blending with the universe. Everything feels ideal. There is a moving beyond oneself or one's immediate environment. In sport, this transcendence goes beyond one's immediate participation, although it is the result of that participation. This may occur in response to a culminated or completely harmonious performance.

Some techniques for inducing these various states of consciousness are being developed. These include Gallwey's egoless approach to mastering the "inner game of tennis," Leonard's Energy Body workshops, Suinn's "visuo-motor behavior rehearsal" method, and Csikszentmihalyi's elements for merging of awareness and action into "flow."

Conclusions

An understanding of consciousness and of the various states of consciousness revealed in philosophical and psychological literature does provide a basis for the understanding of the subjective dimension of sport experience.

The model, States of Consciousness in Sport Experience, was developed for identifying the classifying the states of consciousness experienced in sport. It includes five categories: 1) Dissociated; 2) Neutral; 3) Detached; 4) Fused; and 5) Transcended. These five states of consciousness encompass the range of kinds of experiences which occur during sport participation.
The five states of consciousness outlined in this model do provide a new perspective for interpreting what is happening within the subjective dimension of sport participation.

Implications

The exploration of the inner spaces in sport is in the beginning stages. To this point, too few studies have been conducted for there to be an identifiable body of knowledge concerning this dimension of human movement. The increased interest in exploring and in experiencing nonordinary types of realities, which currently is taking place among the general populace in the Western world, may provide the incentive for additional sport researchers to become involved in studying this dimension of performance. The over-emphasis on the empirical and the rational investigations, which primarily utilize techniques of observation and quantification, have produced the feeling that something is missing. It seems to be this "something" which is responsible for supplying the meaning and the significance to the sport experience. The conceptual model outlined in this investigation does provide an identifiable base for discussions and for further investigations of the subjective dimension of sport performance.

An understanding of the states of consciousness which might be experienced during sports participation could aid the competitor in selecting and utilizing the state of consciousness which would aid in achieving the objective at that time. It provides a way for developing a measure of
internal control over what has appeared to have been beyond one's control. Rather than just accepting what is happening, one actually is able to influence the direction of these events.

The realization that there are various states of consciousness in sport experiences could help the learner in understanding the relationship between one's present state of consciousness and one's learning progress. A willingness to try to assume the appropriate state of consciousness for the task at hand might not only speed the learning process but also alleviate much of the anxiety which seems to accompany the learning of new skills, techniques, and strategies.

This model could be used by teachers and by coaches. Their recognition of states of consciousness would confer importance and approval to the acknowledging of the subjective dimension of performance; it would provide students and players with a tool for searching out and for identifying their own states of consciousness; and it would provide a base for directing mental practice in learning to assume and to control one's own state of consciousness.

Learning to focus, to utilize, and to direct one's energy in an effort to accomplish one task at a time does seem to have positive psychological benefits. The popularity of the Transcendental Meditation movement and the increased sales of general publications relating to meditational forms and techniques indicate that people are searching for
tools to aid in mind control.

This writer does not mean to imply that merely knowing about the states of consciousness experienced in sport is sufficient for being able to assume a particular state of consciousness at a particular time. However, studies involving electroencephalograms of the various forms of meditation and the research on brain wave monitoring in biofeedback training show that one can learn to control one's state of consciousness through practice. In order to do this, it is necessary to have some way to evaluate the results of this practice. The esoteric traditions emphasize the importance of a personal teacher or guide, while biofeedback training relies on the audio or visual feedback displayed by an indicator. Utilization of the model, States of Consciousness in Sport Experience, would provide a method for securing this necessary feedback information; one would be able to compare the experienced state of consciousness with those described in the model.

Participants in sport need to be encouraged to identify and to acknowledge the subjective dimension of their sport experiences. They need to feel that this dimension is worthy of recognition and of development, and that it is not something to be ignored, shunned, or denied. This increased self-knowledge actually could expand their awareness of the range of experiences which are possible, and it could provide a source for the development of self-control within this dimension of sport experience.
Recommendations

Sport researchers need to design other types of investigations which would provide additional theoretical and empirical information concerning the subjective dimension of sport experience. For example, information is needed concerning the conditions which affect the subjective sport experience. These conditions would include personal factors (e.g. age, background, level of expertise, years of competitive experience, etc.) as well as that person's intentions, expectations, purposes, perceptions, etc. Also, it would include environmental factors (e.g. competitive versus recreational setting, the crowd, the presence of family and/or friends, etc.). Much of the research concerning these parameters has been limited to their effects on the objective sport performance, i.e. on the "observed" outcome.

Investigations are needed which focus both on the mapping of an individual's experiences in sport and on the utilization of states of consciousness in sport. These will need to be done on an individual basis in order to allow for the recognition of individual differences.

Studies could be designed to determine the applications and the effectiveness of the approaches and techniques suggested by Gallwey, by Leonard, by Suinn, and/or by Csikszentmihalyi. In addition, continued exploration to elicit and to test other approaches and techniques for inducing and for controlling the states of consciousness desired during
various phases of sport participation would contribute to this area of knowledge.

Both meditation and biofeedback training place emphasis on developing an awareness of one's own internal states. It might be possible to design studies which could ascertain the influences of each of these procedures for altering consciousness on subsequent sport experiences.

Studies which utilize States of Consciousness in Sport Experience, the model developed in this investigation, could be designed. These could include the use of this model by teachers and by coaches in the teaching of skills, in the directing of practice for the perfection of skills, and in the overseeing of participation in competitive and in recreational settings. They might be designed to evaluate an individual's progress in developing the mental discipline needed to assume and to remain in selected states of consciousness, as well as to elicit the effects of a selected state of consciousness on an individual's success in learning, practicing, and performing selected skills, techniques, or strategies.
AN EPILOGUE

You cannot stay on the summit forever
You must come down again.
So why bother in the first place?
Just this:
What is above knows what is below, but
what is below knows not what is above.
One climbs, one sees, one descends.
One sees no longer, but one has seen.
There is an art of conducting oneself in the
lower regions by the memory of what one
has seen higher up.
When one can no longer see, one can at least
still know.

--René Daumal
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