CULTURE AND THE VARIETIES OF CONSCIOUSNESS

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INTRODUCTION

Altered states of consciousness have attracted increasing attention in this country since the early 1960's in connection with drug cults and some esoteric religions, as well as with the subsequent "drug epidemic." They are of particular interest to the anthropologist because they are widespread and complex phenomena that to be scientifically understood require study at a variety of levels of approach, involving several subfields of anthropology and several possible research strategies.

Altered states of consciousness will be defined presently. Let us note for the moment that they are universal phenomena, in at least one of a number of forms being experienced by all human beings. However, some of their forms are more generally and more extensively culturally patterned and some are institutionalized in a sacred context. In a large scale comparative study of 488 societies, we found that altered states of consciousness were present in institutionalized sacred form in 90% of the sample societies (Bourguignon 1973). Thus, at first glance it is clear that altered states of consciousness are of interest to the cultural anthropologist concerned with religious activities though they may occur in other contexts as well. They are of interest to the psychological anthropologist because they clearly involve some behaviors of a special type, occasionally behavior that appears deviant in some sense. We may ask what kind of people go in for this sort of thing? How is the behavior acquired? These, clearly, are psychological questions.

To gain a general perspective on the incidence of this type of behavior one needs to take the approach of the comparativist and look at a large sample of societies to discover frequencies, develop a typology and test some hypotheses about the relationship between these behaviors and other aspects of
culture and society. As one takes a closer look at the behavior in the field, one may well be struck by certain of its aspects: for example the type of ecstatic vocalizations termed "glossolalia" or "speaking in tongues." Here we need the cooperation of the anthropological linguist. There appear to be not only psychological but also physiological changes that take place in these states (I am aware that we still have not defined them more closely, but we shall come to that presently), and here we could use the help of the physical anthropologist as well as the neurophysiologist. The archaeologist may well be the only anthropological specialist excluded from our team, but even he may be able to contribute to our research by giving us information about the time depth of the societies we are studying and about material elements that suggest the presence of the contexts in which the behavior under investigation has been known to occur. Where we know that plant substances are used to induce the state, the ethnobotanist and the paleoethnobotanist may be of important assistance to us. And, if we are to return to the present day level of ethnographic analysis, we may wish to have the assistance of a folklorist and a student of dance as well as that of an ethnomusicologist.

Clearly, altered states of consciousness present us with a multiplicity of opportunities for co-ordinated anthropological research, only some of which have been tapped so far. Other specialists, such as psychiatrists and psychologists, have taken an interest in this subject also, and in what follows we shall attempt to draw on their work as well as on that of other students of these phenomena.

Yet there is a distinctive dimension to anthropological research in this area, which allows us to make a contribution to the investigation of altered states of consciousness (ASCs) not duplicated by workers in other disciplines: The anthropologist is interested in the occurrence and nature of ASCs in
particular cultural contexts. He wants to know what these contexts are, how
ASCs are culturally structured and socially utilized, how they fit into the
larger pattern of an ongoing culture. The psychologist, by contrast, is more
likely to deal with experimental settings, in which a series of variables can
be controlled. As a result, the ASCs he studies are often artifacts of the
situation in which they are observed, and their actual or potential social and
cultural significance is outside the scope of the research.

Thus, in the following, although we shall refer to the work of other
scientists concerning ASCs, the anthropological contribution to this research
will be our primary concern. First of all, we shall try to define ASCs. Here
we shall note the lack of agreement which exists at present among observers
concerning the relationship among a variety of states generally considered
under this heading: dreams, hallucinatory states, schizophrenia, creative
states, meditation, conversion experiences, religious ecstasy, etc. As already
indicated, anthropologists are particularly interested in the cultural con-
texts of the behaviors they investigate. Our study of ASCs will focus on a
particular type of context: that of religious ritual and belief. We shall
examine types of ASCs in religious contexts in a cross-cultural, comparative
manner. To do so, we shall ask not only what kinds of ASCs have been reported
from the great range of human cultures as occurring in religious settings, but
also, what kind of order can we discover in all of these observations. What
kinds of links are there between culturally patterned ASCs and other aspects
of culture? In other words, our review of the broad cross-cultural literature
will be only a step toward a somewhat more ambitious goal. This goal is to
place ASCs in a model of cultural behavior, so that it is no longer seen as an
"oddity" of bizarre experience and behavior, but can be perceived as a meaning-
ful element within a cultural system. We shall attempt to show how cross-cultural study reveals the interrelationship between ASCs and other parts of this system, is affected by them and affects them as well. Our approach, then, is both comparative and systematic. It looks for differences as well as for similarities, for correlations and interconnections. Our interest in ASCs is not based on a search for the exotic, the dramatic or the pathological, and it has no axe to grind in the present debate over drugs and the counterculture. Rather, we seek to increase our understanding of the nature of culture and of the operation of society. ASCs happen to be the thread we have chosen to follow through the maze of culture interconnections, for, as already noted, they are particularly suitable for this: they allow us to deal with man as a psychobiological organism producing culture and affected by it, living in society of which he is a part and which is part of him.

WHAT ARE ALTERED STATES OF CONSCIOUSNESS?

Altered states of consciousness represent a broad and varied category of human behavior and experience. This point must be emphasized because the term has often been used as synonymous with one group of such states, those induced by drugs of a type sometimes referred to as "hallucinogens," "psychedelics," "psychotomimetics," etc. The term implies the assumption that the states are different from—modifications or alterations of—some "other" state. It implies that there is a range of "normal" everyday consciousness, in which human beings perform their activities of everyday life. The assumption is that in this "normal" state, persons are as we know them—their "usual" selves. Fischer (1969, 1971) speaks of this state as "normophrenic" and says that it ranges from "routine activity to relaxation." It is characterized by the "I" in contrast to the "Self" (Fischer 1972). Its relation to the
external world is one of "perception" (in contrast to "meditation" on the one hand and "hallucination" on the other). Deikman (1971) has termed this "normal" state the "action" mode of organization in contrast to a "receptive" mode. A. Weil (1972) terms it "straight thinking" in contrast to "stoned thinking." Krippner (1972) defines 20 different types of states of consciousness, one of which is the "normal, waking" state. Only one of these types is "expanded" conscious states." These latter may be brought about by drugs or meditation or they may occur spontaneously. ¹ This classification is in contrast to that of Fischer, cited above, who finds drug states (particularly those resulting from LSD) to involve a heightened level of central nervous system arousal and meditation states to involve lowered levels of arousal. It is evident that much disagreement exists even on the most elementary level of classification. For the anthropologist, there may also be the hidden assumption here that this "normal" waking state of consciousness is the same, regardless of culture. Unless, of course, we assume that a "normal" state exists in every society, although some of its particular characteristics vary from culture to culture. We shall return to this troublesome question when we have dealt more extensively with the subject of ASCs.

While the authors referred to in the previous paragraph state that specific human beings are variable with respect to the states of consciousness they experience, Castaneda² (1968, 1971, 1972) has preferred to speak of different kinds of "reality;" "ordinary reality" and "non-ordinary reality" and discusses the ways of learning to experience this "non-ordinary" reality. While the individual must in some way change himself to move from one to the other, even to the extent of ingesting drug substances, these realities are seen by Castaneda as accessible and apparently as constituting aspects of the universe,
not merely psycho-physiological modifications of the self. But perhaps this interpretation already imposes a uniform pattern of approach and does not fully appreciate the significance of the cultural relativity of thought and experience.

In contrast to the "normal, waking" state of consciousness, human beings experience many other states of consciousness as well. Most familiar of these are states of sleep: REM (Rapid Eye Movement) sleep, which is characterized by dreaming, and non-REM sleep, which is deeper and does not involve dreaming. These sleep states are characteristic of all human beings and, indeed, of all types of mammals that have been tested. Another state familiar to many is alcohol intoxication. Ludwig (1968), who lists more than sixty varieties of altered states of consciousness, includes among them a large number of states, that are without any spectacular features but that involve an increased or decreased level of stimulation or of mental involvement, varying importantly from a normal, standard or average level. Among these he lists a number of states experienced by many, if not most, Americans: highway or road hypnosis, extreme boredom, hypnagogic and hypnopompic states (prior to falling asleep or waking up); hypnotic trance (which may be experimental—in the classroom or laboratory—therapeutic, or part of entertainment); dance-and-music-trance in response to jazz, rock-n-roll, rhythmic drumming; religious states at revival meetings—including conversion, healing, possession by the Holy Ghost, speaking in tongues; prolonged vigilance; intense task absorption; fervent prayer; total involvement in listening to a dynamic or charismatic speaker, daydreaming, drowsiness, reverie; free-association during psycho-analytic therapy; profound muscular relaxation as in floating, sunbathing etc., etc., etc. None of the states in this extensive
list is obviously pathological, and few are recognized as more than transitory, private experiences. Yet they share important features with other ASCs, some of which are more formally structured and more highly culturally patterned while yet others are due to pathological aspects of the individual's functioning. Note a point to which we must return later: I wish to suggest here that it is not the ASCs as such that are pathological but the particular physiological and/or psychological factors giving rise to them. Indeed, ASCs are perhaps more likely to be pathological if these factors are not deliberately induced but arise spontaneously and involve biochemical and/or neuro-physiological alterations outside the individual's control.

Altered states of consciousness have been the subject of a number of classifications. Plato considered four types of divine madness, or mania, which he recognized as different from ordinary madness. He speaks of prophetic madness, ritual madness, poetic madness and erotic madness. The prophet, the poet, the lover and the worshipper in the rituals of Dionysos, in other words, experience altered states of consciousness. We still recognize creative states as "unusual," as we recognize states of religious inspiration, whether in conversion or healing or in inspired preaching or speaking in tongues. And the transformations wrought by states of being in love are, at least, recognized in popular songs and poems. In popular speech, we recognize these as states of being "high" (even "high as a flag on the Fourth of July," in the words of the song).

More recent formal classifications have been offered by several investigators. Ludwig (1968) in the paper mentioned earlier, recognizes five groupings of ASCs. He classifies them by the agents inducing the states: they may be brought about by either decreased or increased exteroceptive stimulation
and/or motor activity or increased emotion; by increased alertness or mental involvement or by decreased alertness or relaxation of critical facilities; and finally, they may be due to the presence of certain somatopsychological factors. In this latter group there may be insufficient or excessive food intake, hormonal disturbances, sleep deprivation, toxic delirious states as well as a series of other causes, among them various pharmacological agents. In spite of the great variety of states listed (not all of Ludwig's list is repeated here and even his sixty-some items are undoubtedly not an exhaustive catalog) and the variety of factors bringing them about, Ludwig recognizes a series of 10 common characteristics of ASCs, regardless of the agents that induce them. These common features are: alteration of thinking, disturbance of time sense, loss of control—both of self-control and of control of situation, change in emotional expression, body-image change, perceptual distortions, change in meaning or significance, sense of the ineffable, feelings of rejuvenation, and, finally, hypersuggestibility.

Quite a different classification is presented by Fischer (1969, 1971, 1972) who sees ASCs as deviating from a normal state either through greater arousal of the central nervous system, or greater tranquilization. Aroused states range from sensitivity, creativity, anxiety to hyperaroused states of schizophrenia to, at the extreme, ecstatic states of mystical rapture. States of reduced arousal are meditative states reaching their extreme in the samādhi of the Yoga master. In the most recent (1972) version, Fischer presents his model of consciousness in circular form, so that the extreme of the maximum of the hyperaroused state found in ecstatic mystical rapture touches the extreme of samādhi of the hypoaroused state of meditation. Both REM sleep and drug states, such as those produced by LSD, are states of increased
arousal beyond the "normal" state. All these typologies contrast the "normal" state of human functioning with one or more forms of "altered" states. This "normal" state is that of adaptation to the world of work, of problem solving, of reality testing, in short the world of what anthropologists have generally called the secular or the profane. The other, the "altered" state, is more peculiarly linked, as we shall see, with the world of the sacred, the supernatural, the mystic, the subjective reality of the individual. There is, of course, not a one to one correspondence here; the sacred is not always encountered in the fear and trembling of the mystic, and as we have seen, all altered states are not necessarily sacralized. Furthermore, anthropologists know that not all societies separate the sacred and the profane as radically as Durkheim's ideal types would have it. Nonetheless, the overlap between these two types of classifications appear striking and hardly accidental. In this connection we may recall La Barre's (1970) observation of the significance of culture shock, of sensory deprivation that produces hallucinations, and of dreaming for the human propensity to create religions.

THE VARIETY OF ASCs

This brief introduction indicates the essentially ordinary and banal nature of many types of ASCs. It suggests their accessibility to most human beings under exposure to particular stimuli. These stimuli are themselves ubiquitous and often banal and include situation of stress, of heightened emotional tone, or greater sensory in-put or, on the contrary, diminished in-put and monotony. Also, they may be subject to certain biochemical factors, whether these be ingested or injected or produced by the body itself (in which case we presumably come back to one of the two earlier categories, such as the production of hormones in response to stress). Now, in a century or so of
intensive anthropological investigations of hundreds of societies we have
discovered that there is enormous variability in cultures and we have made
much of this observation. On the other hand, we have also learned that
certain psychobiological constants exist and that these constants are utilized
by different cultures in their particular ways and for their particular ends.
Powerful impulses, such as hunger and sex, powerful emotions such as those of
fear, love, hatred, and powerful experiences such as those of dreams and hallu-
cinations, all of these are generally "domesticated" by being brought under
some degree of cultural control. In the case of hunger and food, for example,
each society has its own definitions of what is edible and what is not (and
these are often enough only partially rational), when and how food may be
obtained and by whom, who is entitled to a share and which share, how the food
is to be prepared and consumed and by whom and in whose presence and under what
circumstances, etc. Complex series of beliefs exist concerning the desirability
or undesirability of certain actual or potential food sources and of the
consequences which befall him who ignores the rule derived from these beliefs.
On the current American scene, we hear much expression of concern over mood-
changing substances in the form of pills and drinks. Yet we generally ignore
the mood-changing qualities of ordinary foods (calorie intake, levels of
protein consumption, sugar, high doses of vitamin B, etc.). Recent converts
to vegetarianism consider meat eating an addiction and speak of withdrawal
symptoms and cravings for meat. Casalis (1861) curiously spoke of cannibalism
in similar terms. And as far as alcohol is concerned, it should be noted that
a product is currently being marketed to neutralize the effect of alcohol in
the blood stream: it is made of wheat and vitamins.*

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Not only may specific foods be mood-changing, but the degrees of satiation or of mild or acute hunger affect moods as well. Most teachers are aware of the dullness of classes taught immediately after lunch or the impatience of excessively hungry students, while mild hunger appears to be a stimulus to thought and activity. Hyperglycaemia after copious eating is listed by Ludwig (1968) as a factor inducing a form of ASC, as is hypoglycaemia due to fasting. Knut Hamsun in his famous novel *Hunger* brilliantly painted the delusional states of a famished man.

Essentially, societies must master impulses that may be disruptive to social life and harness emotions, motivations and experiences that may support the operations of society. Life at the limits of starvation is a social as well as physical disaster, as shown by the case of the Ik (Turnbull 1972) among whom food is scarce and hunger is socially divisive.

The example of the hunger drive suggests that basic needs are culturally patterned and structured. It also suggests that under certain circumstances, biological drives relate to physiological factors relevant to the production of altered states of consciousness. Hypoglycaemia, hyperglycaemia and the delusional states of severe hunger have been cited. Edward Sapir, in a classic paper entitled "The unconscious patterning of behavior in society," originally published in 1927, cites numerous examples of how various types of social behavior are patterned in ways of which the naive actor is unaware. One example refers to varying styles of breathing. Now, breathing in the form of hyperventilation is frequently cited both as a method of inducing ASC, as in Yoga exercises, and as an expression of the presence of such a state. An example is found in the work of Henney (1972), who describes hyperventilation as symptomatic of the possession trance behavior of members of a Spiritual
Baptist church on the Island of St. Vincent. Elsewhere, as among the Jamaican revivalists described by Moore (1965), hyperventilation is intentionally used to induce possession trance. Henney also compares this hyperventilation behavior to that reported by Masters and Johnson (1966) as characteristic of sexual climax. Similarly, Goodman (1972a) has shown the parallels between glossolalia (ecstatic vocalization) and sexual climax. And here we come to consider another biological drive, namely sex, as bringing about an altered state. Other aspects of man's physiological functioning, of which we are even less aware, similarly involve both cultural patterning and the possibilities of ASC. For example, gravity is one area of human adaptation of which we are generally unaware. The experience of the astronauts has shown us the relationship between relative or complete weightlessness and ASC in the form of euphoria. In a lesser form, perhaps, this can be observed in trampoline jumping, sky-diving, and high-speed travel. The obvious implication is that we observe a relationship between altered objective biological functioning—including the conditions under which this functioning occurs—and alteration of the subjective state, the state of consciousness. One further example may be cited here, that of sensory deprivation.

In the 1950's and 60's a series of experiments were conducted in Canada and in the United States in which volunteer subjects were in various ways deprived for periods of time of a variety of sensory stimuli. According to La Barre (1970:65), these experiments resulted from the concern of D. O. Hebb of McGill University to understand the "confessions" presented at the Russian purge trials. They were also an American response to the "brainwashing" of Americans in Chinese prisons as a result of the Korean war, and later a preparation for the developing experiments with space flight in the 1960's. The
sensory deprivation experiments have been summarized a number of times (Henney 1968, 1973, Kracke 1967; an extensive bibliography is supplied in La Barre 1970:65).

A variety of conditions and equipment were used in these studies, the participants in all of which were volunteers, mostly college students. The conditions ranged from wearing translucent goggles, which prevented patterned vision, to various means of reducing tactile and auditory input (Shurley 1962), to the complete submersion of subjects in a tank of water at body temperature, their faces covered by respirator masks (Lilly 1956). The experimenters rather consistently report various forms of fantasy, dissociation and hallucination as well as a limited tolerance for the conditions of the experiment. Furthermore, there is evidence of increased suggestibility and of after-effects, such as some failure of subjects after the experiment "to focus attention and direct thought" (Kracke 1967:19). Henney (1968, 1973) has compared in some detail the production of hallucinations under these experimental conditions and the production of visions in ritually isolated and sensorily deprived participants in a ritual called "mourning" among the Spiritual Baptists of St. Vincent. A review of varying conditions under which people in many cultures seek visions, as in the vision quest of North American Indians, (see for example Benedict, 1923), suggests many striking similarities to the sensory deprivation experiments as well. Indeed, La Barre (1970:51-60) suggests specifically the relevance of the human response to sensory deprivation together with such other factors as the psychophysiology of dreams and sleep and of the existence of culture shock (as a form of "social deprivation") to a "fresh understanding of the human propensity for religion to emerge" (p. 51).

We shall return to the relationship between ASCs and religion presently. For the moment I should like to reiterate my earlier remark that ASCs occur
under conditions of alterations in objective biological functioning or of alteration in the conditions in which this functioning occurs. Sensory deprivation, restricting sensory input and freedom of action, alters the "normal" conditions under which the individual functions in any cultural context. Such restrictions extended over even a brief period of time, except with an elaborate support system, would make survival virtually impossible. It should be noted also that they constitute drastic situations of regression and dependence for the adult individual. Kracke (1967) has raised the question of how the maintenance of the ego depends on "patterned environmental stimulation." He speaks of "built-in sensory needs" (p. 27). Because input is restricted in these situations, and objects in its environment cannot be perceived, the ego turns inward and projects its own images in the form of hallucinations, thereby drawing, apparently, on memories and feelings. This is not very different from the observation by Fischer (1969:40), who has suggested that "the only content of the ecstatic experience of the mystic at the height of his rapture is a reflection of himself in his own 'program'." There is no data input from without; there is a withdrawal from sensory reality. Yet these states are interpreted within a theological framework, and thus culturally structured, as are the conditions under which meditation is undertaken. In the religious context of the Vincentians reported by Henney (1973), the memories and feelings of which Kracke speaks are structured so that visions have relevance to the religious aim for which the ordeal is undergone. For the experimental subject in the sensory deprivation studies, however, such a criterion of relevance does not exist.

CULTURAL USES OF ASCs

As noted earlier, it is imperative for the survival of society that disruptive impulses be mastered. At the same time, it is also true that some
potentially disruptive psychological processes may be harnessed in support of
the operations of society. Among the forces that have been harnessed in some
manner by most societies we have listed altered states of consciousness. In
"harnessing" them societies limit the potential danger that ASCs may constitute.
Also, we note that they are utilized in support of existing institutions. An
interesting example of the cultural utilization and patterning of a universal
form of ASC is found in the case of dreams.

Dreams

As mentioned above, it is evident that people dream in all human societies
and it is also evident that societies vary greatly in the degree to which atten-
tion is paid to dreams, how dreams are evaluated and interpreted, culturally
styled, etc. Some societies, however, use dreams in particular ways. D'Andrade
(1961) has shown the social correlates of what he calls "The use of dreams to
seek and control supernatural power." D'Andrade hypothesized a positive
relationship between such use of dreams and the distance that a young man
typically moves from his parental home at marriage. He found this relation-
ship to be statistically significant. He also found that societies using
dreams to seek and control supernatural power are likely to be, in terms of
their economies, "low accumulation" societies, that is, societies depending on
hunting and gathering rather than on herding and agriculture for their subsis-
tence and thus less able to preserve and store food in any quantity. In a
later study (Bourguignon 1972) I found such dream use to be statistically
significantly related to the presence of a form of generally hallucinatory ASC
termed "trance."

Now it is clear that neither the rules of post-marital residence nor
economic factors "cause" certain beliefs and practices concerning dreams.
Rather, it is assumed that such use of dreams represents, or expresses, certain types of stresses characteristic of particular kinds of societies: stresses on the young man on his own without family support, stresses linked typically to societies with economies of low accumulation. In the first case, the supernatural control afforded by dreams represents in an institutionalized form a fantasied support to one in need of such assistance. In the second case, we find societies that emphasize independence and self-reliance, that is to say, reliance on self rather than on other humans. Institutionalized fantasied supernatural assistance thus compensates for the lack of human beings on whom one may rely. Thus, it is suggested that the use of dreams, and of hallucinatory trance states, in the manner indicated, presumably has developed in response to certain psychological needs of individuals (specifically, dependency needs) that are not readily satisfied in societies of certain types, namely those requiring self-reliance. The personalities individuals develop and the stresses they experience are related to the technico-economic realities of life in society. Furthermore, such use of dreams helps to maintain the personalities of individuals just as the social roles with which they are associated help to maintain the societies as ongoing concerns. Thus, such use of dreams seem to have significant adaptive advantages and for this reason appears to be predictable within societies of a certain type. 5

These observations concerning dreams also indicate that the subjective and private experience of dreaming is, in fact, affected by learning, by cultural expectations, formalized interpretations, etc. People do have "culture pattern dreams," that is, dreams of an expected type, and these culture pattern dreams vary from culture to culture. Individuals who are in
some manner selected, or self-selected, for certain roles such as religious specialists (shaman, diviner, etc.) have the dreams required by this process of selection and for the operation of their prescribed functions. Within limits, dreaming is not merely culturally interpreted, it is also culturally stylized, and the line between dreaming and other forms of pseudo-perception is indeed a thin one.

Alcohol and intoxication

Not only dreaming but also other types of ASCs are culturally stimulated and even produced, modified and utilized. This is true whether specific ones of these states are employed for religious, i.e. sacred, ends and within sacred contexts, whether they involve beliefs in spirits or not. A familiar example of a type of ASC in a secular context is that of alcohol intoxication in the United States, which appears to vary among sub-cultural groups to a significant extent. Furthermore, the type of alcohol available, the occasions for its consumption, the attitudes toward this consumption, the social and cultural setting in which it occurs, the patterns of interaction with which it is associated, the range of permissible behavior, are all spelled out in cultural norms. Some of these are specified by law, others by class and cultural group. The type of drinking engaged in at a lower class Polish or Irish wedding, to cite one example, and the total surrounding context is surely different in a sizable number of dimensions from that characteristic of the cocktail party held to celebrate a new publishing venture or a new film. Most importantly, in this connection, this difference includes the range of propriety of "drunken" behavior.  

Such cultural patterning is also involved in the various ASCs listed earlier: highway or road hypnosis is clearly dependent on the existence of
long monotonous stretches of super-highways, high speed automobiles, unaccompanied and undistracted drivers, focusing on a single task over long periods of time. It is unlikely in one driving a stage coach.

Trance and Possession Trance: Descriptions

In spite of the many ramifications of the subject, we shall limit ourselves as already stated, in the following discussion of ASCs in a cross-cultural framework to types of ASCs that are institutionalized in a religious context. These are best reported, and we therefore have more comparative knowledge of them than of other forms. Furthermore, by analyzing not only the behavior but also its ideological context, we find that much light can be shed on the interaction between ASCs and culture.

We may begin this comparative analysis with a relatively simple example, taken from G. Dole’s (1964: 57-58) study of a South American Indian tribe, the Kuikuru:

Accordingly Metse divined. He and four other shamans sat on log or bark stools and smoked native cigarettes. Only Metse inhaled deeply, and as he finished one cigarette an attending shaman handed him another lighted one. Metse inhaled all the smoke and soon began to evince considerable physical distress. After about ten minutes his right leg began to tremble. Later his left arm began to twitch. He swallowed smoke as well as inhaling it, and soon was groaning in pain. His respiration became labored, and he groaned with every exhalation. By this time the smoke in his stomach was causing him to retch. He swallowed with audible gulps in an obvious effort to keep from vomiting.
The more he inhaled the more nervous he became. He rubbed his eyes, scratched his head and chest, blew his nose and wiped his hand on his leg. He took another cigarette and continued to inhale until he was near to collapse. A helper now supported his back as he continued to grow weaker. Suddenly he "died," flinging his arms outward and straightening his legs stiffly. At this point the log stool was removed from beneath him, and three men held his rigid body horizontal about chest high for a few moments. His tendons snapped as he writhed slowly in this position. Soon he relaxed and was lowered to a sitting position on the ground, his head hanging limply and his back again supported by the helper.

During his "death" Hetse breathed continuously, but in a very subdued manner. After some minutes his eyelids fluttered. He remained in this state of collapse nearly 15 minutes. From time to time toward the end of this period he moved his limbs slightly, he rubbed his eyes, scratched his head several times and looked about in a startled manner as if listening for something. When Hetse had revived himself two attendant shamans rubbed his arms. One of the shamans drew on a cigarette and blew smoke gently on his chest and legs, especially on places that he indicated by stroking himself. Then Hetse began to speak.

This brief extract gives us a good deal of information. First of all, we are told that we are dealing with culturally defined role behavior. The role is that of shaman, and part of shamanistic behavior is entering into a trance state in a specific and appropriate manner. The actor knows how to do this; he has done so before. He is assisted by other shamans who know what is
required of them in this situation: there is experience and knowledge concerning trance states on the part of both the performing shaman and his assistants. The actors in this scene are adults; they are men. There is a useful purpose served by this procedure: trance is undertaken in order to divine. This is also a supernatural ritual, since the trance brings the shaman into contact with nonhuman spiritual entities. The trance is induced by chemical means: through the inhalation and swallowing of tobacco smoke in a specific manner and quantity. The procedure, furthermore, is painful; however, it is undertaken nonetheless in order to obtain certain ends. The trance state is not an end in itself. The ingestion of the smoke leads to a period of unconsciousness and collapse, which is likened to death in native terminology. The trance is followed by a period of disorientation. The trance, or death, is conceptualized among the Kuikuru as an absence of the soul, during which the shaman's soul encounters spirits and acquires the sought-after information. He carries out a public service for clients, and he does so, it appears, in public.

We may compare this hallucinatory, drug induced trance state with another example of culturally patterned ASC. The example to follow is summarized from my field notes and describes a scene from Haitian folk religion:

On the day following our discussion of a visit I was planning to her relatives in the country, A. told me she wanted to call one of her spirits, named Papa Ogou, to please me. She invited two of her neighbors to join us and had a cigar and a candle brought in by her five year old daughter. She put some water in a cup which she placed on the floor, lit a candle and placed it and the cigar on a plate beside it. She tied a red kerchief—Ogou's color—around her head and sat down on a chair, her arms resting on a small table.
before her. She and the women began to sing. The singing was slow and quite sloppy; there was none of the rhythmical or compelling quality about it which one might have expected. At one point, A. seemed to stare at the flame of the candle, but then her gaze wandered again. She started to breathe quickly, then heavily, then began to shake her head violently, seemed to calm down again and lowered her head. When she raised her head, her features seemed transformed. There was in her face an amazing resemblance to L. when possessed by this same spirit. (L. is an old priestess, whom A. does not know). Now it was Ogou who was here, no longer A. Ogou stood up and began to smoke the cigar, poured a libation of water and greeted the three of us. Consistent with the manner expected of Ogou, A. the small shy girl, now acted—fairly successfully—the role of the aggressive, domineering and flirtatious male.... In the course of the talk among Ogou, the two women and myself, Guédé—the spirit of one of the women—was referred to. When Ogou decided to leave, he (that is A.) sat down and relaxed. But when A. raised her head again, she was not herself but rather was now possessed by Guédé, who was angered by the unkind things Ogou had said about him. In contrast to Ogou, Guédé was funny and obscene as befitted his character. When Guédé left and A. came to, she inquired about Ogou's visit and appeared surprised to learn that Guédé, who had not been invited, had also come.

TRANCE AND POSSESSION TRANCE: SOME COMPARISONS

This brief summary of a two-hour scene presents rather a contrast to the Kuikuru scene discussed above. Here, too, we have an altered state of
consciousness; here, too, we deal with culturally defined role behavior. The actor, however, is not a professional religious specialist. She is a low-grade initiate of a cult group. One part of behavior appropriate to this status is going into possession trance on certain ritual occasions. This particular ritual was of an ad hoc nature, and the participants and paraphernalia were reduced to a minimum. Yet because of its small scope, it permits somewhat detailed analysis and highlights some aspects of the system. The principal actor entered into the altered state in the specified and appropriate manner; she was aided by two randomly chosen assistants, not members of her own group, but like most persons of their class they knew what to do—they knew the songs, the need to remove the red kerchief for Ogu when Guédé appeared and other small ministrations. The ease with which A. went into her altered state suggests that she has done so many times before. There are no drugs used; tobacco is smoked during the state, not to induce it. The means used are suggestion, and apparently a preparatory state, indicated by A.'s resolve to call Ogu, a resolve she had arrived at in my absence. The actors are adults (however, A.'s five year old daughter is present during the proceedings), they are women. There is a purpose to this ritual—the purpose is to impress me and encourage me in my resolve to visit A.'s family in their rural location, a subject we had discussed the previous day. This is a supernatural ritual, since the altered state brings the actor into contact with spirits—specifically, the spirits, one by one, enter and possess her. This, then is possession trance, in contrast to the drug-induced hallucinatory trance of the Kuikuru shaman. There is nothing painful in the procedure of inducing the possession trance and the termination appears to take place spontaneously, i.e., it appears to be under the control of the subject. The assistants are
required to aid in the induction of the state, not in its termination, as in the Indian example. The possession trance appears to be fairly superficial; there is no great difficulty in terminating the state and the subject responds to a variety of cues--there is no profound unconsciousness. And yet, there is a spontaneous shift from one alien personality to another. The pattern resembles in many ways that of classical multiple personalities known from the psychiatric literature. The period of possession trance is followed by amnesia and the subject must be informed of the actions of the spirits, indeed about their actual presence. The state is conceptualized by the Haitians as the appearance of a spirit entity, who mounts the subject, who is spoken of as his "horse." There is no memory of the experience, or at least, there is supposed to be no memory. In actual fact there is probably wide variation from occasion to occasion. In any case, because of lack of memory, there must be witnesses for the spirit's message to be communicated effectively. Possession trance therefore requires an audience, whether to please (or inform) that audience or to please the spirits (or the actor). There is complex role playing, but there is no evidence of hallucination.

In view of all these differences, what do these states have in common? To begin with, they both are forms of altered states of consciousness, however induced. They clearly involve cultural patterning and not merely idiosyncratic behavior. They are thus influenced by learning, tradition, community opinion, etc. Secondly, they are sacred states: they permit contact between human beings and spirits as these are conceived of in a particular culture; as such, they confirm and elaborate the belief in spirits. Furthermore, they are ritual states; they are induced under specific traditional circumstances, surrounded by certain safeguards. In both of these examples, ASCs are
intentionally induced and valued positively. This is not necessarily always the case. ASCs may occur spontaneously and still be culturally structured as in demonic possession in Christian tradition. Some may be negatively evaluated.

We have found that it is possible to differentiate such ritual states into two groups as shown by our examples, trance, generally interpreted as soul absence of some kind, and possession trance, interpreted as due to the taking over of the body and its functions by a spiritual entity. There are, of course, great variations in the specific manifestations of these states in given societies and, within a society, among individuals. Nonetheless, this simple distinction of two forms of sacred altered states puts some order into what is, indeed, a vast quantity of data.

**FREQUENCY OF ASCs**

We have reviewed the ethnographic literature on over a thousand societies for data on ASCs. For a sample of 488 societies, we have carried out more detailed analysis, and these will constitute the body of data to be discussed in what follows. These 488 societies, taken from Ethnographic Atlas (Murdock 1967), represent all parts of the world. Of this sample 437 or 90% were found to have either or both of these institutionalized types of ASC in one or more forms. Yet not all parts of the world institutionalized these states with quite the same frequency. The percentage of societies with such sacred ASCs ranged from 97% in North America to a low of 80% in the Circum-Mediterranean area. However, it should be noted that these totals tend to underrepresent the phenomena in question; errors are likely to be errors of omission rather than errors of overcounting.

This great frequency of ASCs institutionalized in a sacred context should really not come as a surprise to us. Attentive reading of ethnographies shows
their widespread existence. Yet 19th century anthropologists were perhaps more acutely aware of the widespread existence of these phenomena, which they considered to be hallmarks of the primitive. Thus, Tylor thought the experience of trance and of visions among the crucial factors leading primitive man to develop the idea of "souls," thus laying the groundwork for all development of religion. A belief in souls as able to exist apart from their own bodies leads directly to a theory of spirit possession. In Tylor's words "this is the savage theory of daemonical possession and obsession, which has been for ages, and still remains, the dominant theory of disease and inspiration among the lower races" (1958, vol. 2:210). To Tylor, this was part of an evolutionary process, whereby more complex societies gradually outgrew these childish and crude notions. With the rejection by anthropologists of 19th century evolutionism, the development of cultural relativism, and a view of cultures as problem-solving systems, we find that materials considered to be exotic and sensationalist or at least picturesque tend to be given little space in ethnographic descriptions and analysis.

Functionalism saw religion in relation to the maintenance of society, structuralism tends to consider it as a reflection of social structure. For example, Beattie and Middleton (1969: XIX) suggest that a belief in spirits makes the non-human world a part of social structure and thus amenable to dealings following the norms of social structure. This observation notes a striking isomorphism between relationships among humans in a given society and their interpretations of what are considered to be actions of spirits, on the one hand, and the forms human behavior toward spirit entities should take on the other. Yet this observation does not "explain" such beliefs since it does not suggest a mechanism by which such an isomorphism could be said to have come
about. Explanations of religion in such functional terms, as Spiro (1967:66)
has noted, are really explanations of a certain "dimension of society" as
resulting from religion, rather than explanations of religion or of any part
of it. From the vantage point of this discussion it is important to note that
structuralists as well as functionalists tend to "explain away" the irrational
aspects of traditional cultures. However, as E. R. Dodds (1951) has shown,
even classical Greek culture has a darker side; the contemporary American
scene, with its rampant growth of occultism and related aspects clearly demon-
strates that the "irrational" is not synonymous with the "primitive" or the
"savage" (Bourguignon, 1973); (for numerous examples of the variety of current
American marginal religious groups and their beliefs and activities, see the
forthcoming volume edited by Zaretsky and Leone, n.d.)

Because of their focus on the relation of religious forms to social
structure or on the functional nature of these forms, the experiential dimen-
sion of religion has generally been neglected by anthropologists. For example,
for British social anthropologists, what has mattered in the study of spirit
mediumship (possession trance in the terminology of this paper) has been the
institution itself and its role in the operation of society. The subjective
aspect is generally ignored and the existence, or suspected existence, of
shamming is pointed to often to stress the primacy of the sociological aspects
of the phenomenon (e.g. Beattie 1969, Lewis 1971). Even Wallace, who has
written so impressively on revitalization movements and the mazeway resynthe-
sis of prophets and their followers, speaks of the "ritual reorganization of
experience" (1966:239), defines religion as "a set of rituals, rationalized
by myth..." (p. 107). No reference is made to the experiential aspects related
to the rituals or the myths.
It has been noted not infrequently in recent years that the anthropological study of religion has been, in the words of C. Geertz (1966:1), "in a state of general stagnation." It would appear, however, that the tide has now turned, particularly with the publication of La Barre's (1970) epoch making synthesis of anthropological knowledge, directed toward an understanding of religious belief, ritual and experience. For La Barre sees the private, autistic experience of the shaman, the vatic or prophetic personality, as the core of all religion. And these autistic or dereistic experiences are largely synonymous with altered states of consciousness, as are, indeed, many of the mazeway resynthesis experiences that Wallace (1956, 1966) places at the center of his conception of revitalization movements.

Perhaps what is most surprising, then, in regard to our statistical findings concerning the widespread institutionalization of ASCs and their integration into the sacred beliefs and rituals of human societies, is the fact that until very recently so little attention has been paid to this evidence by anthropologists on any level but that of observation, description and analysis of single cases. Indeed, it would appear that with respect to ASCs, the interests of anthropologists, as those of psychologists, have lagged behind those of the larger society.

The widespread incidence of institutionalized forms of ASCs requires some explanation. Clearly, we are dealing here with a universal human capacity, which is available for cultural utilization and stylization. Most cultures appear to have made use of some forms of these behaviors within a sacred context. The forms that we have studies are explained as involving contact with spirits: either the soul (or one of the souls) is temporarily absent and encounters spirits on its travels, or else the human being becomes, temporarily, the vehicle or vessel of some spirit entity. In the latter case, there is
generally an audience with whom the spirit residing in the human body communi-
cates. The use of ASCs in this manner presupposes a belief in spirits, a
belief that constitutes Tylor's basic definition of religion and that is
virtually universal. More particularly, ASCs may be seen as acting as means
of communication with spirits, whether spirits are encountered and questioned,
as in the case of the unconscious Kuikuru shaman, or whether they are im­
personated and brought into direct conversation and contact with human beings, as
in the case of the Haitian vodu possession trance. They constitute, thus, in
some manner a heightened form of ritual, which on the one hand addresses commu­
nication to the spirits as in prayer and sacrifice, and on the other seeks
their response, as in divination or the interpretation of signs and portents.
The rituals employing ASCs are dramatic two-way communications that make the
will and the knowledge and the actions of spirits immediately evident to human
participants.

Since ASCs exist universally and since they are capable of being shaped
by learning, they become the vehicle par excellence of the religious message
and the religious process. This effect of learning appears to be far reaching
and to involve not only the overt behavior and subjective content of the experi­
ence of ASC but its neurophysiological aspects as well. In a review of studies
of various types of meditation practices among Hindus, Japanese and Americans,
Emerson (1972:25) concludes that the religion of the meditator determines to a
great extent the way in which his EEG pattern as well as his metabolism will
change during the course of meditation.

As noted earlier, ASCs are intense experiences. When these appear spon­
taneously, they may be felt as an overpowering invasion by ego-alien forces,
which are interpreted in conformity with prevailing cultural views concerning
the nature of the universe and the spirits and forces within it. By such
interpretations, means are sought not only to make these ego-alien forces
understandable in intellectual terms, i.e., to provide for closure, but also
to discover practical means of dealing with them. The most successful strategy
chosen by many but not all of the societies of our sample consists of institu-
tionalizing these states, even to inducing them voluntarily so that they can
be domesticated and used not only in the service of the self that produces them
but also in the service of society.

It follows from this line of reasoning that different types of societies
will have different needs and make different types of uses of these states.
Where the states are not brought under institutional control, they may in fact
be dangerously disruptive and entail social extrusion for the one experiencing
them, as has frequently been the case in the "rational" tradition of the West.
Hallucinations, for instance, are virtually synonymous with insanity for both
psychiatrists and laymen (see for example Keup, ed. 1970).

THE CULTURAL EXPLANATIONS OF ASCs

To make sense of our findings and to put some order into them we found
it useful to distinguish ritual forms of ASCs in terms of the accompanying (or
rationalizing) myth or ideology. This is important because the mythology not
only interprets and rationalizes but also structures the behavior exhibited,
and probably, if we may extrapolate from the findings of Emerson cited above,
also makes for neurophysiological differences between the analytic types into
which we have grouped our data. Thus, we distinguish two major types of ASCs
as exemplified by the illustrations given above: 1-Trance (T), in which the
predominant explanation concerns soul absence and which is frequently linked
to types of hallucinations, or visions, as in the case of our South American
shaman. 2—Possession Trance (PT), in which the altered state is explained as due to a take over (possession) of the body by a spirit entity. (Parenthetically it should be noted here that such possession trance must be distinguished from other types of possession belief, which refer to conditions other than ASCs. An example of the latter is found in Simmon's (1971:88) book on the Badyaranke of Senegal: These people believe that some wounds do not heal because they are entered by a genie in the form of a snake.8)

When we consider the world-wide distribution of T and PT we find that some societies (10% of our sample) had institutionalized neither, some had T, some PT and some both. For example, in rural Thailand (Textor n.d.) possession trance occurs in several forms, which are however much more frequent among women than among men. On the other hand, a type of trance, termed "induced convulsion," occurs among males. Thus, both PT and T occur in this society. Among the Shakers of St. Vincent (Henney 1973) visionary trance is part of a special private ritual of advancement in the church, whereas possession trance occurs as part of the public services of worship. In some societies, indeed, there may be more than one form of T and/or more than one form of PT. However, for purposes of coding presence or absence of either or both of these forms of ASCs, multiple appearance of the forms did not concern us.

REGIONAL DISTRIBUTIONS OF ASCs

As noted earlier, the distribution of societies with institutionalized forms of sacred ASCs varies from region to region. Societies with trance states (T), the type interpreted as some form of soul absence, were found most frequently in North America, where they appeared in 93% of the societies. They appeared in 76% of South American societies. Possession trance (PT), on the other hand, was found to predominate in the areas of the Old World; these types
of states were found, for example, in 72% of East Eurasian societies and 66% of the societies of sub-Saharan Africa. (It should be remembered here that both forms might coexist in a given society. This is the case, for 30% of the African sample and for 34% of the East Eurasian one.) These statistics clearly reveal that there exist regional differences in the distribution of these states, a fact that is undoubtedly due in part to diffusion. The trance states of North America, for example, are linked to the diffusion of the vision quest and guardian spirit complex (Benedict 1923); the trance states of South America are linked to the distribution of the use of hallucinogenic drugs (Lare, Barre 1970:143-49, 158-60; Harner/1973) and of certain forms of shamanism (Métraux 1949). Our example of the Kuikuru fits these distributions nicely. Furthermore, the Haitian example of PT is known to involve a religious tradition whose connection with the West coast of Africa is well documented, and which represents a variant of a more widely distributed form of Afro-American religion. (It should be noted that Afro-American societies are not part of our statistical sample because they are not coded in the Ethnographic Atlas.)

CORRELATES OF ASCs

These regional distributions, however, have other implications as well. As we have discussed elsewhere (Bourguignon and Greenbaum 1973) each of the six major ethnographic regions into which the Ethnographic Atlas divides the world is distinguished by the predominance of certain socio-cultural features. For example, North American Indian societies were in the majority small scale societies, with a great emphasis on hunting and gathering as a principal subsistence activity. Groups were small and the political organizations with some notable exceptions generally did not reach great complexity. Sub-Saharan Africa, on the other hand, is predominately made up of agricultural societies,
with considerably greater social and political complexity, with frequent existence of social stratification and particularly of slavery. Thus, could the uneven distribution of the states we are studying be related not only to diffusion but also in a functional manner to various differences in societal complexity?

We did, indeed, find this to be the case. We compared societies having T only with those having both T and PT and those having only PT. These three types of societies, for our world-wide sample, showed a statistically significant difference (chi square significant at or below the .05 level of probability) with respect to twelve societal dimensions, taken in modified form from the Ethnographic Atlas. PT societies had the larger population and the larger local group, they were more likely to have stratification and slavery (or to have had it recently), they were also more likely to have a sedentary settlement pattern and a complex jurisdictional hierarchy. In addition, PT societies were significantly different from T societies with respect to having marriage with bride price or other compensation, to having extended rather than nuclear families, as well as polygyny. They were more likely to have matrilineal or patrilineal kingroups rather than other types, to have duolateral cousin marriage and segregation of adolescent boys. With regard to these characteristics PT societies contrasted sharply with T societies, with T/PT societies generally being intermediary between the two.

Most of these characteristics may be considered indicators of societal complexity, so that this picture appears to link the presence of PT to societal complexity and of T to a degree of simplicity, although this overall picture is undoubtedly contaminated somewhat by regional distributions. Thus, we have already mentioned the
widespread existence of the vision quest in North America and the wide use of narcotic substances in both North and South America. Diffusion is also suggested by the relationship between PT and male adolescent segregation. This practice exists in one of two forms in 78% of the African societies of the Ethnographic Atlas, an area where PT predominates, and only in 12% of those of North America and 25% of those of South America, where T predominates (Bourguignon and Greenbaum 1973). Thus, both historical and functional relationships appear to determine this picture of statistical differences between societies with PT and those with T.

Possession trance and the relative complexity of societies

The question then arises: Why should there be a relationship between PT and societal complexity? Here it would help us to consider the types of spirits (or gods) who are enacted in possession trance and the settings in which possession trance occurs. Conversely we need to consider the spirits and settings involved in trance. These will give us an indication of the way in which the organization of society is reflected in religion. Furthermore, we need to consider the stresses to which the individual is exposed in a given type of society and the possible ways of managing these stresses under various social and cultural conditions.

I have suggested elsewhere (Bourguignon n.d.) that since complex societies offer a greater variety of roles than simpler societies these roles, projected onto the spirit plane, are acted out in spirit possession. Certainly a stratified society, one with a complex jurisdictional hierarchy and with craft specializations provides numerous roles that may be enacted. In this connection Swanson’s cross-cultural study of the existence of "superior gods" is of some interest. He defines such gods as "spirits who control all phases of one
or more, but not all, human activities" (1964:210). He finds that the number of superior gods in a society correlates significantly with the presence of social classes, just as we have found a correlation between social classes and possession trance. Also, he finds that the number of superior gods is "a joint function of the number of specialties in a society and the compatibility of those specialties with the sources of the societies purposes," as well as that there are some differences between kin societies and nonkin societies with respect to the kind of specialties involved (Swanson 1964:93-94). The presence of specializations, like the presence of stratification, is an indicator of societal complexity.

Thus, Swanson's findings and our own coincide importantly. Note, however, that the contrast I wish to stress here is that between complex societies. The complex societies here are those with stratification showing superior gods and possession trance, and the simpler ones are those without stratification or superior gods and more likely to have trance. The contrast, it should be stressed, is not between societies using ASCs and those not doing so. Possession by superior gods, which dramatize the existence of societal specialization and differentiation, argues for a multiplicity of roles, as noted above. This argument is supported by our illustrations. Thus, the spirits possessing A. in our Haitian example are males not only with different personalities and attitudes, but also with different status positions. Ogou, originally a Yoruba spirit, is probably a deified royal ancestor. Among the Yoruba, a complex society with possession trance, he is linked to iron and the craft of the smiths and also to warfare. In Haiti, his identity is linked to that of St. James the Elder (Santiago de Compostella) who also is associated with warfare, especially the war of Spain against the Moors as represented in the chromolithographs widely used in his cult. In Haitian terms, Ogou is an upper class individual, a soldier, a man of war and power,
who drinks rum without getting drunk and who has great appeal to women.
Guéde, on the other hand, is a vagabond, a poor man who haunts the ceme-
teries and receives charity. He is linked to death, but also to magic and
countermagic as well as to fertility. He is obscene and does not respect
the authority of spirits such as Ogou. He is a coward who fears fire; he
eats lower class foods and drinks the cheap raw rum called taffia. In a
stratified society, these are two of a virtually unlimited number of
spirits available for impersonation. They represent the class structure
and positions within it. In contrast to the Haitians and the Yoruba, the
Kuikuru are horticulturalists with small politically autonomous settlements,
with weak formal leadership. There are no class differences. There appear
to be no superior spirits. The Kuikuru do not act out roles in trance but
obtain information from personal spirit helpers.

Both among the Yoruba and in Haiti—and in a great many if not most
of the complex PT societies—PT is enacted in the framework of a cult
group, frequently one having a hierarchy, initiation rules, complex rituals,
etc. Such cult groups recreate in their own structure the complexity of
the structure of the society in which they occur. Thus, the multiple roles
acted out by the person in possession trance reflect both the structure of
the larger society and the structure of the cult group. In such cult
groups there is likely to be opportunity for learning the roles of the
spirits and thus the behavior appropriate for those impersonating them.
The complexity of the quasi-theatrical performance requires that PT be
induced voluntarily and that it be brought under control and not be allowed
to disrupt ritual proceedings. Although possession trance represents a
powerful sanctioning device for social change, the control exercised in
stable traditional societies over the behavior of the possession trancers also makes these religious organizations important bulwarks for traditional institutions.

Reviewing the data on our African sample of societies, Greenbaum (1973a) concluded that there was a relationship (significant below the .001 level of probability) between the existence of PT and fixed status distinctions in the form of stratification of freemen and slavery. She sought an explanation of this association in an intervening variable, namely societal rigidity (Greenbaum 1973b). She argued that

under rigid systems, simple decision making is fraught with danger from internal and external social controls. Possession trance relieves the individual of personal responsibility in the decision making process by temporarily changing the identity of a human being into that of a spirit. The medium, through whom the spirit speaks, and the petitioner, following the spirit's dictates, can thus solve the problem of meeting crucial daily life decision without either intruding personally into the established order of things (Greenbaum 1973b:59).

For the purposes of her analysis, possession trance was redefined somewhat as being present only when the activity of mediums is of the kind to which her hypothesis refers. Greenbaum further hypothesised that there exists a link between fixed status distinction and rigid social structures. She did not present a statistical test of these hypotheses, but she reports an exploratory study of 14 African societies, for which she recorded the presence or absence of PT, and which she rated in regard to several criteria of rigidity and flexibility. With respect to possession trance, the societies lacking this characteristic were found to be flexible, while the majority of those having it were indeed rigid. On the other hand, rigidity and complexity appear not clearly linked, i.e., some complex societies were indeed flexible. These findings are suggestive and it
would be interesting to be able to apply these methods to a larger sample as well as to non-African societies.

An example of the use of possession trance to affect decision making is seen in the Haitian case cited above. It is true that I did not request advice from A.'s spirits, but the advice was offered. Specifically, the spirits encouraged me, through the person of A., their medium, to act on my intention to visit A.'s relatives in the country. The roles played as a medium by A., furthermore, allowed her to attempt to influence me in a way she apparently felt to be more emphatic and effective than anything she might have said in her own right, and, consciously or unconsciously, she used this method of communicating her own wishes to me. By playing the roles of the spirits, the scope of her effective range of action on her social world, the anthropologist's behavior in this case, was broadened. Incidentally, she also used indirect communication involving the spirits when she was tired of the country and wanted to return to the city: she told me of a dream in which the spirits asked her to return and in which she explained to them that she couldn't, because I was keeping her away! (Bourguignon 1954).

An example of a different kind is found in an account of a Ndembu curing ritual by Turner (1964). Among these agricultural peoples of North-western Zambia serious illness may be caused by punitive ancestors. Possession trance may be part of the divination process of diagnosis and part of the therapeutic process as well in which the illness and the ancestral influence, perhaps in the form of a tooth, are removed. Turner's article shows in great detail how the individual's illness is perceived as representing a disorder of the body politic and how the diviner/therapist
is able effectively to bring about a reorganization of the social group by his interpretation of the cause of the illness as the displeasure of the ancestors at some of their descendants' behavior.

The Case of the Zulu

We may cite one more example of an African society using possession trance in the manner hypothesized. The example is that of the Zulu, who are coded by Greenbaum as rigid. The data on the Zulu have been summarized and reviewed by Gussler (1973) and in part have been interpreted by Wallace (1972). Among the Zulu, certain symptoms of illness are diagnosed by a diviner as due to possession by ancestral spirits, requiring the patient's initiation into a cult of diviners. In this prolonged process of initiation, the patient experiences possession trance, and the ancestral spirits make their wishes known. Typically, patients (i.e. potential diviners) and diviners are women. Zulu society is particularly hard on women whose life, upon marriage, is surrounded by a great many taboos and is characterized for the bride by a very low status in the husband's homestead. Becoming a diviner, or even a member of the diviner's cult, allows women a legitimate, supernaturally sanctioned profession with avenues to influence and wealth and a great deal more independence than women, particularly younger women, can normally claim. Possession illness and possession trance make a woman the center of attention to her kin folk and an expensive one at that. Thus, the patient may obtain through the ritual a cathartic satisfaction or, in somewhat different terms, a "subjective, expressive compensation" for her low social status (Bourguignon 1973c:328). However, as Gussler (1973) has shown, these rituals of initiation also change the real life situation for the women, including her diet, allowing
her access to crucial sources of protein (meat and milk products). I have termed the consequences of this change in status "objective instrumental compensation" (Bourguignon 1973c:328). Thus, by diagnosing possession illness in a patient, a diviner playing the role of spirit medium, encourages a decision on the part of the patient and her relatives to pursue a therapeutic course that will, in effect, transform the life of the patient and consequently also that of her relatives in significant ways.

I. M. Lewis (1971:31) found women's cult groups, such as those of the Zulu, to be widespread, and he has argued that "for all their concern with disease and its treatment, such women's possession cults are also... thinly disguised protest movements directed against the dominant sex." He considers that generally the spirits involved in such cults are amoral in character and peripheral to the central religious cult of the society, just as the women are in a peripheral position with respect to the power structure of the society. He terms these women's groups, which he has studied specifically among the Somalis, where the major religion is Islam, "peripheral spirit cults." However, since such cults are weapons of the weak and downtrodden, he argues that they are not exclusively characteristic of women, and he cites some, perhaps questionable, examples in support of his argument. Furthermore, the peripheral cults, in Lewis' view, act to exert some measure of control or vengeance on the powerful either through the danger of mystical acts (i.e., the threat of the sending of illness against them) or simply by forcing them to pay the cost of the initiation of the patient. Lewis contrasts these peripheral cults with what he terms "main morality possession religions" or "central possession
cults" (1971:34,34). There, the possessing spirits are those upholding the moral principles of the society; the possession trancers are the powerful and not the powerless. Lewis argues (1971:35) that central possession cults persist typically in societies "composed of small, fluid units, exposed to particularly exacting physical conditions or conquered communities..." He sees possession trance as being in conflict with "strongly-based and entrenched religious authority... which is hostile towards haphazard inspiration" (p.34). Some of these central morality religions involve ancestors as possessing spirits. Now it is interesting that, in spite of what has been said concerning the status of women among the Zulu, the spirits that possess women, first causing illness and later empowering them in curing and divining, are not indeed peripheral amoral spirits but precisely the ancestors, the focus of the central morality religion of Zulu society. Thus, it would seem that in order to function as "safety valves" for those caught most vulnerably in the strains of a rigid social system, possession trance institutions in fact need not involve "amoral peripheral spirits," but may indeed invoke the same category of spirits generally respected in the society.

Lewis is not interested in the question of complex and/or rigid societies, but he does deal, as we have seen, with the question of power relationships. And here he draws the subject of witchcraft into the discussion of possession. He notes that the Zulu women do indeed become possessed by ancestral spirits, and that their illnesses are explained as due to such possession. But when the powerful, i.e. men, in that society, get ill such illness may be explained as due to possession by a witch's familiar, and in those cases the women are accused of being such witches involved in a cult of amoral peripheral spirits. Thus, the spirits possess
the weak of their own volition, forcing them to undertake some obligations towards them, whereas the powerful are attacked by the spirits the witches send against them, and here there is an identification of the rebellious weak, i.e. those asserting power through spirit alliances, with witches. Illness of the powerless, that is, their fearful and negative involuntary uncontrolled possession can be transformed through ritual into voluntary controlled, i.e. desirable and positive possession. The possession of the powerful is conceived of as mystical attack by inferiors and involves both the identification of the culprit and the exorcism of the spirit. It is interesting that in the case of the Zulu, the spirits that are the centers of the actual women's cult are, as noted, the ancestors. The spirits that the women purportedly send to cause illness are not part of these cults but part of a fantasy of witches' familiars. The Zulu case, as analyzed by Lewis, suggests that his typology of possession cults into women's curing groups, which are disguised protest movements centering around amoral peripheral spirits in contrast to central morality religions, represents something of an oversimplification. For among the Zulu, the illness/curing/diviner cult involves the ancestors and neither peripheral spirits nor mystical attack. Mystical attack and peripheral spirits, on the other hand, though apparently involving some of the same personnel, are part of the fantasy of witchcraft beliefs, i.e. the paranoid fears of the powerful, and not of an overt cult.

SOME TYPES OF EXPLANATIONS

The connection between the realities of possession trance and the fantasies of witchcraft beliefs is most interesting. Greenbaum (1973b), as previously noted, suggested that possession trance offers a safety
valve to rigid societies. Nadel (1952) in his comparative study of African
witchcraft beliefs has shown that

witchcraft beliefs enable a society to go on functioning in a
given manner, fraught with conflicts and contradictions which
the society is helpless to resolve; the witchcraft beliefs thus
absolve the society from a task apparently too difficult for it,
namely some radical readjustment. But from the observer’s point
of view it is doubtful if it is more than a poor and ineffectual
palliative or can be called a solution "less harmful" than open
hostility or even the break-up of the existing institutions and
relationships (Nadel 1952:29).

Possession trance, too, helps rigid societies to go on functioning. To
this extent, both Greenbaum and Lewis offer a functional explanation of
possession trance, as, in a modified way, Nadel offers a functional
explanation of witchcraft beliefs. Yet, like Nadel, we may ask about the
cost of such a manner of dealing with the stresses and strains character-
istic of such societies.

To the extent that such functional analysis helps us to pin point the
sources and loci of stress in a given society, such analysis is indeed
useful. Yet it falls short of giving us a causal explanation or an under-
standing of the mechanisms that make for the existence of such institutions.
Rather, it sheds some light on how some societies manage to continue func-
tioning in spite of the load of "contradictions and conflicts."

The question Greenbaum asks with respect to our African data is:
What are the differences between societies that have possession trance
and those that do not? Lewis asks a question about possession belief and
possession trance, which, strictly speaking, he does not differentiate.
The question is: Why do some societies have such beliefs and practices,
and others do not? How does this involve power-relationships on the one
hand and what is the nature of the possessing spirits on the other? The
question that I propose to pursue in the following is somewhat different: Given the observation that 90% of our sample societies have institutionalized, in a religious context, some form of altered states of consciousness, how can we account for their apparent "choice" between trance and possession trance? Admittedly, these states are very ancient aspects of religious experience, which, in part explains their quasi-universality in the religious context. To have been institutionalized early in human history, to be widespread and to have lasted for such a long time, and indeed, if we but look around in our present society, to be constantly renewed and rediscovered, they must indeed be adaptive—adaptive for human individuals who undergo the experiences and adaptive for societies that institutionalize them. How is it that trance is apparently adaptive in this sense in one group of societies and possession trance in another?

We may attempt to shed some light on these difficult questions by considering in greater detail the contrasts between trance and possession trance on the one hand, and on the other, the contrasts between the types of societies with which they are associated. It should be stressed, however, that although we make much of the differences between trance and possession trance, we are in fact setting up ideal types, constructing models, because to do so is heuristic and allows us to test certain relationships statistically. For other purposes, it may be useful to consider altered states along a continuum (Bourguignon 1972) and to realize that, as in all classifications, some arbitrariness must necessarily enter on some occasions (which, we like to think, were indeed rare) into the process of coding our data. For example, we have classed all non-PT altered states as T, treating it in fact as a sort of residual category. Thus, we have classified meditative states with hallucinatory (or visionary)
trance states. Since full blown meditative systems appear to be linked to "higher" civilizations, this might tend to reduce the correlation we have found between trance and less complex societies. This method of classification might also be considered undesirable in that it cuts across the differences noted by Fischer (1971, 1972, see above), who contrasts hyperaroused hallucinatory states and hypoaroused meditative states. In this connection it is of interest that Spiro, in his study of Burmese Buddhism (1970:54-55) reports on meditators bearing voices and seeing visions, of comparisons made by meditators between the pleasures of meditation and those of orgasm and even, in one case of powerful sexual arousal during a lengthy apprenticeship period. Medita-
tion, in this case, contrary to Fischer's classification, produces hallucina-
tion and other indications of hyperarousal. It, therefore, fits our category of "trance" as a state which may involve hallucination. We have already referred to such types of trance as induced by drugs and sensory deprivation.

Given these preliminary remarks, let us now take another look at the differences between trance and possession trance, as illustrated by our two examples, the Kuikuru shaman and the Haitian cult member. Among the Kuikuru, as we have seen, the shaman sought trance in order to establish contact with his spirits. The Haitian woman sought possession trance in order to permit her audience to establish contact with her spirits. The Kuikuru was a man and an independent operator, so to speak; the Haitian was a woman and a member of a cult group, although on this particular occasion she "worked" on her own. The Kuikuru induced his state by bio-
chemical means, the Haitian by suggestion and reference to learned cues.
The Kuikuru experienced profound unconsciousness and showed great physiological signs of stress, the Haitian appeared to be only slightly affected. Both showed signs of disorientation in the post-ASC phase. The Kuikuru's trance was followed by memory, or presumed memory, of his experience (the purpose of the trance being to bring back information acquired from the spirits); the Haitian's experience was followed by amnesia, true or feigned according to cultural rules (the purpose of the possession trance being to provide an occasion for the spirits to use her body as their vehicle). The Kuikuru was passive during the trance state, the Haitian engaged in active role playing during the possession trance state. The Kuikuru's trance was followed by social interaction; in the Haitian case social interaction was a significant aspect of the possession trance. The Kuikuru required assistance in terminating the state, the Haitian in entering it. Both had previous experience with such states and their behavior showed knowledge of techniques of entering and leaving the state and the state itself involved cultural patterning, as did the context in which it occurred and the ends for which it was utilized.

This brief inventory lists a sizable number of contrasts between trance and possession trance as seen in our examples, without attempting to be exhaustive. Some of the contrasts are undoubtedly due to the specific examples chosen, while others are indeed characteristic for the types involved. For instance, in an analysis of our comparative data for North and South America, we found that where drugs were used to induce ASCs, the type of ASC involved was much more likely to be trance rather than possession trance. The difference was statistically significant below the .001 level of probability, as measured by $x^2$. The fact that we are dealing with a man in the case of trance and a woman in the case
possession trance is suggestive. Certainly there are men who experience PT, in Haiti as elsewhere. Yet, as already hinted at in our discussion of Lewis and of the Zulu, most observers agree that women tend to outnumber men in PT rituals in most societies, although definite numerical data are hardly ever given, and some references to males who experience possession trance are usually also made. The difference between memory for T and amnesia for PT appears to be typical of the contrast between the two. This comes close to the core of our problem: T is a private, intrapersonal experience, although there exist cases where the hallucinations are indeed mimed for an audience. In the Kuikuru case the spirit "trip" is indeed undertaken in public. Since this is an intrapsychic experience it must be remembered in order for its lesson to be applied, whether in communication with others or in the life of the subject himself. On the other hand, possession trance is by necessity a public ritual, with the spirits that are impersonated interacting with others. The personality of the individual in possession trance is in abeyance. The important thing is the effect on the audience—the actor is merely a tool, the Haitians (and many Africans) say the "horse," of the spirits. The impact of possession trance on the audience comes from the immediate presence of the spirits. The intrapsychic experience of the actor, whatever it may be, is at best of secondary importance in the performance. The social effectiveness of the role playing does not depend on the personal satisfactions, cathartic or otherwise, of the actor. The performance may indeed serve the actor's unconscious ends and thus be of importance as a way of manipulating his or her social world. The convincing character of the performance is of utmost importance here—the memory of the events is not. Possession trance is of necessity a highly social—and sociable—form of behavior.
This social behavior is not limited to verbal interaction with an audience or with other impersonators. It often includes dancing and music not only, as in trance, as part of the induction of the state, but also as part of acting out the role. It may involve acrobatics, eating, drinking, smoking, indeed a whole repertory of human activities. In addition, it may involve activities not acceptable for humans: eating tabooed foods, tearing live animals, eating excrement, impersonating animal spirits or, in situations of culture contact, even machines.16

We have used the illustration of the Kuikuru shaman as our example of hallucinatory trance. It happens to be a case in which trance is achieved by use of drugs and, as we have noted, such is frequent in the Americas and most particularly in South America.17 Yet it is not the most frequent type of trance, even in the Americas. Of a total of 152 instances of trance societies (counting both T and T/PT societies) in the Americas, 67 (44%) did use drugs to induce the state, but the majority, 85 (or 56%) did not. Among the remainder, a major avenue to trance is found in the North American vision quest. There, the undertaking is generally a private matter. The vision may be not only private but secret. It may be reached in isolation, induced by conditions that resemble those of sensory deprivation. It may be the fantasy fulfillment of the needs derived from isolation in a frightening setting: the fantasy of a spirit helper.18

However acquired, the visions of trance are personal and the person having them gains power through them. He may use this power for personal achievement in warfare, love or gambling, or in curing and other shamanistic activities. He is enabled to surmount the dangers of a spirit trip, to bring back the souls of the sick, and to perform a variety of extra-
ordinary acts. Through mastery of his own fears, he acquires strength and heightened self reliance.

In the contrast between the ideal type of trance and the ideal type of possession trance a variety of themes recur: achievement, self reliance, independence of human helpers versus obedience to spirit forces, and submission to their will. These contrasts suggest not only differences in belief and ritual, but also differences in personality of the visionary and the possession trancer. We are led to seek these differences not only in the methods of induction of the ASC (which stress the loneliness of someone seeking trance and the group dependence of someone subject to possession trance) and in the sex of the actor, but also in the typical socialization procedures of the societies involved. How does one get to be the kind of person who performs appropriately in respect to these particular ritual requirements?

In their study of the relation of child training to subsistence economy, Barry, Child and Bacon (1967) proceeded from the hypothesis that adult role behavior varies with the dominant type of economy, so that "in societies with low accumulation of food resources adults should tend to be individualistic, assertive and venturesome...adults should tend to be conscientious, compliant and conservative in societies with high accumulation of food resources" (1967: 248). To produce such adults, there must be appropriate socialization practices, which must thus vary with type of economy. They define three variables of child training (responsibility, obedience, nurturance) constituting pressures toward compliance and another group (achievement, self-reliance, independence) as constituting pressures toward assertion. They find very high correlations between low accumulation economies and assertion and between high
accumulation economies and compliance. The association is so strong indeed, that they conclude that "a knowledge of the economy alone would enable one to predict with considerable accuracy whether a society's socialization pressures were primarily toward compliance or assertion" (1967:54). They also find in all types of societies greater emphasis on compliance in the socialization of girls, on assertion in the socialization of boys.

In view of these findings, we may consider the subsistence economies of our sample societies and how they relate to the preferred form of ASC. Where agriculture accounts for 46% or more of a society's subsistence, possession trance, or trance and possession trance are more likely to be present, than in societies where there is a lesser dependence on agriculture. The difference is significant, for a sample of 302 societies, below the .001 level of probability. The same thing is true if we consider the type of agriculture involved: possession trance, with or without trance, is a great deal more likely to exist where there is horticulture or intensive agriculture, than where agriculture is shifting, casual or absent. Again, the difference is significant below the .001 level of probability. Few societies obtain more than 25% of their subsistence from animal husbandry. But again, those that do are significantly more likely to have possession trance, with or without trance, than those that do not (p. .01). (Interestingly, where animal husbandry deals with camels or horses, the distribution is in the opposite direction. This seems to be influenced by the frequency of horses being raised among American Indians, where trance predominates.) Conversely, among societies that depend primarily on hunting, gathering and fishing for their livelihood, trance predominates, as opposed to possession trance, with or without trance. Again this difference is statistically significant, below the .001 level of probability.
In sum, then, high accumulation societies (animal husbandry and agriculture), which Barry et al. tell us socialize for compliance, are also possession trance societies, and low accumulation societies (hunting, gathering and fishing), which they find socialize for assertion, are trance societies. Why should this be so? Such variables as those cited above concerning societal complexity (for example stratification, slavery, population size, etc.), which we have found correlate with the existence of trance or possession trance, are all closely related to subsistence economy, as shown by Textor (1967).

The concepts of "trance" and "possession trance" are made up of two elements: the behavioral and the ideological. On the behavioral level, we find the presence in both cases of an altered state of consciousness. Also, for the ideal typical case, for trance we find unconsciousness or at least a considerable degree of passivity during the state, for possession trance there is a high degree of dramatic activity. These differences are related to the ideological differences: trance is interpreted as the "trip," the absence of the (or a) soul, possession trance as the presence of a spirit visitor taking over ("possessing" or "mounting") the body of the actor. The typical ASC behavior institutionalized by a given society and the appropriate ideology or explanatory scheme, as we have seen, relate to subsistence economy and thus, on the one hand, to various aspects of societal complexity and, on the other, to patterns of socialization. As we have also noted, the behavior and ideology linked to the particular form of ASC appear to dramatize and express the prototypical values of assertion for trance societies and of compliance for possession trance societies.

The question that remains concerns this final relationship: How is it that trance behavior "suits" those socialized for assertion, and possession
trance those socialized for compliance? The behavior and ideology in question must be compatible with the social structure in which they operate and the social functions for which they are employed, but they must be compatible with the personalities and the values of the actors as well. A suggestion that comes to mind is that hallucinatory trance, through the relationship with spirits which it offers, perhaps particularly through the initial encounter with these spirit helpers, satisfied dependency needs that cannot be satisfied (in these societies) in human interactions. The spirits in these contexts give support for assertive actions with promises of special individual powers and gifts. On the other hand, the compliant and dependent person who seeks or experiences possession trance, through the pretense of acting as a passive vehicle for powerful spirits is able to satisfy power strivings as well as other drives for which the real life situation provides no opportunities. This is particularly true where there is ample room for improvisation in possession trance rituals and where the subjects are, for the most part, drawn from the powerless (see, for example, Mischel and Mischel 1958, as well as the several examples of possession trance cited above).

ASCs and ecology

One further dimension of the cultural ASCs needs to be discussed before we can attempt to set up an explanatory model, and this is the possible role of ecological factors in the development of ASCs. Ohlmarks (1939) argued on the basis of a very extensive review of the literature that Siberian-North American (i.e. Circum-polar) shamanism was an outgrowth of "arctic hysteria," which he refers to as "an arctic flora of severe, often epidemic psychoses and abnormal forms of psychic reactions." These, he insists, "derive from the arctic environment and the arctic climate" (italics in original) (1939:351). Among
the "hysterogenic elements" he mentions not only cold, darkness and desolation,
but also vitamin deficiencies. People further to the south, living in a "less
hysterogenous environment" were unable to produce the "great ecstasy in a
natural way," i.e., through psychic illness. They therefore resorted to narc-
cotics, or simply to theatricals, to produce it or imitate it.20

Wasson (1968) has identified the soma of the Rig Veda as a mushroom, fly
agaric, used as a hallucinogen throughout Northern Eurasia. As the ancestors
of the Aryans moved south out of the ecological zone in which fly agaric could
be found, ritual practices were developed, including yoga, to produce the visions
that the drug had made available. This suggests a sequence from shamanism
derived from arctic hysteria to a substitution of psychotropic drugs for the
hysterical illness and then a further substitution of ritual practices for the
drugs, when these became unavailable in a further move southward.

Gussow (1960) more recently has argued for a similarity between arctic
hysteria (piblokto) and the behavior of Eskimo shamans. Wallace (1962; 1972)
has suggested that arctic hysteria among Greenland Eskimo was perhaps not
"hysteria" at all but behavior induced by calcium deficiency. A model based
on this hypothesis relating ecological and cultural factors has been elaborated
by Katz and Foulks (1969). Foulks (1972) has collected some data among Alaskan
Eskimo related to the calcium deficiency hypothesis. His data led him to a
refinement of the model, including a consideration of the effect on calcium
circadian rhythms caused by the variations in sunlight in the arctic.

Quite a different model of an ecological involvement in institutionalized
forms of ASCs has been offered by Gussler (1973) for the Zulu and related groups.
Gussler shows the parallel in symptomatology between possession illness and
pellagra, a disease widespread in the South African populations heavily depen-
dend on a maize diet. Pellagra, furthermore, appears to affect women more severely than men, and it is aggravated by emotional stresses and environmental changes, such as those which may occur at marriage when a woman moves to her husband's kraal. Such a model would also help us to understand, how initiation, with its animal sacrifices, may be therapeutic in dietary terms as well as in psycho-cultural terms.

The materials briefly summarized in the preceding paragraphs involve two interrelated questions: Is ASC behavior pathological, or better, does it originate in pathological states? And, what is the relationship of cultural ecology to (a model of) culturally patterned, institutionalized ASCs?

We may attempt to deal with the first question by frankly admitting that we do not know the answer. The views of writers on the subject, even on the subject of Siberian shamanism, are contradictory and diverse. Psychiatrists such as Field (1960), working in Ghana, and Pfeiffer (1971), writing about Indonesia, emphatically insist that dissociation is not necessarily pathological. The Brazilian psychiatrist Ribeiro (1945), a student for many years of Brazilian possession trance cults, notes that the psychiatric status of cult participants varies widely. Perhaps the suggestion of Schwartz (1968) is most helpful here; in speaking of Melanesian cargo cults, he suggests that cult behavior may be "pathomimetic" rather than "pathogenic," that is, patterned on pathogenic behavior without actually being pathogenic. Such a suggestion is also implicit in Gussler's work (1973), mentioned above, which sees similarities in the symptomatology of pellagra and Zulu possession illness.

The ecological models referred to will require considerably more data and probably more refinement, as already indicated by the work of Foulks. The implications that may be drawn from them at present, however, seem clear: cultural factors—learning, interpretation, stylization—interact with pathogenic processes, be these psychogenic or ecogenic, such as deficiency diseases.
The processes of illness in turn form models for "extra-ordinary" behavior which may be integrated into conceptions of extraordinary beings. The special experiences derived from hallucinogenic substances, as well as from dreams, are used similarly. A conception of ecology must therefore include an epidemiology of diseases as well as an ethnobotany of pharmacological substances in order to help us in developing an explanatory model for the understanding of institutionalizations of ASCs.

The Model: A Trial Formulation

The model proposed here (Fig. 1) aims to bring together, in a parsimonious manner, the results of the preceding discussion on a variety of topics. There is some supporting evidence, but there are also some assumptions and nondemonstrated propositions that go to make up this model. We begin with certain statements.

1. Concerning ASCs: they represent a universal human potential; they are subject to learning and molding; the learning affects neurophysiology as well as overt behavior and subjective experience; they are not necessarily pathological; they are frequent in situations of psychological and/or physiological stress.

2. Concerning the human organism: human beings are everywhere born helpless; they grow and develop in profound interdependence with adults; early experiences and relationships will serve as conscious and/or unconscious models for later relationships, including relationships with supernatural entities they are taught to believe in.

At birth individuals are placed within societies that are ongoing concerns. The organization of the particular society and the patterns of its culture are directly related to its ecological setting and the adaptation to this setting that it makes. This ecological setting includes technology and economy, diseases characteristic of this ecological adaptation (e.g. deficiency diseases due to
Fig. 1
nutritional practices), and the resources the society is capable of utilizing, including, as we have seen, the possible use of hallucinogenic substances. In this setting new members are socialized. The socialization process is related to the adult economic role, so that societies with high accumulation economies socialize for compliance and those with low accumulation economies for assertion.

As noted earlier, this empirical finding by Barry et al. (1967) was based on their idea that "the extent to which food is accumulated and must be cared for" (p. 247) is an important variable in adult role behavior and therefore also in child training. In societies dependent on animal husbandry as in those dependent on agriculture, "carelessness in the performance of routine duties leads to threat of hunger," not only immediately but also for the longer run. Because past techniques and routines have proven themselves, individual initiative will be considered risky and therefore feared. Consequently, obedience to those experienced and faithful following of traditional routines will be valued. On the other hand, hunting and fishing societies, with no storage facilities, present quite a different picture. Here individual initiative, skill, self reliance will be prized. The risks of innovation and enterprise may be momentary only and the possible rewards high.

Furthermore, types of economies relate to a variety of societal variables: population size, permanence of settlement, stratification, slavery, marriage patterns, and household organization, which in turn affect socialization. Also, hunting and fishing societies, with low food accumulation, will be smaller in size, with less societal complex and, less of a social hierarchy demanding obedience and conformity. These several societal variables also affect the stresses to which the individual is exposed in childhood, at adolescence and in maturity. Furthermore, the socialization process involves values and ideals of personality
as well as economic roles; economic roles relate to other roles as well. Moreover, individuals socialized toward certain norms in turn socialize others similarly. We thus deal not only with socialization but also with the resultant adult personalities. The characteristic stresses experienced in childhood and in adulthood, the values and ideal images that are internalized, those are reflected in the spirits people believe in. We have noted that spirits reflect societal complexity, in their numbers and powers, and they also reflect in a more intimate manner, the sources of fears and satisfactions for the individual.

ASC behavior may be considered one type of behavior typical of a given personality, reflecting its values and beliefs, its stresses and needs. We can therefore study behavior under ASC as we study other types of expressive behavior, whether in spontaneous cultural products or in response to psychological tests. The stresses on the individual may be situational; as in life crises (for example, the vision quest in puberty among North American Indians, the PT illnesses of young married women among the Zulu, or, in a somewhat different pattern, in Northern India), physiogenic illness, and psychological crises. They may be characterological in origin as with hysterical personalities, or they may be built into the structure of the society for certain types of individuals (e.g. the status and role of shaman). There may be crises in the life of the society: under grave dangers of cultural distortion and social disaster, the reorganization of society may occur through charismatic, prophetic individuals, or through the mass experience of ASCs. La Barre speaks of "crisis cults;" Wallace of "revitalization movements."

Under such circumstances of intensive culture change, in particular, ASCs may affect not only the organization, or reorganization of society, but also, directly or indirectly, its ecological adaptation. For example, the Seneca
prophet, Handsome Lake (Wallace 1970) told Iroquois men to take up agriculture, which had previously been women's work. The prophecies of various cargo cult leaders in Melanesia have often included taboos on work while awaiting the millenium (Worsley 1969).

Thus, an ecological adaptation in which adult economic role behavior requires compliance leads to socialization for compliance, producing adults who demand compliance in familial and political situations and who at the same time believe in spirits (ancestors or departed chiefs or other powerful beings) who demand compliance. These spirits can be dealt with through impersonations during ASC (possession trances) which dramatize the requirement for compliance made by these powerful beings. Yet, through the fact that, after all, humans play the roles of these impersonated entities, the ASC allow those in possession trance to act out their own needs for assertion, and they present them with an opportunity to manipulate others and their own real life situations as well.

On the other hand, an ecological adaptation demanding assertion, independence, self-reliance in the economic life of its adults, requires socialization directed to these ends. Social organizations of independent assertive adults, with few accumulated resources, will reach only a low level of complexity and limited social and economic cooperation, with little delegation of authority to a higher human power. Spirits, under such conditions, are perceived as having limited powers and can be induced to share some of this power by expressions of normally unadmitted dependency and powerlessness. Such spirit allies will then help the seeker in overcoming other dangerous entities, increasing his own powers. Within a given ecological setting, ASCs used in ritual contexts may constitute actual biological or psychological deviances employed for social ends or may use such deviances or pathologies as models on which institutionalized behavior can be patterned.21
For the individual, ASCs provide catharsis, compensation and/or the reorganization of self, the "birth" of a "new man." For the society, ASCs provide a safety valve that may help maintain existing institutions; or yet, ASCs may provide justification for cultural and social changes. Furthermore, the direct experiences with supernaturals that ASCs are believed to offer provide an experiential basis for faith, for the confirmation and development of religious conceptions and rituals. Therefore, there are a series of feedbacks from the level of individual ASC experiences to the institutional structures of society: first to the religious institutions, but also, as we have seen in our examples, to other institutions involving power relationships, decision-making processes and the like.

Because of the considerable importance of ASCs in the social fabric of the vast majority of human societies, not only as an expression of belief and as a type of ritual but also as active social agents, it is difficult to understand why they have been undervalued for so long, except as this undervaluation is itself an expression of Western culture introducing distortions into the perception and thought of the anthropologist.

Altered states and "normal" states of consciousness?

The question was raised earlier whether "normal" states vary from culture to culture. This depends, of course, on the definition of the normal state and the criteria used to discover and describe it. If we follow Fischer (1972) in defining altered states as involving central nervous system excitation above and below the level of a "normal" state, then, by definition, such a state exists everywhere, the norm being that state in which an individual spends presumably most of his waking time, attending to the routine business of living. Fischer notes that the state of hyper-arousal involves a specific
series of physiological features: rise in body temperature, metabolic rate, blood sugar and rate of heartbeat, pupillary dilation, facilitation of mono-synaptic reflexes. While such data are available on drug experiments, such as those carried out by Fischer and others on LSD, they are not available cross-culturally for what I have termed trance and possession trance. Fischer, however, states that "trance [read here: possession trance] is 'acting out,' a learned cortical role playing with pupillary constriction and parasympathetic (trophotropic) predominance, whereas hallucinations are 'acting inward,' a more subcortical experience, an 'I'-meets-'Self' situation with less role playing, a high sensory to motor ratio and pupillary dilation (and all the other symptoms of the ergotropic excitation syndrome)" (Fischer 1972:45).

Goodman (1972b) finds evidence of hyper-arousal in glossolalia and consistency in glossolalia patterns cross-linguistically.

If on the other hand the "normal" state is to be defined in subjective terms, in terms of perception of self and of the behavioral environment, then the question is a different one and the answer may be expected to be different also. The psychologist Tart (1972:2) states:

A normal state of consciousness can be considered a resultant of living in a particular environment, both physical and psychosocial. Thus the normal state of consciousness of any individual is one that has adaptive value within his particular culture and environment; we would expect the normal state of consciousness to show qualitatively and/or quantitatively different aspects from one culture to another.

Such a relativistic view fits well what anthropologists and social psychologists have learned about perception, whether of the environment or of the self (e.g., Segall, Campbell and Herskovits, 1966; Hallowell, 1955; Bourguignon, 1965). Conceptions of spirit entities and their relations to humans, as in trance or possession trance, then clearly are part of the perceptual set,
which may be said to be part of "normal" consciousness. R. F. Fortune tells of a Dobuan informant describing a scene of bewitchment he claimed to have watched and wondered how such a report is to be interpreted. This is directly relevant to the problem of the relativity of normal consciousness which concerns us here:

Y moved in concealment, charming with spells towards the gardener and charming his sorcerer's lime spatula. Then with the gardener facing him, and nearby where he crouched concealed, he burst forth with the sorcerer's screaming shout. Christopher saw the gardener fall to the ground and lie writhing convulsively under the sorcerer's attentions...

The sorcerer feinted to rap his victim gently over the body with his lime spatula. The body lay still. He cut open the body with the charmed spatula, removed entrails, heart, and lungs, and tapped the body again with the spatula, restoring its appearance to apparent wholeness (here my informant speaks from what he apparently believes his own eyes saw in the cleared garden space below). The sorcerer's attentions here left the body of the victim, and transferred to charming the lime spatula anew. The body rose. Y said "You name me." The body mumbled incoherently and received a feint at a gentle rap on the temples from the spatula. Again "You name me" aggressively. Again an incoherent mumble, and another feinted rap. So a third time. Y said "You go." The man went to the village, and arrived raving, leaving his personal goods and tools in the garden. His children went to bring them. The man lay down writhing, groaning, and calling on his abstracted vital parts by name—by this time it was mid-day. So he lay that day and night. Next day the sun climbed to its zenith and he lay dead.

Such is the account of the watch-dog in the case... So firm was his belief that he used the language of an eye witness of the removal of the entrails, heart, and lungs of the victim.

It is clear that the sorcerer's procedure is hypnotic in nature, the fear apparently being paralysing...

I believe that Christopher's account of his adventure as his wife's mother's brother's watch-dog was no fabrication. He had no need to implicate himself so closely if he was spinning a tale. I have never seen a human being so possessed with emotion as my informant, yet retaining his sanity. He appeared to see everything that he described once again,... (Fortune: 1963:162-63).
How is one to interpret this passage? Was the man a liar and an actor? Was he hypnotized by Y, the sorcerer, as Fortune suggests? Or perhaps, in observing Y's magical symbolic gestures did he perceive and/or relate them as direct renderings of their referents? The latter appears to be a suggestion at least worth entertaining. If so, was he in a "normal" state during these events, and are we then not dealing with an example of the cultural relativity of that "normal" state?

ALTERED STATES OF CONSCIOUSNESS IN WESTERN CULTURE

The Historical Background

Before concluding this broad review, we must take a brief look at the place of ASC's in Western religious tradition. This is, of course, subject matter to fill several books and no more than mention of some trends is possible here.

Cultural patterning of ASCs within a religious context has a long history in Western tradition, with roots both in its Hebrew and Greek sources. We have mentioned Plato's classification of four types of inspired "mania." There was the tradition of the Delphic oracle, inspired by Apollo, and there was the tradition of Dyonisian, Corybantic and Orphic cults. Dodds (1951) shows the influence of Northern shamanism in the background of some of the Greek tradition. The French classical scholar, Jeanmaire (1951) has found it useful to compare the fragmentary knowledge we have of the Corybantic rites, which appear to have involved therapeutic forms of possession trance, particularly among women, with those of the zar cult of Ethiopia. The mystery religions of Hellenistic and Imperial Roman times also seem to have involved certain ASC rituals.
In the Hebrew tradition, we find Saul possessed by an evil spirit and David dancing in ecstasy before the Ark. The inspiration of the prophets and the visions of some, such as Ezekiel, point to a tradition of possession trance and hallucinatory trance. (Field, 1960, makes very explicit comparisons between this and the New Testament tradition, and the dissociational states she studied in Ghana).

In the time of Jesus, belief in a great number of demons was rife and exorcism appears to have been practiced widely in Galilee. On the other hand, positive possession, as recorded in the account of the Pentecost, is also reported. Both streams, possession by the Holy Ghost and demonic possession, have continued in the Christian world to the present. To this is added, furthermore, a tradition of mysticism. An extensive literature of the writings of the mystics reports not only their experiences, as in the writings of St. John of the Cross and St. Teresa of Avila, but also teaches spiritual exercises. A similar mystical tradition exists in Judaism, particularly in the medieval Cabala (Zachner, 1937). The tradition of demonic possession was noted by the 19th century French psychiatrist, Charcot, and his students, who compared the symptoms of their hysterical patients with those of the victims of demonic possession. The case of the possessed nuns at Loudun is probably the most famous (Huxley, 1951).

Quite a different use of ASC's appears to have existed in European witchcraft. As Harner (1973) has shown, there is good reason to believe that witches employed ointments made of plants such as henbane, deadly nightshade, mandrake, etc. These contain powerful hallucinogens, which produce sensations of flying and the visions which provide the imagery of the witches' Sabbath. Witchcraft rejoins the tradition of beliefs associated with ASCs
in another way: witches were accused of causing demonic possession (i.e., possession trance hysterias) in their victims through their pacts with the devil. This is illustrated in the familiar case of the Salem witches.

Still another strain of ritualized ASCs has played a role in European history and has left at least local remnants. ASCs in the form of compulsive dancing, the so-called "dancing manias," spread through parts of Europe at various times during the late Middle Ages (Hecker, 1888). At times these movements involved believers in dance as a form of worship. Some were thought to be possessed by devils, and priests sought to exorcise them. Tarantism, as a stylized form of illness and dance/trance therapy still exists in Apulia, in Southern Italy. De Martino (1961) traces a wide distribution of this illness and therapy throughout the Mediterranean world in earlier periods.

Another localized ASC phenomenon is the fire walking trance of Thrace (northern Greece and Bulgaria), which is associated with the Greek Orthodox Church and the cult of Constantine. It appears to have an ancient Dionysian tradition in its background.

In the United States, mass epidemics of ASCs have occurred in the context of various religious revivals, such as the Great Awakening. The Pentecostal churches provide a familiar example of this tradition, where the most direct expression of ASCs appears in the form of "speaking in tongues" (glossolalia) and faith healing.

At least some of these streams in the historic background are directly relevant to the situation in the contemporary United States. There is one further stream: Spiritism or spiritualism. This exists in the United States both as spiritualist churches and as independently operating mediums. The
French spiritism of Allen Kardec is currently having a vigorous influence in Latin America, where spiritism and Pentecostalism are the two most rapidly growing religious movements.

**Altered States and American Counterculture**

In the early 1960's hallucinogens appeared for most Americans for the first time with the writing and experimentations of Timothy Leary and his associates. They spoke of the drugs as "psychedelic" or mind expanding, where Hofmann, the discoverer of LSD, had spoken of it as causing a "model psychosis." The mind expanding drugs were to give "internal freedom" and to be a basis for solving virtually all problems that beset humanity. After all, as we have seen from our survey of the widespread existence and ritualization of altered states of consciousness among human societies, a culture such as our own, where such states are not given respectability in a ritual context, except among marginal groups, is atypical of mankind. However, as La Barre (1969) has pointed out, it is precisely to our valuation of the rational in man and the suspicion of the mystical as a source of revelations, that we owe the development and growth of science as a unique instrument for the discovery of knowledge about the world of empirical reality.

The search for altered states in hallucinogenic drugs, in Eastern religions, and in renewed forms of ecstatic ritual and experience in Protestantism, Catholicism, Judaism, points to a deep-seated disenchantment with Western civilization with its reliance on science and that child of science, technology. The recent transition from drugs to ritual revivals first came from the observation that drugs did not provide their own "program." Those that brought a religious orientation to the drug experience, found their faith validated. Those that did not, or were inadequately prepared, often.
enough had a "bad trip." College students, who seem to have been the major
group of experimenters, appear to have discovered by personal experience
what Lévi-Strauss (1970:13) has stated in more general terms:

The hallucinogens do not contain a natural message, the very idea
of which appears contradictory; they are releasers and intensifiers
of a latent discourse which each culture holds in reserve and the
elaboration of which the drug permits or facilitates. (My trans­
lation from the original French - E.B.)

The drug cult appears largely to have run its course, but the search for
altered states has not. The drug users sought for instant mysticism, without
the pain of apprenticeship and without the guidance of those initiated. 23
When the drug experience was found empty of consolation, many turned else­
where. The search appears to have been wide indeed. Thus, E. B. Fiske,
writing in the New York Times (5/10/1970), notes that "surfing has become
for some a way to religious experience," and he quotes Michael Hynson, "one
of the top surfers in the world," as saying: "I used to be on LSD—not as
an escape but as a sacrament, a total sacrament...Now I have moved on and
find that in surfing I still get high and locked into the rhythm of the self.
It turns you on to God." Alpha waves (which have been largely debunked by
Mulholland, 1972), various schools of meditation, Scientology, parapsychology,
all have gotten into the act, with or without sacred trappings. Resort to
these, as well as to the neo-pentecostal and charismatic movements in the
established churches, has served as a half-way house for drug experimenters. 24
It has also appealed to the disaffected among the young, and, in the case of
the established churches, to the not so young. The appeal of hallucinogens
and marginal religious groups, taken together with the noteworthy interest in
astrology and the occult (reflected even in children's toys and children's
books), indicates that we are dealing with a phenomenon of some importance,
quite aside from its commercialization. The cult of ecstasy, of the "high," is not the problem, it is the symptom. Beyond the desire to be stylish, to be in step, there is a search for something: intensity of experience, turning inward to the self or to the mystic unknown and tuning out the noises of the crises of the age.

What are we to make of this seeking, evident in the veritable explosion of religious movements, groups and grouplets? It is tempting to suggest that we are witnessing a retreat from reason, a disenchantment with the products of science and rationality, perhaps with science and rationality altogether. Weston La Barre (1970:44) speaking of religion in general and of the American Indian Ghost Dance of 1890 in particular, has said: "All religions, perhaps, began as crisis cults, the response of a society to contemporary problems culture failed to solve...Each religion is the Ghost Dance of a traumatized society." At present, we observe not one but a whole series of "crisis cults," suggesting perhaps the depth and the intensity of the problems that face us. Yet it remains to be seen whether from these many cults there can emerge a genuinely successful "revitalization movement"—in Wallace's terms (1956)—a conscious movement to create a more satisfying society. Prince (1970:81) sees hope in what he calls "the mystical interests of our youth," suggesting that

Our whole culture may have to enter a moratorium on scientific investigation for a generation or two to accomplish the tremendous religious task of achieving a genuine world citizen identification. We must remember that the question has now become "What are we willing to sacrifice for survival?"

We may indeed be dealing with the beginning of such a movement. Some notable ingredients of successful revitalization movements appear as yet to be absent, however, particularly the emergence of a forceful charismatic
leader. Prophecy is not the business of science, of anthropology as little as of any other. Yet we must also remember that many crisis cults finish in total disaster, for the cult and for the society. For the Sioux, the Ghost Dance of 1890 ended not in Custer's Last Stand, but in the massacre of Wounded Knee.
NOTES

1. Since my reference is to an excerpt from a longer, unpublished paper, it is not clear how these categories were arrived at and what sources were used. For example, the category "states of rapture" includes "orgiastic rituals (e.g., witchcraft and voodoo)," and "rites of passage (e.g., primitive puberty initiations)." Such a listing must startle anyone familiar with the ethnographic literature and would tend to throw some doubt on this classification.

2. It is interesting to note that, among others, the novelist Joyce Carol Oates has raised the question whether Castaneda's books might not indeed be fiction rather than anthropology (letter to the N.Y. Times Book Review, November 26, 1972). See also the lengthy cover story on Castaneda in Time Magazine, March 5, 1973, titled: "Don Juan and the Sorcerer's Apprentice."

3. For a brilliant discussion of Plato's classification and for the place of spirit possession trance and belief in Greek culture, see E. R. Dodds, The Greeks and the Irrational (1951), particularly chapter III: The Blessings of Madness.

4. The relationship between ASCs and creativity has long been of great interest to artists in the Western tradition. Plato spoke of the mania or madness of the poet. The notion of "inspiration" represents a symbolic rendering of the same idea. A distinction should be made, however, between creativity as a type of ASC and drug states (or other ASC's) as enhancing creativity. Fischer (1969) has pointed to the similarity between schizophrenia, mannerist art styles and LSD induced artistic experiences. The poet Rimbaud
is well known for his theory of the seer and his claim that a systematic
derangement of the senses is necessary for artistic creation, a theory
which he put into practice by all the methods at his disposal. Ebin, ed.
(1961) presents a series of first-hand accounts by a number of well-known
writers who have experimented with drugs (see also Bower, 1970; Ghislin,
1952). There is a question, however, whether the altered state produced by
drugs gives subjective value to productions which a more sober view finds
less impressive.

There are a small number of accounts that indicate artistic creation in
altered states in primitive and traditional societies. Reichel-Dolmatoff
(1972:104-113) speaks of art produced among the Tubano of Colombia as a
result of the hallucinations stimulated by Banisteriopsis Caapi. Stein
(1959) presents the work of the Tibetan bards as resulting from ASCs.

Although Frontier America was not a low accumulation society in the terms
noted, it was a society that stressed self-reliance and exposed individuals
to a high degree of isolation and loneliness. Hsu (1961, 1972) has stressed
self-reliance as a major American value. While I am not aware of the signi-
ficance of dreams in this setting, these stresses are surely not unrelated
to the spread of the great revival movements with their ecstatic trance
states among the settlers and to the development of pentecostal and holiness
religions more recently among their descendants. However, a close examina-
tion of the American case would take us too far afield in the present
context.

Cross-cultural studies such as those by Horton (1943), Bacon et al. (1967)
and the volume edited by Pittman and Snyder (1962) review the complex of
variables associated with drinking, intoxication and drunken behavior. Bacon, et al. (1967:346, Table 2) show, for example, that in their study of 57 societies there is a negative correlation between frequency of drinking as religious ritual and boisterousness, typical intensity of hostility and extent of change in hostility, but a slight positive correlation with occurrence of extreme hostility.

7 The statistical work reported here was part of a larger project, the Cross-cultural Study of Dissociational States, carried out at The Ohio State University between 1963-68 under my direction. The study was supported in whole by PHS Research Grant MH-07463 from the National Institute of Mental Health. The sample of 488 societies was taken from the Ethnographic Atlas (Murdock 1967). The societies are listed, together with their coding for ASCs and for a series of variables derived from the Ethnographic Atlas in the Final Report of the project. The sample is also listed with the ASC coding in the appendix to Bourguignon, ed., 1972. Our sample includes 57% of the Atlas societies and although it is not a random sample, it is indeed a representative sample of the universe from which it is drawn, that is, from the Atlas.

8 It is possible, of course, that possession trance may be pretended or mimed, when, in fact, no ASC is present. In that case, there is neither "trance" nor "possession" (the acknowledged presence of an ego-alien entity as conceptualized in native thought). Rather, the presence of a spirit is impersonated or acted. However, it should be noted that the criteria of "faking" may be different for the anthropologist and for the native, who is primarily concerned with the veracity of the spirit message or with the effectiveness of the cure, etc.
See Bourguignon 1973a, Table 3.

The societal dimensions selected for study in relation to the presence or absence of ASCs were taken from the Ethnographic Atlas in modified form. The modifications as well as the nature of the Atlas itself are presented and discussed in some detail in Bourguignon and Greenbaum, 1973.

Duolateral cousin marriage: A category taken from the Ethnographic Atlas, where it refers to several types of marriage rules. Most common among these is the rule according to which the preferred marriage partner for a man is a woman standing to him in the relationship of either mother's brother's daughter or father's sister's daughter (cross-cousins). Four other rules, which appear more rarely, are also included in the term "duolateral." These are: Marriage with either paternal cousin; with either maternal cousin; with uncle's daughter (i.e., father's brother's daughter or mother's brother's daughter); with aunt's daughter (i.e., mother's sister's daughter or father's sister's daughter).

The antiquity of ASCs in the context of religion has been discussed and elaborated in great detail by La Barre (1970, particularly chapters IV and V).

As noted, some societies have both forms, a point to which we shall return later. However, since, in many of the societal dimensions we have studied T/PT societies are intermediary between the other tow, it seems permissible for the sake of the simplicity of our model to stress the polar types and contrasts between them.
14 It may well be that these experiences described by Spiro's informants occurred in a period of learning to meditate, and that once the ability had been developed, hypoaroused states were in fact achieved. Fischer's classification has also been questioned by Prince (1972) on some other grounds.

15 We did attempt to replicate this study with data from Sub-Saharan Africa, but we found that the information concerning the use of drugs in religious rituals was grossly inadequate for statistical study. The overall impression, however, is that little use is made of drugs in African rituals in general and in possession-trance rituals in particular.

16 See Jean Rouch's excellent film, *Les Maîtres Fous*, concerning a Zermo cult group in Accra, Ghana. Among the impersonated entities are the locomotive or the locomotive driver (the distinction is not clear) and the lorry, as well as various humans raised to spirit proportions. There are a number of other films which present possession trance behavior in vivid detail. See particularly *Trance and Dance in Bali*, by G. Bateson and M. Mead and *The Holy Ghost People* by Peter Adair. This film is a splendid document of a Pentecostal snake handling group in Appalachia.

17 A number of excellent recent books on hallucinogenic drugs and shamanism deal almost exclusively with American Indian, primarily South American, materials (Furst 1972, Dobkin de Rios 1972, Harner 1973).

18 See La Barre's discussion (1970:43; 53-4; 65).

19 The economic data were taken by Barry et al. from Murdock (1957). Ours were taken from Bourguignon and Greenbaum (1973) as based on Murdock (1967). While the definitions are not precisely the same, the patterning of our data
and that of Barry et al. clearly correspond to the same overall results.

20 An example of what is perhaps a merely symbolic and fictional use of a physical disability for sacred as well as social ends is that of the blind seer in Greek tradition, be he Homer or Tereusias.

21 The vast literature on Siberian and Central Asian shamanism has been summarized in Ohlmarks (1939), Paulson, Hultranz and Jettmar (1962), Levin and Potapov, ed. (1964), Findelisen (1957). Much relevant material is brought together in La Barre (1970). Michael, ed. (1963) presents some recent Soviet studies, reporting fieldwork of the 1920's and '30's. Eliade (1964) presents probably the broadest overview, but his theoretical position and the organization of his data seem to be rather in the tradition of history of religion studies rather than that of anthropology. Shamanism was the subject of attack under the Soviet policy against religion, and little information is available about its current status. In North America, Eskimo shamanism has given way before the efforts of the missionaries. The discussion about the mental status of the shaman (specifically the Arctic shaman) is therefore unlikely to be resolved by modern fieldwork.

Among the most important studies of shamanism in particular Asian societies, the following should be cited: Shirokogoroff (1935) on the Tungus, Bogoras (1907) on the Chuckchee and Johelson (1905) on the Koryak.

22 Charcot's disciples published under the title Bibliothèque diabolique a series of volumes of primary source materials on cases of demonic possession dating from the 16th and 17th centuries.

23 Gary Schwartz (1972) has pointed to the importance of the theme of immediate gratification in contemporary youth culture. Immediate gratification
is, of course, the theme of much of advertising, and it does not seem surprising that it is important to a generation reared on television commercials.

24 See, for example, McDonnell 1968; Robbins 1969.
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