# Cultural Determinants of Response to Hallucinatory Experience

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Hallucination attracts the attention of the anthropologist for several reasons: First, because, as one of the most ancient and most widely distributed of the modes of human experience, most, if not all, human cultures provide definitions of and responses to it which are of interest to the descriptive ethnographer; second, because a vast quantity of content has been introduced into the cultural repertoire of mankind by hallucinatory ideation in dreams, visions, and hypnogogic imagery, and hallucination must therefore be considered in relation to culture change; and, third, because hallucination is often defined in Western societies as a symptom of mental and/or physical disease, and anthropologists play a role in medical research in these societies. It is in the last context, particularly in the area of mental health research, that the present inquiry is undertaken.

Cross-cultural materials on hallucination may be of interest in a mental health research context in at least two ways. First, and rather obviously, both psychiatrist and anthropologist will expect the manifest content of hallucination to vary, as does the content of other behavior, to some degree with cultural setting, and they may be interested in the range, frequencies, and associations of various types of manifest content. Differences of opinion exist in regard to the supposed variability of latent content: Lincoln, in his study of dreams in primitive cultures, and other psychoanalytically oriented scholars have emphasized the universal presence in dreams of Oedipal themes and the classic "Freudian" symbols [13]; less strictly psychoanalytic ethnologists have not emphasized the presence of these themes so much as culturally and personally idiographic ones.[2,3] In any case, however, we shall not be primarily concerned with the content per se of hallucinations. Rather, we shall deal with the problem of the definition of and response to the experience, by the society, by the scientific observer, and by the hallucinator himself. The rationale for such an approach, in a mental health context, is twofold: First, knowledge of the range of definitions and response, and their cultural associations, may help in diagnosis and in communication with patients; and, second, it is likely that in some cultural subgroups in our society the nature of definition and response to hallucination entertained by hallucinator and his associates may aggravate or precipitate other mental disabilities in the hallucinating person. Indeed, the mental patient may suffer from added anxiety precisely because of the nature of the definition of hallucinatory experience which he entertained prior to experiencing it himself. Certainly among hospitalized patients in our society, the attempt to conceal hallucinatory experiences from the staff is both chronic and, in one sense, realistic: Staff members frequently take a negative view of hallucinations, and hallucinating patients are subject to measures which, from the patient's standpoint, may be punishments (de-

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lay in discharge, restriction of privileges, questioning on sensitive issues, subtle contempt, and even ridicule, from both staff and other patients).[23]

## Problems of Definition

Uncertainties of definition impede research in the area of hallucinatory experience. Although hallucination is commonly treated by psychiatrists as a symptom of mental disorder, its occurrence is neither a necessary nor a sufficient condition for such a diagnosis. Most psychiatrists, furthermore, impose two restrictions on the word "hallucination," excluding from its extension those ideational experiences which occur during sleep and assigning to it a generally negative valence. These restrictions are useful in psychiatry in our own cultural setting, but they are not helpful in establishing a cross-culturally applicable definition (nor need they be, for a Western psychiatrist's definition is to be regarded as only one cultural variant), since in some societies dreams and waking visions may be for many purposes treated as equivalent. For the purposes of this study, "hallucination" will be defined, very broadly, as pseudoperception, without relevant stimulation of external or internal sensory receptors, but with subjective vividness equal to that aroused by such stimulation. Included in its extension, therefore, are dreams, the waking "hallucinations" of psychiatric terminology, and hypnogogic imagery; excluded is the fainter audiovisual imagery of reflective thought. There remains a somewhat dubious category, occasionally referred to as hallucinations in the psychiatric literature, of perceptions whose subject matter is unambiguously provided by external stimulation but whose form displays subtle or gross distortion. The most familiar examples are the undulating floors, stretched perspectives, echoing sounds, and other distortions experienced by some subjects on administration of the so-called hallucinogenic or psychotomimetic drugs, and by normal subjects who have consumed narcotics, or alcohol, have been breathing anesthetics, or are in process of losing consciousness (fainting). We shall leave these phenomena out of the range of our definition, on the ground that a "hallucinatory" dimension already exists, of vividness of subjective imagery in the absence of sensory stimulation, at all points of which the pseudoperception may be equally undistorted, and relate these dubious cases, rather, to a logically independent dimension of perceptual distortion. The relationship between the two dimensions may, of course, be investigated empirically.

A second major problem, in addition to the concept of hallucination itself, is that perennial flower of confusion, the word "possession." Casual observers and many anthropologists alike use this word in two very different senses: as a label for some person's overtly observable behavior, and as a label for a native theory to explain this behavior. These two uses are, unhappily, often confused. It may be best to state flatly, at the outset, that I shall use the word "possession" to denote any native theory which explains some event of human behavior as being the result of the physical presence, in a human body, of an alien spirit which takes over certain or all of the host's executive functions, most frequently speech and control of the skeletal musculature. A phenomenon of possession does not, therefore, for me exist; the word merely labels a theory.

Now the possession theory happens to be frequently applied, in folk beliefs, to three very different classes of phenomena, for each of which other terms exist. One of these is hallucination; the second is hysterical dissociation (including multiple personality, fugues, somnambulism, conversion hysterias, and hypnotic states); the third is obsessive ideation and compulsive action. Clinically, these are distinguishable phenomena. But any one, or group, of them can be, in folk theory, explained by the mechanism of possession. Unfortunately, some observers have, in their eagerness to empathize with their subjects, used the word

possession to denote not only a type of folk theory but also whatever phenomenon their folk happen to use the theory to explain. In other words, if a people use the concept of "possession" to explain certain hysterical dissociations (such as the stereotyped fugues which are so commonly induced in many religious rituals), the anthropologist tends to say that the dancers in the ritual are "possessed"; similarly, if a people use the theory to explain hallucination (which is, incidentally, a less common use of the concept), the anthropologist may refer to hallucinators as "possessed" persons. Even more confusingly, the ethnographer may use the word to denote any person who is thought to be persistently influenced by a supernatural being, whether located inside or outside the person's body.

A third problem of conceptual ambiguity is the notion of trance. There would seem to be at least two major uses of this term: (1) to denote physiological collapse with coma or the occasionally concomitant delirious hallucinations; and (2) to denote (again) states of dissociation. The possibilities of semantic confusion are manifest.

## Problems of Methodology

At first, it was hoped that the Human Relations Area Files (HRAF), including the old Cross-Cultural Survey Files at New Haven and the completed portions of HRAF at New Haven and Philadelphia, would provide a sample of societies various of whose cultural features could be statistically related to the phenomena of hallucination. The data contained in HRAF, however, even when supplemented by material from sources not tapped by HRAF, and by data on societies not included in HRAF, proved to be not amenable to statistical treatment, for three reasons: A sample which included representative cultures from all major culture areas was not available; the data were not comparable from society to society, because of the extreme unevenness of the reporting (ranging from no report at all to careful, extensive, and psychiatrically informed study), and the data provided were usually too crude to permit the discriminations which I regarded as significant for statistical categories. No quantity of time or money spent in HRAF and other library compilations can remedy all of these defects of the ethnographic literature, and only a vast expenditure of funds in field work could amass new and adequate data on a sufficient number of societies. The inference to be made is, rather, that the ethnographic literature available for areal or world samples, of the sort envisioned by Murdock[14] and others in connection with HRAF, is not suitable for statistical analysis with respect to all dimensions of anthropological interest, but is suitable only with respect to certain highly formalized and conventionally reported dimensions, such as kinship and subsistence activities. The cultures on which data were collected from HRAF in the abortive statistical phase of the study are the following:

Abipone
Achewa
Ainu
Andamanese
Apiaca
Apinage
Aranda
Arikara
Assiniboin
Balinese
Bena
Blackfoot
Buka
Bushman-Hottentot
Canella
Chuckchee
Creek
Crow
Cuna
Dahoman
Easter Island
Gros Ventres
Hopi
Ifugao
Indian Yoga
Kamilaroi
Kwakiutl
Lamba
Maori
Marshallese
Plateau area (North America)
Sherente

Since nontrivial and significant statistics appeared to be unachievable, the obvious next step was to consider what prestatistical manipulations of the data were possible and whether any of these might yield formulations of interest. Experimentation along these lines brought me to construct a rather tedious list of "existence theorems," which I shall not reproduce here, but which proved later to be valuable in setting up the matrix of concepts. Existence theorems are

eminently prestatistical, but they are necessary to any sort of statistical description, since they define the relevant and nontrivial categories. An existence theorem is merely a statement that of the class $x$ there is at least one member concerning which the statement $p$ in true; thus, for instance, the theorem

$$(\exists x)p_1(x)$$

where

$(\exists x)$ = df "there exists at least one $(x)$ such that . . ."

and

$(x)$ = df "society"

and

$p_1$ = "hallucinations are defined by some member of the society as meaningless concatenations of visual and/or auditory pseudo-perceptions."

The whole of the theorem would read: "There exists at least one society such that hallucinations are defined by some members of the society as meaningless concatenations of visual and/or auditory pseudoperceptions." From the existence theorems, derived from the HRAF cross-cultural materials and from my ethnographic knowledge, the dimensions of hallucinatory experience shown in Table 1 were constructed. These dimensions are offered as a formal frame of reference within which to observe cultural definitions of hallucinatory experience, and as a rough statement of the range of cultural variability evident in the ethnographic record.

With the foregoing semantic and methodological considerations in mind, we may proceed to discuss, informally and nonstatistically, certain implications of the ethnographic data.

## Conditions of Hallucination

If one were to design an electronic brain which behaved in all respects like a normal human brain, one would have to include in its specifications both a capacity for hallucination and a capacity to distinguish hallucination from sensory perception. Most human beings hallucinate (in the broad sense of the term which is employed in

TABLE 1.—*Dimensions of Hallucinatory Experience*

| | |
|---|---|
| A | Communication |
| $a_1$ | Contains no information but is a meaningless pattern of auditory or visual images |
| $a_2$ | Contains information in the form of observation of phenomena that really exist somewhere (but are not messages) |
| $a_3$ | Contains message from a supernatural being (ghost, soul, demon, divinity, etc.) located outside Ego's body |
| $a_4$ | Contains message from, or is the experience of, a supernatural being (ghost, soul, demon, divinity, etc.) located inside Ego's body |
| $a_5$ | Contains message from one part of self (e. g., own soul, conscience, memory, Id, subconscious, etc.) to another (e. g., consciousness, ego, etc.) or to other person |
| $a_6$ | Contains message from a natural being communicating by means of radio, telepathy, or other means of telecommunication |
| B | Mechanism of control |
| $b_1$ | Can be controlled by hallucinator and/or hallucinator's fellows by manipulating physical condition and/or foreign biochemical factors |
| $b_2$ | Can be controlled by hallucinator and/or hallucinator's fellows by nonphysical means (such as will, prayer, ritual, worry, suggestion, autosuggestion, psychotherapy, etc.) |
| $b_3$ | Can be controlled by will of alien supernatural or natural being |
| $b_4$ | $b_1 \wedge b_2$ |
| $b_5$ | $b_1 \wedge b_3$ |
| $b_6$ | $b_2 \wedge b_3$ |
| $b_7$ | $b_1 \wedge b_2 \wedge b_3$ |
| $b_8$ | Other $(\sim[b_1 \vee b_2 \vee b_3])$ |
| C | Induction |
| $c_1$ | Hallucinator seeks to induce or repeat experience |
| $c_2$ | $\sim c_1$ |
| D | Concealment |
| $d_1$ | Hallucinator conceals experience from group or denies occurrence |
| $d_2$ | $\sim d_1$ |
| E | Punishment |
| $e_1$ | Group institutes punishment and/or social extrusion |
| $e_2$ | $\sim e_1$ |
| F | Therapy |
| $f_1$ | Group or individual institutes therapeutic and/or prophylactic measures |
| $f_2$ | $\sim f_1$ |
| G | Role assignment |
| $g_1$ | Experience qualifies individual for valued social role (adulthood, shaman, healer, diviner, priest, etc.) |
| $g_2$ | $\sim g_1$ |
| H | Behavior guidance |
| $h_1$ | Content of experience may be taken as guide for individual and/or group action (other than therapeutic) irrespective of social role of hallucinator |
| $h_2$ | Content of experience taken as guide for individual and/or group action (other than therapeutic) only when hallucinator already fills certain social roles (e. g. shaman, prophet) |
| $h_3$ | Content of experience not taken as guide for individual and/or group action (other than therapeutic) |

this paper), in one way or another, quite frequently; and there is no society, to my knowledge, in which hallucinatory experience is unknown. Hallucination is, in fact, one of the most widely distributed of the modes of human experience. Explicit reports of dreams, visions, and the hearing of voices are found in the sacred literature of the pre-Christian Near East; if mythology, ritual, and other religious behavior be regarded as in part the legacy of such experiences passed on by oral or written tradition, we may suspect an antiquity measured in tens or hundreds of millenia.

Under the general rubric of hallucination, however, there can be assembled a wide range of types of experience, from the vivid and realistic supplanting of reality in ecstatic visions and auditory revelations, to a relatively pallid verbal or visual imagery which blends imperceptibly into ordinary "thought." These experiences are known from Western clinical observations to be prompted by the most various circumstances: sleep, anoxia, pharmacologic agents, brain tumors, psychological stress, fatigue, sensory restriction, and others. Relatively little seems to have been done to relate the conditions precipitating and surrounding an event of hallucination to the content of the experience; ethnographic investigation may offer a few clues here.

The specific conditions under which hallucinations have been reported in the ethnographic literature may be divided into the following categories:

| | |
|---|---|
| Sleep | Special exercises (breath control, posture, sensory restriction) |
| Fatigue | |
| Hunger and thirst | |
| Prolonged physical pain | Drugs |
| Extreme physical illness | Emotional stress in normal persons |
| Social isolation | Mental illness |

It should be noted that these conditions are not logically independent, and that frequently (and especially in voluntarily induced hallucination) two or more of the conditions are realized at the same time.

Three observations are pertinent. First, in many societies relatively little significance is attached to differences in the conditions under which hallucination occurs. In particular, dreams during sleep, spontaneous waking visions, and induced hallucinations under drugs or stress may be given equal status and comparable evaluation. Western society is remarkable for the importance it assigns to differences in the precipitating conditions of hallucination; the most striking example, of course, is afforded by the profound distinctions we draw among dreams (in sleep), delirium (in illness or intoxication), and "hallucination" in the restricted sense (in the waking state). Second, we must take note that, although not all hallucinatory experiences are regarded as desirable in any society, in primitive societies it is very common for hallucinations with desirable content to be not only accepted with pleasure but deliberately sought with the aid of such devices as hallucinogenic substances (e. g., some American Indians ingest parts of the cactus peyote and Paleo-Siberians, the mushroom fly agaric) and various sorts of personal disciplines, ranging from breathing and posture exercises, through hunger, thirst, and isolation, to prolonged physical self-torture. The tendency to minimize discrimination among hallucinations on a criterion of precipitating condition of course does not imply any inability to discriminate between hallucination and sensory perception; the preferential status of hallucinatory experiences is possible only when it is clearly differentiable from normal experience. Third, it appears that both the subjective feeling tone and the specific content of the hallucination are heavily influenced by a still more pervasive condition: the cultural milieu in which the hallucination, and particularly the voluntary hallucination, takes place.

The latter point is worth elaborating here, although it anticipates some of the material to follow, because it is relevant to the methodology and evaluation of clinical research with hallucinogenic compounds under varying experimental conditions. Typically in such research the clinician administers

to a group of healthy urban adults, often persons themselves identified with the medical or an auxiliary-medical profession, a substance which induces various instrumentally measurable physiological changes and observable alterations in behavior. The subjects are asked also to report verbally on their subjective experience. These verbal reports reveal a considerable variety of experience: Some subjects are euphoric; some are entranced by the intensity of esthetic pleasure they achieve in the contemplation of color, form, and movement divorced from meaning; many complain of anxiety, physical discomfort, various unwelcome perceptual distortions, and attitudinal changes; some hallucinate and some do not. These various reports and observations are taken to indicate the psychological actions of the drug. Similarly variable results, but usually with transient intensification of chronic symptomatology, are given by mental patients from roughly comparable cultural backgrounds (but, of course, by virtue of illness occupying a very different social status). But no *cultural* controls are employed; and it is possible that to an unknown degree the subjective experience, and hence even the physiological measures, is influenced by the negative attitude toward any distortion of normal sensory and cognitive experience which many members of our society share, at least those people who do not customarily seek such special experiences as are afforded by narcotics and alcohol or by mystical or esthetic preoccupations.

Some indication of the quality and magnitude of the possible effect of differing cultural attitudes toward hallucinatory experience under differing conditions of drug administration is given by the differences in the experiences reported by normal white subjects after administration of mescaline and by American Indians after consumption od of introduction, and of intragroup personality differences: first, the influence of tains mescaline).

The literature on the mescaline experiences of normal subjects is rather scattered, and some of it, particularly if it has an early date of publication, is unsatisfying because of the inadequacy of sample description and the disjointed and anecdotal style of presentation conventional at the time. Nevertheless, the consultation of several prime sources [6,7,25] reveals a reasonably consistent pattern of described phenomena, which contrasts with the pattern described (also, unfortunately, sometimes in undefined samples) by anthropologists' American Indian informants.[11,12,16,20,24] The fact of major contrast has been briefly remarked in print by one of the foremost anthropological students of peyotism, Slotkin,[21] who observed in the course of discussion of attempts of white persons to suppress peyotism that "the responses described in clinical experiments on Whites are so different from the responses described by Indian Peyotists . . . as to fall into completely different catego-

TABLE 2.—*Contrasts in Prevailing Character of the Responses of Clinically "Normal" White and Indian Subjects of Mescaline Intoxication*

| White | Indian |
|---|---|
| Variable and extreme mood shifts (agitated depression, anxiety, euphoria, depending on stage of intoxication and personal characteristics) | Initial relative stability of mood, followed by religious anxiety and enthusiasm, with tendency toward feelings of religious reverence and personal satisfaction when vision achieved, and often, also, expectation of "cure" of physical illness |
| Frequent breakdown of social inhibitions and display of "shameless" sexual, aggressive, etc., behavior | Maintenance of orderly and "proper" behavior ("revivalistic" enthusiasm is socially proper in context) |
| Suspiciousness of others present in environment (reported to be uniformly present by Guttmann and noted in self by Klüver) | No report of suspiciousness |
| Unwelcome feelings of loss of contact with reality, depersonalization, meaninglessness, "split-personality," etc. | Welcome feelings of contact with a new, more meaningful, higher order of reality, but a reality prefigured in doctrinal knowledge and implying more, rather than less social participation |
| Hallucinations largely idiosyncratic in content | Hallucinations often strongly patterned after doctrinal model |
| No therapeutic benefits or permanent behavioral changes | Marked therapeutic benefits and behavioral changes (reduction of chronic anxiety level, increased sense of personal worth, more satisfaction in community life) |

ries; they do not seem to be talking about the same thing." The salient differences in the reports are displayed in Table 2; the reader should note that a meaningful statistical presentation of frequencies of response types, while desirable, is precluded by the nature of the data available.

These marked differences would seem to be plausibly explained by two related factors which are independent of possible differences in racial physiology, of chemical action of the drug owing to variations in dosage, mixture with other agents, of method of introduction, and of intragroup personality differences: first, the influence of the setting in which the drug is taken (the white subject's experiences occur usually in a hospital or university research setting; the Indian experiences, in a ceremonial lodge during a solemn religious ritual); and, second, differences in the psychological meaning of the primary drug effects when experienced. Certainly, gross enough situational and semantic differences exist: White normal subjects generally take mescaline once or twice, in a clinical research setting, with definite knowledge of an experimental or a clinical purpose in the investigation, and without any commitment to or interest in peyote, or to mescaline in any form, as a personal religion; Indian peyote users take mescaline repeatedly, in a solemn religious setting to the accompaniment of serious ritual, with definite knowledge of a religious purpose in the usage and, often, with hope for personal salvation, of which the vision is the evidence. The former factor—the setting—has been reported by Fernberger [5] to yield differences in content, which can to some degree be affected both by suggestion by the experimenter and by autosuggestion. The latter, the semantic, factor would seem to be significant at the present stage of theory concerning the action of the hallucinogens, since it is recognized that both personal character and, perhaps, personally or culturally determined values concerning the "homeostasis of subjective-experience" may affect response to experimentally induced changes in sensation and perception.[19] We quote the work of Hoch, Cattell, and Pennes [8] in this connection.

> We have pointed out that the alterations in the vegetative nervous system appear first under the influence of mescaline, lysergic acid, pervitin, etc. This is usually followed by alterations of perception, bodily sensations, and changes in body image. In many patients it would appear that the perceptual alterations are conducive in producing anxiety, uncertainty, and, at times, rage. Seemingly, the perceptual alterations lead to a lowering of reality control, thence to tension and anxiety, which in turn lead to depressive, aggressive, and paranoid manifestations. Schizophrenic patients whose reality contact is already impaired are seemingly more vulnerable to drugs that have a disorganizing effect on reality perception. As yet it is unclear whether the emotional alterations seen in these patients are due to a physiological action of the drug *per se* or due to the experiencing of an alteration of reality and other changes on a psychic level.

### Interpretation of Content

In most primitive societies, even if (on other grounds) the hallucinator is regarded as being ill, or the hallucination itself is unpleasurable, the content will not be regarded as a meaningless concatenation of pseudoperceptions. The content of hallucination is sometimes interpreted as a message introduced directly into the subject's consciousness by a supernatural being, directed either to the hallucinator himself or to the community through him as an intermediary. More frequently, hallucination will be interpreted as a real perceptual experience by the soul, which has wandered from the body and is seeing and hearing events involving real or supernatural persons which are occurring in another place, or which is able to see and hear events and supernatural beings present but imperceptible to others. The message-intrusion theory tends to blend into primitive theories of possession; in our society, it is expressed in the conventional telepathy, radio, radar, brain-washing, and electrical-current delusions and is classed as a paranoid mechanism, while the spiritual-perception theory is associated with extreme

religious enthusiasm. But in both theories, the content of hallucination is interpreted as significant information.

In at least two culture areas, that of the 17th-century Iroquois Indians of what is now New York State,[26] and of Western society after the advent of psychoanalysis, a third theory also has existed as an alternative explanation for hallucination. In this theory, the hallucination conveys an emotion-laden message from the soul, or some unconscious part of the mind, to the conscious self, and thus is a process of thought. This view, like the others, regards the content of hallucination as a message containing information. It appears to be a rare idea that the content of hallucination is meaningless, and one may hazard the guess that this notion is largely confined to psychiatrically unsophisticated, nonparanoid, and tepidly religious, or nonreligious, members of Western society.

If a hallucination is regarded as a message, there are evidently two approaches to its interpretation: to take the manifest content literally, and to regard the manifest content as a symbolic expression of significant underlying ideas. The latter approach may entail various techniques, such as guessing and devices of free association, the consultation of a formal list of symbols and their meanings, and the more or less standardized derivation of meaning from the context of circumstances (such as ritual, illness, situational stresses, and the like) in which the hallucination occurred. It is not important here whether or not there are, in truth, universal themes and symbols expressed in dreams and other hallucinatory experiences, as psychoanalytic theory and data suggest. The important point is that most human beings, in most societies, outside Western civilization, regard hallucinatory content as communication bearing significant information which can be understood either directly or by the use of special methods of interpretation.

Now this belief in hallucinatory content as communication, particularly when it is coupled with the conviction that the communication is not merely intrapsychic, seems to have an effect both on the content of hallucination and on the hallucinator's, and his community's, response to it. Hallucination in itself is not frightening, either to hallucinator or to his community, although the content may be; but even if the content is frightening, it is valuable knowledge. Hence the overt response to hallucination will very likely be markedly affected by its classification as communication.

It is to the topic of response to hallucination that we now turn.

## Response to Hallucination

The difference in response between English white and Australian black to a course of hallucinations in a mourning woman is vividly illustrated in the following anecdote, reported by Parker,[15] the author of a study of the Euahlayi tribe of Australia.

> Our witch woman was rather a remarkable old person. When she was, I suppose considerably over sixty, her favourite granddaughter died.
>
> Old Bootha was in a terrible state of grief, and chopped herself in a most merciless manner at the burial, especially about the head. She would speak to no one, used to spend her time about the grave, round which she fixed upright posts which she painted white, red, and black. All round the grave she used to sweep continually.
>
> More and more she isolated herself, and at last discarded all her clothes and roamed the bush à la Eve . . . as she had probably done as a young girl.
>
> She dug herself an underground camp, roofed it over, and painted enormous posts which she erected in front of her "Muddy wine," as she called her camp. She never came near the house, though we had been great friends before.
>
> She used to prowl around the outhouses and pick up all sorts of things, rubbish for the most part, but often good utensils too; all used to be secreted in the underground camp. She never talked to anyone, but used to mutter continually to herself and her dogs in an unknown tongue which only her dogs seemed to understand.
>
> We thought she was quite mad.
>
> One day, while we were playing tennis, she suddenly, muttering her strange language and dancing new corroboree steps, clad only in her black skin, came up. Matah told her to go away, but she only corroboreed round him and said she wanted to see

me. . . . She danced round me for a little time, then sidled up to me and said:

"Wahl [negative or "no"] you frightened, wahl me hurt you. I only womba—mad—all yowee—spirits—in me tell me gubbah— good—I lib 'long a youee: bimeby I come back big feller wirreenun [as a medicine woman] wahl you frightened? I not hurt you."

And after crooning an accompaniment to her steps, off she went, a strange enough figure, dancing and crooning as she went towards her camp; and not until the spirits gave up possession of her did she come near the house again.

I used to tell the other blacks to see that Bootha had plenty of food. They said she was all right, the spirits were looking after her. Lunatics, from their point of view, are only persons spirit-possessed.

Gradually old Bootha, clothed as usual, came back about the place.

Strange stories came through the house back to me of old Bootha. She was very ill for a long time, then suddenly she recovered, not only recovered but seemed rejuvenated. We heard of wonderful cures she made; how she always consulted the spirits about any illness; how there were said to be spirits in some of her dogs; how she was now a rainmaker, and, in fact, a fully fledged witch.

The reader will note a typical Western attitude toward the "lunatic," a blend of amused contempt, pity, and anxiety, and also the native woman's awareness of the attitude, and her effort to clarify the white man's misunderstanding by explaining that her hallucinatory experiences were "good." Noteworthy also is the satisfactory (both to the woman and to her associates) social remission, which was achieved in the course of becoming a shaman: a remission which, I suggest, was facilitated by her anxiety-free acceptance of hallucinatory experience. This anxiety-free acceptance of, and willingness to describe, hallucinatory experience contrasts vividly with the common shamed, fearful, self-doubting attitude of Western patients, who frequently try to conceal the fact that they "see things" or "hear voices," and sometimes "confess" (as the psychiatrist puts it) to hallucinations only under very careful questioning.

Response to hallucination may be considered both as a matter of the hallucinator's response to the experience and as a matter of the response of his group (and the two, of course, may be equivalent). As I have indicated, in primitive societies the fact of hallucination per se is seldom disturbing; but the content itself may be disturbing or not, depending on the nature of the socially appropriate response. Dreamers or visionaries may resist strenuously the hallucinated suggestion that they undergo an arduous process of becoming a shaman, or that they accept the role of *berdache* (an institutionalized inversion of sexual role among the Plains Indians), or that they commit some act, like murder or incest, which violates social norms; they may be stricken with panic at learning of approaching community disaster, or that they have been bewitched, or that they will be captured, tortured, and killed in a future war. Similarly, the hallucinator's associates may respond with dismay, or with enthusiasm, to the wishes of his soul, and may institute protective measures to avert harm from him or from themselves, may induct him into the special social relationships indicated by his vision, may conduct the indicated medical treatment, or may take his revelation as a code for social reform. The significant point is that it is the content of the communication which is the focus of interest and the fulcrum of action rather than the fact of hallucination itself.

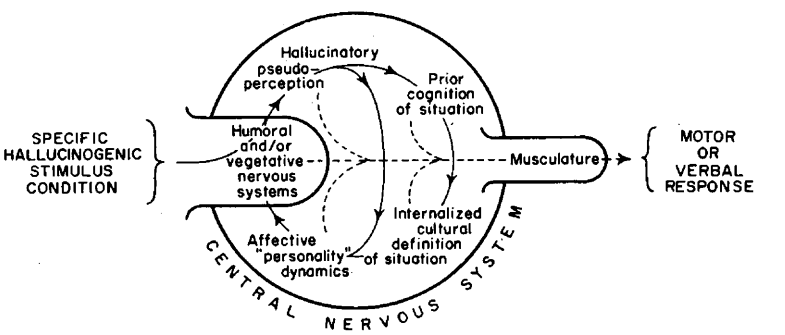
Let us now consider, by contrast, the responses to hallucination typical in Western societies. In some social groups, particularly religious sects, hallucinatory experience with supernatural figures apparent in the manifest content is interpreted as divine, or Satanic, revelation, and is responded to either by acceptance of injunctions discovered in the content or by repression, or even punishment designed to drive out "possessing" devils. In psychoanalytically influenced groups (which probably include a considerable proportion of the urban population of Western countries), dreams are interpreted and used as a basis for psychotherapeutic action, but waking hallucinations are regarded as symptoms of serious psychic illness. And in the rest of

the population at large, waking hallucinations are probably regarded primarily as indications of "nervous breakdown," or even "insanity." The latter unfavorable social diagnosis is very commonly followed by the social extrusion of the hallucinator, with or without prior medical advice, into a mental hospital or some other socially restricted environment, or at the very least into a quasiostracism at home or in lodgings. Police force is available and not uncommonly used to sanction and to effect this extrusion. In medical circles, despite recognition that hallucination in many conditions is a secondary symptom, and despite the insistence of workers like Boisen that "what the voices say is the important thing, not the mere fact of hearing voices," [1] hallucination is commonly taken to be a grave sign. In some of the research literature, indeed, hallucination is treated as if it were the essential feature of psychosis.

Now it is reasonable to suppose that most persons, when they hallucinate for the first time (certainly when the first waking hallucination occurs), are aware of the culturally standard interpretation of and response to hallucination in their society. Even if they do not accept this interpretation and response as wise or proper, they will be aware of its probable evocation in others. If this is the case, then it is likely that the person's interpretation of, and response to, the *fact* of his own hallucination in a given context (as well as its content) will be a function of the way in which the fact (and content) of hallucination is defined by his culture. The function should determine in part his emotional experience both during and after the event, and possibly (by cultural suggestion) its perceived content as well.

We may ask, at this point, how much anxiety, self-depreciation, and cognitive distortion are added to the miseries of mental patients by the circumstance that they have learned to fear waking hallucination in the course of living in a society in which waking hallucinatory experience is almost uniformly negatively valued? (The scientific validity of the valuation is irrelevant.) Furthermore, we must question the completeness of any research into the psychophysiological action of the so-called psychomimetic drugs, of sensory restriction, and of other hallucinogenic procedures which fails to weigh not only the magnitude but also the direction of the probably massive contaminating effect of cultural suggestion upon the subjects. For what is measured is not just the action of a drug or other procedure, but the action of the procedure plus the subject's interpretation of and response to this action, plus the feedback effect on the continuing action itself (Figure); and all of these actions, interpretations, responses, and effects are factors with direction, as well as magnitude.

There may be much that the therapist can do to alter the internalized cultural definitions of hallucinatory experience in his patients, if he wishes. But it is research problems that chiefly concern us here. It would be possible in clinical research to control for the direction of cultural effects by employing as control subjects persons whose subculture differs sharply from that of the




Mediation of response to hallucinogenic stimulus by facets of subjective experience.

experimental subjects in its definition of the expected experience, and by ensuring that the experimental conditions for the controls were sufficiently close to culturally normal conditions *for them* to permit generalization from past learning. Furthermore, it would be possible to select subjects systematically on criteria of personality, of past experience, and of attitude toward the expected events; and it would be possible to vary deliberately the general situational structure with other variables held constant, both by physical manipulation and by deliberate instruction and suggestion to the subjects. Such procedures, incidentally, should also be considered in relation to other than hallucinogenic compounds; they evidently would apply to such drugs as tranquilizers, sedatives, and energizers, which on other evidence also depend in part for their effects on relatively unexplored interactions with personal dynamics and sociocultural milieu.[18] Methodologically, such manipulations are the reverse images of the controls imposed by the placebo-and-blind (or double-blind) techniques and of analysis-of-variance techniques involving multiple pharmacologic agents; whereas the placebo-plus-blind, or variance-analysis, design varies the chemical agent and holds situation constant either by randomization or by laboratory control, the method of cultural and situational controls would hold the drug constant and vary such aspects of situation as the physical experimental conditions, instructions to personnel, and character and background of subjects. Drug and cultural controls should ideally be combined in one design.

## Summary

The paper briefly examines the range of cultural variation in conditions inducing, interpretations of, and responses to, hallucinatory experience. The published data suggest strongly that internalized cultural definitions of hallucinatory experience have a profound effect on the responses both of mentally ill and of normal persons. Methodological controls for cultural differences are indicated in research with hallucinogenic substances.

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