

Some Relationships between Music and Hallucinogenic Ritual: The "Jungle Gym" in Consciousness

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Although the anthropological literature on hallucinogenic drug use is fast growing, few studies examine the role of music in such drug ritual (see, however, McAllester 1949). In an earlier study, we looked at the whistling produced by folk healers who use plant hallucinogens in treating emotional and psychological illness among a civilized Indian population in the Peruvian Amazon region (Katz and Dobkin de Rios 1971). At that time, Dobkin de Rios (as field anthropologist) wrote of her initial assumptions that the musical accompaniment to evening ritual drug sessions were, at best, merely in the realm of extra effects and tangential to the

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healing experience. Our conclusions, however, pointed out that music—in this case, whistling incantations during the period of drug intoxication—served as a vital link in bridging separate realities induced by the ingestion of a plant hallucinogen.

This initial finding has led us to extend our study to examine the role of music in societies where normal waking consciousness is altered by plant hallucinogenic ritual. We have asked the question: why is music so integral a part of drug ceremonies in traditional new world societies? This article attempts to examine the function of a variety of musics in the Western Hemisphere which are used ritually in conjunction with powerful plant hallucinogens. We hypothesize that music, indeed, is not tangential to the drug experience, be it for purposes of healing, achieving contact with the supernatural, divining the future, for recreational or pleasurable effects. Rather, given the way in which hallucinogens cause dissolution of ego boundaries and the concomitant biochemical effects of generation of extreme anxiety—music replaces with its own implicit structure a set of banisters and pathways through which the drug user in a non-Western ritual setting negotiates his way. This is generally done so that an individual can achieve his culture's goal of drug use—namely, to obtain a stereotypic visionary experience programmed by his culture.

To test our hypothesis, we assembled data, whenever available, on drug rituals and music in New World traditional societies for which the following data are available: type of music; the ritual and/or function; the drug used; comments on ritual and other ancillary activities; who performs. Data on Old World drug-using societies, unfortunately, are minimal and reflect the often-noted bias of anthropologists, in the main, socialized in industrial societies where alcohol and tobacco are the most frequently known substances used to alter states of consciousness (see Janiger and Dobkin de Rios 1975 for a detailed discussion of this issue). This has set up, so to speak, cultural blinders in data gathering. Fortunately, this phenomenon is offset in part by the widespread use of plant hallucinogens in traditional American societies, when compared to those in the Eastern Hemisphere (see La Barre 1970). We also draw upon studies made by Dobkin de Rios (1972, 1973a, 1973b, 1974, 1975), which have tested the hypothesis that to predict drug effects culturally determined antecedent variables must be taken into consideration along with set and setting.

EFFECTS OF PLANT HALLUCINOGENS ON MAN

Since interest in psychedelics or hallucinogens has grown in Western society, a large literature has developed which examines the effects of plant hallucinogens on man. The category of psychoactive drugs, hallucinogens, is but one of several major areas of interest to the psychopharmacologist and also includes stimulants and narcotics. The anthropological record both past and present, however, shows a great frequency of cultural interest in the area of the so-called mind-manifesting drugs, inasmuch as they have been incorporated most diversely into ritual activity. Dobkin de Rios's study for the National Commission on Marihuana and Drug Abuse (1973a) has pointed to a variety of uses in cross-cultural perspective, ranging from magico-religious activities, rites of passage, treatment of disease, and recreational activities. She has found the following common features in drug-using societies:

1. Cultural variables such as beliefs, attitudes, expectations, and values structure the patterning of drug-induced hallucinatory experience (1973a, 1975).
2. Common themes that emerge in a study of traditional societies where hallucinogens are used ritually include: altered perception of time and its influence on belief systems; animals who reveal the properties of plant hallucinogens to man (see also Siegel 1973); stereotypic visions evoked by musical productions of shamans; spiritual animation of hallucinogenic plants; the transformation of shamans into animal familiars, aided by hallucinogenic plant ingestion; paranormal phenomena (e.g., telepathy) gained through plant hallucinogenic use (Dobkin de Rios 1973a).

Although the effects of specific hallucinogenic substances on the human central nervous system vary, pharmacologically we can classify commonly perceived effects, as Ludwig (1969:14-17) has done, as follows:

1. Alterations in thinking, with subjective disturbances in concentration, attention, memory, and judgment.
2. Disturbed time sense.
3. Loss of control; fear of losing a grip on reality and self control.
4. Change in emotional expression, ranging from extremes of ecstasy and orgiastic equivalent, to profound fear and depression.
5. Change in body image, with a wide array of distortions in such image; a profound sense of depersonalization; a schism between body and mind, and a dissolution of boundaries between self and

others, the world, or the universe.

6. Perceptual distortions, including increased visual imagery, and illusions of every variety. Synesthesias appear, whereby one form of sensory experience is translated into other forms. An example would be people reporting seeing or feeling sounds.
7. Change in meaning or significance.
8. A sense of the ineffable.
9. Feelings of rejuvenation, rebirth, or hope.
10. Hypersuggestibility.

As we can see from the above, various subjective states of participants can make the hallucinogenic experience a potentially very dangerous one, whatever the society. Sudden access to the unconscious, however many layers it may be structured, is just not part and parcel of normal waking activity. We know that in many cultures of the world, men highly revere and attend to their dreams, merely as one manifestation of such psychic entry. By the same token, possession and trance states, as Lewis (1971) points out, are often caught up in ritual expectations and ecstatic awe of participants and audience. With the use of plant hallucinogens in non-Western ritual context, we find a concern for the individual's ability to handle these relatively unknown realms of the psyche, to be made accessible by the ingestion of a plant hallucinogen. Some factors are important to heed in this context. We know that rarely are hallucinogens taken by the individual alone, but rather, most consistently, in a group setting. Drugs are not prepared nor used haphazardly, but under the guidance of a specialist—a shaman, ayahuasquero (from the plant hallucinogen ayahuasca, various *Banisteriopsis* spp.), folk healer, or whatever the term. He is always one who has undertaken an apprenticeship with another adept in the knowledge of drug effects and cultural goals linked to such use.

Anxiety generated by rapid access to the unconscious may be expressed in a number of ways, including vomiting, diarrhea, nausea, cramps, extreme tachycardia, rise of blood pressure—all components of the so-called bad trip that seems to be present and reported in all cultures for which there are adequate data. It is almost as if once the lid of the Pandora's box of drug experience is raised, anything can emerge. Grof (1972), in an attempt to explain the near universality of such reporting, relates the frequent findings in Western society during LSD intoxication of monsters and horrendous creatures of the psyche to birth trauma experience and stages of fetal expulsion from the womb.

MUSIC AND DRUG-INDUCED ALTERED STATES OF CONSCIOUSNESS

Given the above, we may ask about the pervasive presence of music, in a variety of forms, as an integral part of the drug experience. The evidence presented in table 1 shows the frequency of music used in new world drug rituals, and attests to the crucial role of music when drugs provide access to nonordinary realms of consciousness. The participant in the ritual perceives the implicit structure of music quite differently than he does during normal waking consciousness. We know, of course, of the mathematical precision and structure that all music possesses, whatever the musical tonal system of a given culture or the repetition of musical phrases involved (e.g., Lomax 1968, Hood 1971). What we would like to argue here is that once the biochemical effects of the hallucinogenic drug alter the user's perception, music operates as a "jungle gym" in consciousness during the drug state, providing a series of pathways and banisters through which the drug user negotiates his way. Here we are using in a metaphoric sense the familiar children's playground architectural structure, composed of iron bars interlinked in horizontal and vertical planes. In contrast to the playtime structure where the child chooses spontaneous pathways and heights to explore, however, we suggest that the companionship of music to the hallucinogenic drug experience functions almost as a computer's magnetic tape, instructing the calculating machine in a particular course to follow. In light of Dobkin de Rios's extensive documentation of the cultural patterning of hallucinogenic-induced visions, which will be elaborated shortly, the implicit mathematical structure of music, purposefully chosen by the shaman, would serve specific cultural goals, that is, to see the guardian spirit of the ayahuasca vine, to achieve contact with a special supernatural deity, and the like. To reiterate, the "jungle gym" is an inflexible system where the choice of pathway is left to the child, while music, also a fixed structure, is imposed upon the drug user by the shaman who controls to some degree his clients' visual options within this ritualized use of music.

Generally speaking, hallucinogenic drug users in non-Western society take such plants to achieve specific cultural goals, that is, see the source of bewitchment in a vision, achieve contact with the supernatural to divine the future, hear the voice of a fertility god, and so on. Music, in these instances, can be used by the shaman

actually to provoke special types of visions. In Dobkin de Rios's experience with Peruvian Amazonic ayahuasca use (1972), healers stated that the particular traditional melody they chose to sing at a given moment in the drug ritual could evoke visions they specifically desired their clients to have, to permit them to see the agency responsible for bewitchment, to resolve anxiety created in the wake of drug use, and so on (see also Siskind 1973:109).

A recurrent theme among drug-using societies is the cultural patterning of hallucinatory experience. This has been discussed in 1959 by Wallace who did a comparative study of mescaline ingestion among North American Indians and individual whites who used the peyote plant. Recent studies have reaffirmed this stereotyping of visionary content, giving us a fascinating glimpse into how man's psyche is subject to cultural conditioning (see Dobkin de Rios, 1974). We would like to summarize briefly some data on societies where stereotypic patterning of hallucinatory experience is the norm. In Dobkin de Rios (1973a), data have been assembled on a dozen societies of the world, ranging from hunters and gatherers to members of archaic civilizations where plant hallucinogens played an important role in religious activity. Cultural patterning of drug-induced visions was evident throughout the sample. Some of these stereotypic visions are used to clarify our forthcoming discussion of the relationship of music to hallucinogenic rituals, especially in the evocation of drug visions.

Among the Siberian reindeer herdsman, before eighteenth-century European contact, the *Amanita muscaria* (fly agaric) mushroom was used by various tribal groups to facilitate communication with the supernatural, divine the future, diagnose the cause of illness, and as a source of enjoyment on festive occasions such as weddings. Groups like the Chukchee believed that during intoxication, men personifying the mushroom appeared to the user, numbered according to the total plants consumed. These creatures, small in size, took a person under his arm and accompanied him on a voyage. They followed intricate paths and visited places where the dead resided (Wasson and Wasson, 1957, cited in Dobkin de Rios, 1973a:1187). Under *Amanita muscaria* intoxication, the Yurak Samoyed shamans also saw manlike creatures who ran quickly along the path that the sun travels before rising. An intoxicated person followed closely behind the spirits. Along the journey, the fly agaric spirits told a man what he wanted to know, such as whether

or not he would be able to cure a sick person. When the spirits came down into the light again, they found a pole with seven holes and cords. The shaman tied up the spirits and awoke. He sat down, took in his hands a symbol of the pillar of the world, a four-sided staff with seven slanting crosses cut into each side at the upper end and sang about what he heard in his journeying (*ibid.*)

The Huichol Indians of the Sierra Madre Occidental Mountains of north central Mexico, a traditional hunting and gathering people now turned to farming and herding, use the peyote plant as an integral part of their religious activity. Benzi (1972) has reported on Huichol stereotypic visions based on his 1971 field work among them. As Benzi reports, Huichols are convinced that the plant enables them to enter into a state of communion with their gods; they believe in the tangible reality of their apparitions. Music is seen to play an important role in drug experience, provoking visions in accordance with melodic patterns, especially once a year, during the annual peyote hunt, when men and women set out to journey to San Luis Potosí, the mythical land of origin. Visions often include, in Benzi's words, manifestations of their gods, appearing in the form of animals such as snakes and jaguars. There is a relative uniformity of hallucinogenic visions, evoked by shamanic chants. During the ritual, the shaman is able to reach the divine abode, where he is able to foresee the future and speak the language of the animals. In short, peyote is a way for the Huichols to attain the sacred (Dobkin de Rios 1973a:1189).

Turning to Dobkin de Rios's study among an urbanized, erstwhile peasantry in the Peruvian Amazonic city of Iquitos, the term stereotypic vision is illustrated by the use of the plant hallucinogen, ayahuasca. Throughout the year's field work (1968-1969), Dobkin de Rios constantly elicited information from informants concerning their patterned visionary experience cited to explain the etiology of illness. To quote:

This group held a philosophy of disease causation that set explanation of causality within a matrix of witchcraft or taboo violation. A belief system that focused upon the guardian spirit of the hallucinogenic vine, ayahuasca, conceptualized a boa constrictor as this spirit. The spirit was believed to enter the circle around which a healer and his patients gathered periodically in the rain forest to treat disease. Informants repeatedly told of the boa appearing before them while they were under

the effects of ayahuasca. However, despite the negative implications of a large, fearsome creature, this shared vision was believed to be an omen of future healing (1974:15–16).

Although the examples could easily be multiplied, we can generalize that in primitive societies, drug-induced stereotypic visions are eagerly sought after, generally as a sign that contact with the realm of the sacred is occurring and that some message, omen, or knowledge will be passed on to the initiate. In this way, hallucinogenic plants are used to reaffirm the values of a society and in effect, to make available supernatural forces experienced both visually and emotionally.

If we look at table 1, we see variations in drug-adjuncted music. This is generally an unstudied area in anthropology and one meriting particular attention. One general characteristic, or the lowest common denominator of the musics, appears to be the frequency of rattling effects (almost always in consort with whistling or singing), or rapid vibratory sounds. Rattles, singing, chanting, and vocal productions, in general, may be a very important part of the hallucinogenic experience in that the “jungle gym” is built up, torn down, or rearranged in a sort of child’s game of consciousness block-building, to serve specific cultural goals.

As Ludwig (1969) pointed out, synesthesias are very commonly reported by drug users. We would like to stress that most traditional drug-using societies not only recognize this scrambling of sensory modalities, but actually program their rituals so as to heighten all sensory modalities. Thus, from table 1, we see that olfactory, tactile, auditory, and gustatory senses are all present and no doubt are affected by the music. Actually, even in a relatively undramatic drug session, similar to the many observed by Dobkin de Rios in two distinctive regions of Peru, sensory overload is preponderant in the drug experience and can provide for subjective drama, rather than an external thespian flavor. In other parts of the world and even among Amazonian hunters and gatherers, however, the use of dancing, vivid body paint, bird feathers of bright hue, and the like, add to the sensory overload. From the ayahuasca data, a common feature was the shaman’s mixing his brew in a bottle of *agua florida*, orange scented water, which the patient would drink. In this case, olfactory heightening came from the patient’s own mouth and was perceived by him throughout the entire session.

In conclusion, the data show that traditional New World societies have used hallucinogenic drugs as a vehicle to gain access to the unconscious often projected outward onto a world of spirit forces. Music, in this psychic drama, is much more than a means of setting up mood for the participants. Our data, in fact, suggest that the implicit structure of music fills the void left by the effects of the drug and provides a new structure to the participant, which shamanic guidance is able to utilize in the service of culturally valued goals.

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TABLE 1
MUSIC AND HALLUCINOGENIC-INDUCED ALTERED STATES OF CONSCIOUSNESS

Society	Type of Music	Ritual and/or Function	Drug Used	Comments	Who Performs	Bibliography
Tukano Indians, Colombia	panpipes, gourd rattles, large wooden tube drum, singing, dancing	recitation of myths, conversation, singing, to commemorate creation myth; reaffirmation of strict exogamy laws; shamanistic initiation; maintain traditions; teach religious knowledge; maintain psychological equilibrium	Piptadenia; Vilho snuff, tobacco; <i>Banisteriopsis</i> spp.; Yajé (Spanish)	myths recited in hypnotic tone with great precision and insistence; women observe and sing; ritual conversations, greeting sunrise; total body painted red; singing and dancing; feather adornment; some ritualized gestures; jumping while walking	shaman (payé); adult males and boys; shaman and novice	Reichel-Dolmatoff 1971:16, 128-129, 131, 133, 251; 1972:88-90, 97, 101
Yanomano, Venezuela and Brazil	chants, rattle, singing	to induce ritual death, envision familiars; invitation to hekura spirits to come and dwell in man's chest; to make contact with and attempt to control hekura shamanistic initiation; curing and control of spirits causing illness	tobacco; Virola; ebené (vernaculur)	some individual body decoration with feathers for ritual feasts; prancing, back and forth in front of the house; dancing, shouting with weapons over head; chest pounding and ear shouting duels sometimes follow; strong odors used to stop bad experiences	adult males; shamans	Chagnon 1968: 25-24, 90-91, 109, 150-151; France 1970:64-68
Aztec, Mexico	dancing, singing, and weeping	take initiatory journey to end of world; celebration of joy; political occasions to solidify alliances in divinatory feast	<i>Psilocybe</i> , <i>stropharia</i> and <i>conocybe</i> spp.; <i>teonanactl</i> (nahuatl)	all day and night festival with song and dance; visions of dying, being eaten by wild beasts, capturing prisoners in war, being rich, having wives or committing adultery and being executed; visions shared and discussed	nobility; visiting dignitaries	Guerra 1971:116; <i>Ibid.</i> , cited in Schultes 1972: 14-15
Luisiño California	dancing, wild screaming	initiation rites; adolescents put in to frenzy and stupor to find out about adult life	<i>Datura</i> spp.	none	young men and adolescents	Schultes 1972:47
Tenetehara Indians, Brazil	dancing, chanting, shaking rattle, native ritual music, whistling bell, fervent music, and song	curing ritual to call spirit to aid in curing; call upon Virgin Mary to intercede in illness	tobacco; Cannabis	intoxication from smoke, rhythm of song and dance	shaman	Wilbert 1972:56
Mexicos, North Coast Peru	whistling, songs, occasional use of conch shell	shamanistic all night curing ceremony	<i>Trichocereus pachanoi</i> ; San Pedro (Spanish); <i>Datura arborea</i> ; <i>condorillo</i> spp. hornamo, tobacco	prayers and invocations and chants accompanied by rhythmic beat and traditional shamanistic rattle; symbolic contact and all of patients' senses stimulated; to relieve magically caused disease; to bewitch enemy; perfume drunk by patient	folk healer; patients	Sharon 1972a: 43-44; 1972b: 128-129; Dobkin de Rios 1968a: 193-194; 1968b: 42-43; 1973b: 69-70, 80
Navajo Indians, United States	drums, singing, whistling, rattles	curing ceremony, averting evil and promoting future good; to thank God for past blessing; communication with supernatural	<i>Lophophora williamsi</i> , <i>peyote</i>	all night ritual; prayer, song, drumming, eating peyote; cedar incense; ritual cigarettes smoked; communal drinking of water and corn meal at dawn; light from small fire only	communicants, both men and women	Aberle 1966:11, 125-153

Chama Indians Upper Amazon	songs, hissing sounds, guttural noises	curing sessions; shamanistic initiation to acquire supernatural power	ayahuasca; <i>Banisteriopsis</i> ; tobacco juice	secluded locale at night; visions changed with chants of song; spirit of tobacco appears to novice shaman and teaches him his song	curer, initiate	Kusel 1965:62-65; Elick 1969, cited in Wilbert 1975:14-17
Cashinahua Indians, S. E. Peruvian Amazon	chanting, singing	communal ceremony, to learn about things removed in time & space; divinatory; to cure disease	<i>Banisteriopsis</i> spp. Nixi pae; ayahuasca	evening ritual; rhythmic swaying of bodies while sitting in group; singing individually; songs not coordinated	initiated males; shaman and other participants	Keninger 1973: 9-13, 14
Menomini, Wisconsin	songs, drumming	to obtain power from the great spirit, relief from problems of illness	<i>Lophophora williamsii</i> , peyote	ceremony varies from serious intense to quite emotional; songs cry for help and prayers; pleas for salvation and for aid and relief from doubts, fears, guilt feelings	cult members	Spindler 1955: 433-444
Huichol, Mexico	guitar, fiddling, singing, trumpet, horns	peyote quest, ritual obtaining of peyote, reciting ancient stories	<i>Lophophora williamsii</i> , peyote	initiated sing and dance while novices ingest peyote	men, women, and children	Furst 1972: 177-178, 180-181
Mazatec Indians, Mexico	singing, drumming on body, forehead and arms; clapping hands	curing ceremony, to diagnose illnesses	<i>psilocybe, stropharia</i> and <i>conocybe</i> spp. mushrooms	darkened area except for fire embers; incense burning in small hut; curer's song experienced from all over hut	curer (men and women), ceremonial participants	Wasson 1972: 197-198; Munn 1973:88, 90, 91, 111
Jivaro Indians, E. Ecuador	drumming on hollowed log; singing and whistling	soul stealing; curing, to capture soul of enemy so as to leave him vulnerable to attack and death; trance state achieved to contact supernatural world; remove bewitching object from patient's body	<i>Banisteriopsis</i> spp. natema; tobacco juice; <i>Datura arborea</i> , <i>Datura suaveolens</i>	drinking quantities of natema; beating drum and repeating name of intended victim; ritual singing; sucking and social interaction in darkness	shaman and patient	Harner 1973a:141, 153-154; 160-161; Harner 1973b:15, 23
Sharanahua, Peruvian Amazon	songs, chants	curing ceremony, seeking vision to show cause of illness	<i>Banisteriopsis</i> spp., ayahuasca	evening sessions; establishing social solidarity	shaman; adult men	Siskind 1973:28, 31-38
Culina, Peruvian Amazon	singing	curing magically caused illness	<i>Banisteriopsis</i> spp., ayahuasca	none	curer	Riviere and Lindgren 1972:102
Anahuaca Indians, Upper Amazon	chants	curing sessions; prophecy to maintain social solidarity, to locate animals, enemies	<i>Banisteriopsis</i> spp., honi kuma	chantlike atmosphere produced by chanting; faces painted	adult men	Cordova-Rios 1971: 26, 37-39, 148, 157, 165, 167-168
Kiowa Indians, Comanche Indians, United States	chants	ceremony to pray, meditate at all night meetings	<i>Lophophora williamsii</i> , peyote	no dancing; ending with communal meal	unknown	Schultes 1972:14-15

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