

Altered States of Consciousness

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BENEATH man's thin veneer of consciousness lies a relatively uncharted realm of mental activity, the nature and function of which have been neither systematically explored nor adequately conceptualized. Despite numerous clinical and research reports on daydreaming, sleep and dream states, hypnosis, sensory deprivation, hysterical states of dissociation and depersonalization, pharmacologically induced mental aberrations, and so on, there has been little attempt made to organize this scattered information into a consistent theoretical system. It is my present intention to integrate and discuss current knowledge regarding various altered states of consciousness in an effort to determine (a) the conditions necessary for their emergence, (b) the factors which influence their outward manifestations, (c) their relatedness and/or common denominators, and (d) the adaptive or maladaptive functions which these states may serve for man.

For the purpose of discussion, I shall regard "altered state(s) of consciousness" [hereafter referred to as ASC(s)] as any mental state(s), induced by various physiological, psychological, or pharmacological maneuvers or agents, which can be recognized subjectively by the individual himself (or by an objective observer of the individual) as representing a sufficient deviation in subjective experience or psychological functioning from certain general norms for that individual during alert, waking consciousness. This sufficient deviation may be represented by a greater preoccupation than

usual with internal sensations or mental processes, changes in the formal characteristics of thought, and impairment of reality testing to various degrees. Although there will be some conceptual pitfalls in such a general definition, these pitfalls will be more than compensated for by the wide range of clinical phenomena which can now be considered and hence studied as presumably related phenomena.

Production of ASC

ASCs may be produced in any setting by a wide variety of agents or maneuvers which 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.¹ Moreover, by adopting Hebb's views,² we also find that varied and diversified environmental stimulation appears necessary for the maintenance of normal cognitive, perceptual, and emotional experience, and that when such stimulation is lacking, mental aberrations are likely to occur. Although experimental evidence is sparse concerning the manipulation of motor, cognitive, and emotional processes, there seems to be ample clinical and anecdotal evidence to suggest that gross interference with these processes may likewise produce alterations in consciousness.*

In specifying the general methods em-

Submitted for publication April 20, 1966.

From the Mendota State Hospital, Madison, Wis.

Read before the Symposium on "Possession States in Primitive People," sponsored by R. M. Bucke Society, Montreal, March 4-6, 1966.

Reprint requests to 301 Troy Dr, Madison, Wis 53704.

* See R. Shor's excellent theoretical article* concerning the conditions necessary for the emergence of trance, a term roughly similar to my usage of ASC.

ployed to produce ASCs, I should like to emphasize that there may be much overlap among the various methods and that many factors may be operating other than those listed. Nevertheless, for the sake of classification (albeit artificial), I have categorized the various methods on the basis of certain variables or combinations of variables which appear to play a major role in the production of these ASCs.

A. Reduction of Exteroceptive Stimulation and/or Motor Activity.—Under this category are included mental states resulting primarily from the absolute reduction of sensory input, the change in patterning of sensory data, or constant exposure to repetitive, monotonous stimulation. A drastic reduction of motor activity also may prove an important contributing factor.

Such ASCs may be associated with solitary confinement^{4,5} or prolonged social and stimulus deprivation while at sea,^{6,8} in the arctic,^{9,10} or on the desert; highway hypnosis¹¹; “breakoff” phenomena in high altitude jet pilots¹²; extreme boredom¹³; hypnagogic and hypnopompic states; sleep and related phenomena, such as dreaming and somnambulism; or experimental sensory deprivation states.¹⁴⁻¹⁶ In clinical settings, alterations in consciousness may occur following bilateral cataract operations¹⁷ or profound immobilization in a body cast or by traction.¹⁸ They may also occur in patients with poliomyelitis placed in a tank-type respirator,¹⁹ in patients with polyneuritis which is causing sensory anesthetics and motor paralyses,¹⁸ and in elderly patients with cataracts.²⁰ Descriptions of more esoteric forms of ASCs can be found in references to the healing and revelatory states during “incubation” or “temple sleep” as practiced by the early Egyptians and Greeks²¹ and “kayak disease,” occurring in Greenlanders forced to spend several days in a kayak while hunting seals.²²

B. Increase of Exteroceptive Stimulation and/or Motor Activity and/or Emotion.—Under this category are included excitatory mental states resulting primarily from sensory overload or bombardment, which may or may not be accompanied by strenuous physical activity or exertion. Profound

emotional arousal and mental fatigue may be major contributing factors.

Instances of ASCs induced through such maneuvers are as follows: suggestible mental states produced by grilling or “third degree” tactics²³; brainwashing states²³; hyperkinetic trance associated with emotional contagion encountered in a group or mob setting^{24,25}; religious conversion and healing trance experiences during revivalistic meetings^{23,24,26,27}; mental aberrations associated with certain *rites de passage*²³; spirit possession states^{23,24,28,30}; shamanistic and prophetic trance states during tribal ceremonies^{29,31}; fire walker’s trance³²; orgiastic trance, such as experienced by Bacchanalians or Satanists during certain religious rites^{33,34}; ecstatic trance, such as experienced by the “howling” or “whirling” dervishes during their famous *devr* dance²²; trance states experienced during prolonged masturbation; and experimental hyperalert trance states.³⁵ Alterations in consciousness may also arise from inner emotional turbulence or conflict or secondary to external conditions conducive to heightened emotional arousal. Examples of these states would include fugues, amnesias, traumatic neuroses, depersonalization, panic states, rage reactions, hysterical conversion reactions (ie, dreamy and dissociative possession states), berzerk, latah, and whitico psychoses,³⁶ bewitchment and demoniacal possession states,^{34,37-39} and acute psychotic states, such as schizophrenic reactions.

C. Increased Alertness or Mental Involvement.—Included under this category are mental states which appear to result primarily from focused or selective hyperalertness with resultant peripheral hypoalertness over a sustained period of time.

Such ASCs may arise from the following activities: prolonged vigilance during sentry duty or crow’s watch; prolonged observation of a radar screen¹³; fervent praying^{40,41}; intense mental absorption in a task, such as reading, writing, or problem solving; total mental involvement in listening to a dynamic or charismatic speaker⁴²; and even from attending to one’s amplified breath sounds,⁴³ or the prolonged watching of a revolving drum, metronome, or stroboscope.

D. Decreased Alertness or Relaxation of Critical Faculties.—Grouped under this category are mental states which appear to occur mainly as a result of what might best be described as a “passive state of mind,” in which active goal-directed thinking is minimal.

Examples of such states are as follows: mystical, transcendental, or revelatory states (eg, *satori*, *samadhi*, nirvana, cosmic-consciousness) attained through passive meditation or occurring spontaneously during the relaxation of one’s critical faculties^{44,45}; daydreaming, drowsiness, “Brown study” or reverie; mediumistic and autohypnotic trances (eg, among Indian fakirs, mystics, Pythian priestesses, etc); profound aesthetic experiences; creative, illuminatory, and insightful states^{45,46}; free associative states during psychoanalytic therapy; reading trance, especially with poetry⁴⁷; nostalgia; music-trance resulting from absorption in soothing lullabies or musical scores; and mental states associated with profound cognitive and muscular relaxation, such as during floating on the water or sun-bathing.

E. Presence of Somatopsychological Factors.—Included under this heading are mental states primarily resulting from alterations in body chemistry or neurophysiology.⁴⁸ These alterations may be deliberately induced or may result from conditions over which the individual has little or no control.

Examples of physiological disturbances producing such ASCs are as follows: hypoglycemia, either spontaneous or subsequent to fasting; hyperglycemia (eg, postprandial lethargy); dehydration (often partially responsible for the mental aberrations encountered on the desert or at sea); thyroid and adrenal gland dysfunctions; sleep deprivation⁴⁹⁻⁵¹; hyperventilation; narcolepsy; temporal lobe seizures (eg, dreamy states and *déjà vu* phenomena); and auras preceding migraine or epileptic seizures. Toxic delirium may be produced by fever, the ingestion of toxic agents, or the abrupt withdrawal from addicting drugs, such as alcohol and barbiturates. In addition, ASCs may be induced through the administration of numerous pharmacological agents, such

as anesthetics and psychedelic, narcotic, sedative, and stimulant drugs.

General Characteristics of ASCs

Although ASCs share many features in common, there are certain general molding influences which appear to account for much of their apparent differences in outward manifestation and subjective experience. Even though similar basic processes may operate in the production of certain ASCs (eg, trance), such influences as cultural expectations,⁵² role-playing,^{53,54} demand characteristics,^{55,56} communication factors, transference feelings,⁵⁷ personal motivation and expectations (mental set), and the specific procedure employed to induce the ASC all work in concert to shape and mold a mental state with a unique flavor of its own.

Despite the apparent differences among ASCs, we shall find that there are a number of common denominators or features which allow us to conceptualize these ASCs as somewhat related phenomena. In previous research,⁵⁸⁻⁶² Dr. Levine and I were able to demonstrate the presence of many of these features in alterations of consciousness induced by hypnosis, lysergic acid diethylamide (LSD-25), and combinations of these variables. Similar features (described below), in greater or lesser degree, tend to be characteristic of most ASCs.

A. Alterations in Thinking.—Subjective disturbances in concentration, attention, memory, and judgment represent common findings. Archaic modes of thought (primary process thought) predominate, and reality testing seems impaired to varying degrees. The distinction between cause and effect becomes blurred, and ambivalence may be pronounced whereby incongruities or opposites can coexist without any (psycho) logical conflict. Moreover, as Rapaport⁶³ and Brenman⁶⁴ have commented, many of these states are associated with a decrease in reflective awareness.

B. Disturbed Time Sense.—Sense of time and chronology become greatly altered. Subjective feelings of timelessness, time coming to a standstill, the acceleration or slowing of time, and so on, are common. Time may

also seem of infinite or infinitesimal duration.

C. Loss of Control.—As a person enters or is in an ASC, he often experiences fears of losing his grip on reality and losing his self-control. During the induction phase, he may actively try to resist experiencing the ASCs (eg, sleep, hypnosis, anesthesia), while in other instances he may actually welcome relinquishing his volition and giving in to the experience (eg, narcotic drugs, alcohol, LSD, mystical states).

The experience of "loss of control" is a complicated phenomenon. Relinquishing conscious control may arouse feelings of impotency and helplessness, or, paradoxically, may represent the gaining of greater control and power through the loss of control. This latter experience may be found in hypnotized persons^{57,65} or in audiences who vicariously identify with the power and omnipotence which they attribute to the hypnotist or demagogue. This is also the case in mystical, revelatory, or spirit possession states whereby the person relinquishes conscious control in the hope of experiencing divine truths, clairvoyance, "cosmic consciousness," communion with the spirits or supernatural powers, or serving as a temporary abode or mouthpiece for the gods.

D. Change in Emotional Expression.—With the diminution of conscious control or inhibitions, there is often a marked change in emotional expression. Sudden and unexpected displays of more primitive and intense emotion than shown during normal, waking consciousness may appear. Emotional extremes, from ecstasy and orgiastic equivalents to profound fear and depression, commonly occur.

There is another pattern of emotional expression which may characterize these states. The individual may become detached, uninvolved, or relate intense feelings without any emotional display. The capacity for humor may also diminish.

E. Body Image Change.—A wide array of distortions in body image frequently occur in ASCs. There is also a common propensity for individuals to experience a profound sense of depersonalization, a schism

between body and mind, feelings of derealization, or a dissolution of boundaries between self and others, the world, or universe.

When these subjective experiences arise from toxic or delirious states, auras preceding seizures, or the ingestion of certain drugs, etc, they are often regarded by the individual as strange and even frightening. However, when they appear in a mystical or religious setting, they may be interpreted as transcendental or mystical experiences of "oneness," "expansion of consciousness," "oceanic feelings," or "oblivion."

There are also some other common features which might be grouped under this heading. Not only may various parts of the body appear or feel shrunken, enlarged, distorted, heavy, weightless, disconnected, strange or funny, but spontaneous experiences of dizziness, blurring of vision, weakness, numbness, tingling, and analgesia are likewise encountered.

F. Perceptual Distortions.—Common to most ASCs is the presence of perceptual aberrations, including hallucinations, pseudo-hallucinations, increased visual imagery, subjectively felt hyperacuteness of perception, and illusions of every variety. The content of these perceptual aberrations may be determined by cultural, group, individual, or neurophysiological factors and represent either wish-fulfillment fantasies, the expression of basic fears or conflicts, or simply phenomena of little dynamic import, such as hallucinations of light, color, geometrical patterns, or shapes. In some ASCs, such as those produced by psychedelic drugs, marihuana, or mystical contemplation, synesthesias may appear whereby one form of sensory experience is translated into another form. For example, persons may report seeing or feeling sounds or being able to taste what they see.

G. Change in Meaning or Significance.—At this point I should like to dwell somewhat on one of the most intriguing features of almost all ASCs, the understanding of which will help us account for a number of seemingly unrelated phenomena. After observing and reading descriptions of a wide variety of ASCs induced by different agents or maneuvers, I have become very impressed

with the predilection of persons in these states to attach an increased meaning or significance to their subjective experiences, ideas, or perceptions. At times, it appears as though the person is undergoing an attenuated "eureka" experience during which feelings of profound insight, illumination, and truth frequently occur. In toxic or psychotic states, this increased sense of significance may manifest itself in the attributing of false significance to external cues, ideas of reference, and the numerous instances of "psychotic insight."

I should like to emphasize that this sense of increased significance, which is primarily an emotional or affectual experience, bears little relationship to the objective "truth" of the content of this experience.⁴⁵ To illustrate the ridiculousness of some of the "insights" attained during ASCs, I should like to cite a personal experience when I once took LSD for experimental purposes. Sometime during the height of the reaction, I remember experiencing an intense desire to urinate. Standing by the urinal, I noticed a sign above it which read "Please Flush After Using!" As I weighed these words in my mind, I suddenly realized their profound meaning. Thrilled by this startling revelation, I rushed back to my colleague to share this universal truth with him. Unfortunately, being a mere mortal, he could not appreciate the world-shaking import of my communication and responded by laughing!

William James ^{66, (p 284)} describes subjective experiences associated with other alterations of consciousness. "One of the charms of drunkenness," he writes, "unquestionably lies in the deepening sense of reality and truth which is gained therein. In whatever light things may then appear to us, they seem more utterly what they are, more 'utterly utter' than when we are sober." In his *Varieties of Religious Experience*, he adds:

Nitrous oxide and ether, especially nitrous oxide, when sufficiently diluted with air, stimulate the mystical consciousness in an extraordinary degree. Depth upon depth of truth seems revealed to the inhaler. This truth fades out, however, or escapes, at a moment of coming to; and if the words remain

over in which it seemed to clothe itself, they prove to be the veriest nonsense. Nevertheless, the sense of a profound meaning having been there persists; and I know more than one person who is persuaded that in the nitrous oxide trance we have a genuine metaphysical revelation.^{67 (p 378)}

H. Sense of the Ineffable.—Most often, because of the uniqueness of the subjective experience associated with certain ASCs (eg, transcendental, aesthetic, creative, psychotic, and mystical states), persons claim a certain ineptness or inability to communicate the nature or essence of the experience to someone who has not undergone a similar experience. Contributing to the sense of the ineffable is the tendency of persons to develop varying degrees of amnesias for their experiences during profound alterations of consciousness, such as the hypnotic trance, somnambulistic trance, possession fits, dreaming, mystical experiences, delirious states, drug intoxications, auras, orgiastic and ecstatic states, and the like. By no means is amnesia always the case, as witnessed by the lucid memory following the psychedelic experience, marihuana smoking, or certain revelatory or illuminatory states.

I. Feelings of Rejuvenation.—Although the characteristics of "rejuvenation" only has limited application to the vast panoply of ASCs, I have included this characteristic as a common denominator since it does appear in a sufficient number of these states to warrant attention. Thus, on emerging from certain profound alterations of consciousness (eg, psychedelic experiences, abreactive states secondary to the administration of carbon dioxide, methamphetamine (Methedrine), ether or amytal, hypnosis, religious conversion, transcendental and mystical states, insulin coma therapy, spirit possession fits, primitive puberty rites, and even, on some occasions, deep sleep), many persons claim to experience a new sense of hope, rejuvenation, renaissance, or rebirth.^{24,26,44,62,67-72}

J. Hypersuggestibility.—Employing a broad view, I shall regard as manifestations of hypersuggestibility in ASCs not only the numerous instances of "primary" and "secondary" suggestibility but also the in-

creased susceptibility and propensity of persons uncritically to accept and/or automatically to respond to specific statements (ie, commands or instructions of a leader, shaman, demagogue, or hypnotist) or nonspecific cues (ie, cultural or group expectations for certain types of behavior or subjective feelings). Hypersuggestibility will also refer to the increased tendency of a person to misperceive or misinterpret various stimuli or situations based either on his inner fears or wishes.

It is becoming increasingly apparent that the phenomenon of suggestibility associated with ASCs can be best understood by analysis of the subjective state itself. Recently, theoreticians seem to have become much more aware of the importance of the subjective state to account for many of the phenomena observed in hypnotized persons. Orne, for example, stated that "an important attribute of hypnosis is a potentiality for the subject to experience as subjectively real suggested alterations in his environment that do not conform with reality."⁵(p 237) Sutcliffe adds that "the distinguishing feature of this state is the hypnotized subject's emotional conviction that the world is as suggested by the hypnotist, rather than a pseudoperception of the suggested world."⁷³(p 200)

In attempting to account for the dramatic feature of hypersuggestibility, I believe that a better understanding of this phenomenon can be gained through an analysis of some of the subjective features associated with ASCs in general. With the recession of a person's critical faculties there is an attendant decrease in his capacity for reality testing or his ability to distinguish between subjective and objective reality. This, in turn, would tend to create the compensatory need to bolster up his failing faculties by seeking out certain props, support, or guidance in an effort to relieve some of the anxiety associated with the loss of control. In his attempt to compensate for his failing critical faculties, the person comes to rely more on the suggestions of the hypnotist, shaman, demagogue, interrogator, religious healer, preacher, or doctor, all representing omnipotent authoritative figures. With the

"dissolution of self boundaries," which represents another important feature of ASCs, there would also be the tendency for the person to identify vicariously with the authoritarian figure whose wishes and commands are accepted as the person's own. Contradictions, doubts, inconsistencies, and inhibitions tend to diminish (all characteristics of "primary process" thinking), and the suggestions of the person endowed with authority tend to be accepted as concrete reality. These suggestions become imbued with even more importance and urgency owing to the increased significance and meaning attributed both to internal and external stimuli during alterations in consciousness.

With all these factors operating, a monomotivational or "supramotivational" state is achieved in which the person strives to realize in behavior the thoughts or ideas which he experiences as subjective reality. The subjective reality may be determined by a number of influences working individually or in concert, such as the expectations of the authority figure, the group, culture, or even by the "silent inner voice" (eg, during autohypnotic states, prayer, auditory hallucinations, guiding spirits) expressing the person's own wishes or fears.

When a person lapses into certain other ASCs, such as panic, acute psychosis, toxic delirium, etc, where external direction or structure is ambiguous and ill-defined, the person's internal mental productions tend to become his major guide for reality and play a large role in determining behavior. In these instances, he is much more susceptible to the dictates of his emotions and the fantasies and thoughts associated with them than to the direction of others.

Functions of ASCs

Now that we have considered certain characteristics associated with ASCs, we might raise the question whether they serve any useful biological, psychological, or social functions for man. It is my thesis that the very presence and prevalence of these states in man⁷⁴ attests to their importance in his everyday functioning. I find it difficult to accept, for example, that man's ability to

lapse into trance has been evolved just so he can be hypnotized on stage or in a clinical or laboratory setting. Moreover, the widespread occurrence and use of mystical and possession states or aesthetic and creative experiences indicates that these ASCs satisfy many needs both for man and society. Although my thesis may prove teleological, I feel that this approach will shed some further light on the nature and function of these states.

My viewpoint, then, is that ASCs might be regarded (to use Sherrington's terminology) as "final common pathways" for many different forms of human expression and experience, both adaptive and maladaptive. In some instances the psychological regression found in ASCs will prove to be atavistic and harmful to the individual or society, while in other instances the regression will be "in the service of the ego"⁷⁵ and enable man to transcend the bounds of logic and formality or express repressed needs and desires in a socially sanctioned and constructive way.

A. Maladaptive Expressions.—The maladaptive expressions or uses of ASCs are numerous and manifold. The emergence of these ASCs may represent (a) attempts at resolution of emotional conflict (eg, fugues, amnesias, traumatic neuroses, depersonalization, and dissociation); (b) defensive functions in certain threatening situations conducive to the arousal of anxiety (eg, lapsing into hypnoidal states during psychotherapy⁷⁶); (c) a breakthrough of forbidden impulses (eg, acute psychotic and panic reactions); (d) escape from responsibilities and inner tensions (eg, narcotics, marihuana, alcohol); (e) the symbolic acting-out of unconscious conflicts (eg, demoniacal possession, bewitchment³⁷⁻³⁹); (f) the manifestation of self-destructive tendencies (eg, rage reactions on the battlefield, instances of voodoo death⁴⁰); (g) the manifestation of organic lesions or neurophysiological disturbances (eg, auras, toxic conditions); and (h) an inadvertent and potentially dangerous response to certain stimuli (eg, highway hypnosis, radar screen and sentry duty trance).

B. Adaptive Expressions.—Man has em-

ployed a variety of ASCs in an effort to acquire new knowledge or experience, express psychic tensions or relieve conflict without danger to himself or others, and to function more adequately and constructively in society.

1. Healing: Throughout history, the production of ASCs has played a major role in the various healing arts and practices. The induction of these states has been employed for almost every conceivable aspect of psychological therapy. Thus, shamans may lapse into trance or possession states in order to diagnose the etiology of their patients' ailments or to learn of specific remedies or healing practices.³¹ Moreover, during the actual treatment or healing ceremony, the shaman, hungan, medicine man, priest, preacher, physician, or psychiatrist may view the production of an ASC in the patient as a crucial prerequisite for healing. There are countless instances of healing practices designed to take advantage of the suggestibility, increased meaning, propensity for emotional catharsis, and the feelings of rejuvenation associated with ASCs. The early Egyptian and Greek practices of "incubation" in their sleep temples, the faith cures at Lourdes and other religious shrines, the healing through prayer and meditation, cures by the "healing touch," the laying on of hands, encounters with religious relics, spiritual healing, spirit possession cures, exorcism, mesmeric or magnetic treatment, and modern day hypnotherapy are all obvious instances of the role of ASCs in treatment.²¹

Pharmacologically induced ASCs have also played a major role in the healing arts. Abreactive or cathartic techniques, employing peyote, ether, CO₂ amytal, methamphetamine, and LSD-25 have all had wide use in psychiatry.^{23,78} Kubie and Margolin^{79,80} have also commented on the therapeutic value of certain drugs to induce temporary dissociation and relieve repression.

Perhaps unrelated to the specific effects of ASCs in treatment are the nonspecific effects of certain other alterations in consciousness which aid in maintaining psychic equilibrium and health. For example, sleep, traditionally regarded as The Great Healer,

and dreaming seem to serve important biological and psychological functions for man.⁸¹ The ASC associated with sexual orgasm might be considered as another beneficial mental alteration which not only has biological survival value as a positive reinforcement for the sexual drive but also serves as an outlet for numerous human desires and frustrations.

2. *Avenues of New Knowledge or Experience*: Man often has sought to induce ASCs in an effort to gain new knowledge, inspiration, or experience. In the realm of religion, intense prayer, passive meditation, revelatory and prophetic states, mystical and transcendental experiences, religious conversion, and divination states have served man in opening new realms of experience, reaffirming moral values, resolving emotional conflicts, and often enabling him to cope better with his human predicament and the world about him. It is also interesting to note that among many primitive groups, spirit possession is believed to impart a superhuman knowledge which could not possibly be gained during waking consciousness. Such paranormal faculties as superlative wisdom, the "gift of tongues," and clairvoyance are supposedly demonstrated during the possession fit.²⁹

ASCs appear to enrich man's experiences in many other areas of life. The intense esthetic experience gained while absorbed in some majestic scene, a work of art, or music may broaden man's subjective experiences and serve as a source of creative inspiration. There are also numerous instances of sudden illumination, creative insights, and problem solving occurring while man has lapsed into such ASCs as trance, drowsiness, sleep, passive meditation or drug intoxication.⁴⁶

3. *Social Function*: ASCs occurring in a group setting seem to serve many individual and social needs. Although a brief discussion cannot do justice to the wide variety of functions which ASCs serve for various cultures, we can at least mention a few.

If we may employ spirit possession as a paradigm for the potential value of ASCs, we find that its social import and ramifica-

tions are considerable. From the individual's vantage point, possession by one of the tribal or local deities or Holy Spirit during a religious ceremony would allow him to attain high status through fulfilling his cult role, gain a temporary freedom of responsibility for his actions and pronouncements, or enable him to act out in a socially sanctioned way his aggressive and sexual conflicts or desires.⁸² Tensions and fears are dissipated, and a new sense of spiritual security and confidence may supplant the despair and hopelessness of a marginal existence.⁸³

From society's standpoint, the needs of the tribe or group are met through its vicarious identification with the entranced person who not only derives individual satisfaction from divine possession but also acts out certain ritualized group conflicts and aspirations, such as the theme of death and resurrection, cultural taboos, and so on.^{24,28-30,83,84} Moreover, the dramatic behavioral manifestations of spirit possession serve to convince the participants of the continued personal interest of their gods, reaffirm their local beliefs, allow them to exert some control over the unknown, enhance group cohesion and identification, and endow the utterances of the entranced person, shaman, or priest with an importance they might otherwise not have if spoken in an ordinary setting. In general, the existence of such practices represents an excellent example of how society creates modes of reducing frustration, stress and loneliness through group action.

In conclusion, then, it appears the ASCs play a very significant role in man's experience and behavior. It is also apparent that these states may serve as adaptive or maladaptive outlets for the expression of a multitude of man's passions, needs and desires. Moreover, there is little question that we have hardly scratched the surface in understanding fully the facets and functions of ASCs. As a final note, I should like to quote the very pertinent remarks of William James.^{67 (pp 378-379)}

... Our normal waking consciousness . . . is but one special type of consciousness, whilst all about it, parted from it by the filmiest of screens, there lie potential forms of consciousness entirely different.

We may go through life without suspecting their existence; but apply the requisite stimulus, and at a touch they are all there in all their completeness, definite types of mentality which probably somewhere have their field of application and adaptation. No account of the universe in its totality can be final which leaves these other forms of consciousness quite disregarded. How to regard them is the question—for they are so discontinuous with ordinary consciousness. Yet they may determine attitudes though they cannot furnish formulas, and open a region though they fail to give a map. At any rate, they forbid a premature closing of our accounts with reality.

Summary

Despite numerous clinical and research reports on certain altered states of consciousness, there has been little attempt to conceptualize the relationship among these states and the conditions necessary for their emergence. To this end, the author has tried to integrate and discuss pertinent findings from many diverse areas in an effort to gain a better understanding of these states and the functions they serve for man and society.

As one views the many altered states of consciousness experienced by man, it soon becomes apparent that there are a number of essential conditions which contribute to their emergence. Moreover, although the outward manifestations and subjective experiences associated with various alterations in consciousness may differ, there are a number of basic features which most of these states share in common. From a functional viewpoint, it also becomes clear that many altered states of consciousness serve as "final common pathways" for many different forms of human expression, both maladaptive and adaptive.

Generic and Trade Names of Drugs

Amobarbital—*Amytal*.

Methamphetamine—*Desoxyn*, *Methedrine*.

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