

Plants as Teachers Among 4 Mestizo Shamans of Iquitos, Peru

- By Luis Eduardo Luna

In the city of Iquitos and its vicinity there is even today a rich tradition of folk medicine. Practitioners, some of whom qualify as shamans, make an important contribution to the psychosomatic health of the inhabitants of this area. Among them there are those called uegetalistas or plant specialists and who use a series of plants called doctores or plant teachers. It is their belief that if they fulfill certain conditions of isolation and follow a prescribed diet, these plants are able to "teach" them how to diagnose and cure illnesses, how to perform other shamanic tasks, usually through magic melodies or icaros, and how to use medicinal plants.

Four shamans were questioned about the nature and identity of these magic plants, what are the dietary prescriptions to be followed, how the transmission of shamanic power takes place, the nature of their helping spirits, and the function of the magic melodies or icaros given to them by the plant teachers.

Introduction

Iquitos, on the left bank of the Amazonas river, plays a central role in the administrative, economic and cultural life of northeastern Peru. A series of booms resulting from the exploitation of rubber, balata, oil and also to some extent the illegal traffic of drugs, have brought both wealth and misery to this city, which has experienced enormous growth in the last 50 years. Today it has 300,000 inhabitants, most of them immigrants from various jungle settlements. With them have come their traditional beliefs and practices, and this city and its vicinity are a rich field for gathering ethnological and folkloristic information. Practitioners, who qualify as shamans, contribute greatly to the alleviation of the psychosomatic trauma of its inhabitants. They are important agents for giving meaning and coherency to various disparate beliefs, the remains of Indian cosmologies that have already disappeared, or are rapidly being disrupted by Western civilization.

This paper reports part of the information obtained during three periods of field work carried out in the Iquitos area during July and August 1981, August 1982 and June and July 1983. During the first two periods I concentrated my work on the person of Don Emilio Andrade Gomez, a shaman living 12 km from the city (Luna,1984). My film Don. Emilio and his Little Doctors (Luna,1982) was made during that time. In the last period I have gathered information from three other shamans, Don Alejandro Vasquez Zarate, Don Celso Rojas and Don Jose Coral More. The first two live in Iquitos. Don Jose Coral, a friend and highly esteemed colleague of Don Emilio, lives on a small plantation 18 km from the city, and 1.5 h walk from Don Emilio's home.

The Informants

All four informants have in common the use, either occasional or regular, of a hallucinogenic beverage known in the area by the Quechua name ayahuasca.

The purpose of taking this beverage is the diagnosing and/or curing of illness, and the performing of other shamanic tasks such as communicating with the spirits of plants, animals and human beings (dead or alive), or of traveling to distant places, and also divination, prophecy, etc. This beverage, whose use has been reported under different names in many parts of the Orinoco and Amazonian rain forest among native and mestizo populations (mentioned in several of the references listed), is in this area made by cooking together a jungle vine, *Banisteriopsis caapi* (Spruce) Morton, and the leaves of a small tree, *Psychotria viridis* Ruiz & Pavon. A number of other additives, to be mentioned later, may be added.

All four informants are mestizo, and may be classified as *vegetalistas* (plant specialists), a term used in the area to differentiate them from *oracionistas*, who employ only prayers for performing similar shamanic tasks, or from *espiritistas*, who work solely with spirits. Under the term *vegetalista* there are distinctions: *purgueros*, who use *ayahuasca* (known also as *pccrga*, purgative), *tabaqueros*, who employ basically tobacco, *camalongueros*, who used the seeds of *camalonga*, a plant (unidentified) that grows in the Andes, *tragcceros*, who use *canaza*, a strong alcoholic beverage distilled from sugar cane, *perfumeros*, who use the essence of flowers, etc. Most *uegetalistas*, as in the case of my informants, use a number of different plants.

Don Emilio Andrade Gomez

Don Emilio was born in Iquitos in 1918. When he was 16 years old, and while working in the Amazon river, near the mouth of the Napo river, he took *ayahuasca* for the first time. He did it in order to *curarse*, a term that implies the cleansing and strengthening of the body. When he took *ayahuasca* for the fifth time, while keeping to the prescribed diet imposed by his teacher, an old man with a flute and a drum appeared in his visions to teach him *icaros*, magic melodies.

He maintained the diet for 3 years, acquiring his shamanic powers during that time. He lives in the vicinity of Quistococha, 12 km from Iquitos, where he is dedicated chiefly to the treatment of patients and the preparation of baths for good luck in work and love.

Don Jose Coral More

Don Jose was born in Yurimaguas on the left bank of Huallaga river, in 1909. When he was 17 he took *ayahuasca* for the first time, because of a great pain he had in his stomach. The twentieth time he took the beverage, spirits, which he calls *murrayas*, appeared in the visions. They told him that they live "where the world ends", having as their only food the flower of tobacco. They removed a magic dart he had in his stomach. He remained on a diet for 2 years. After working as a gatherer of several jungle products such as *Iechecaspi* (*Couma macrocarpa* Barb. Rodr.), rubber, ornamental fish, etc., he made his *chacra* (small plantation) near Pena Negra, 18 km from Iquitos. He has been married twice. Both wives and his five children died, according to Don Jose, due to the attacks of evil sorcerers. Today he lives with Dolores Vasquez Balbaran, who is 52 years old, and has no children. At 74, he is a very strong man who supports himself primarily by his work on his plantation. Occasionally sick people are brought to him. His patients are allowed to live in his home for as long as several months, or until they are fully recovered.

Don celso rojas

Don Celso was born in a small settlement in the upper Tapiche river, in 1905. When he was 30 he suffered a serious lesion on his left leg, which developed a suppurating abscess resistant to treatment. After nearly 3 years of suffering, he was forced to go to Iquitos to seek medical assistance. After 4 months in the hospital, the doctor told him that his leg should be amputated. He refused to permit this and went back to his home. He started to drink ayahuasca. During the next 3 years he did not eat any salt, sugar or pork, nor did he approach any women. After 6 months of ingesting ayahuasca once a week, a little bird appeared in his visions. It carried away and ate the maggots that were in his leg and when it finished disappeared in the ayahuasca pot. The spirits of the plant taught him medicine, but prohibited him to practice during a 2-year period. His wife died during that time. He started practicing medicine actively in 1941. He lives now in Iquitos with his second wife. Tuesdays and Fridays he takes ayahuasca and cures sick people. This is his main course of income. At 78 he is a man of strong constitution and great vigour.

Don Alejandro Vasquez Zarate

Don Alejandro was born in 1920 near Santa Clotilde, on the Yavari river, tributary of the Amazon. When he was 10 years old his family moved to Puca Barranca, on the Napo river, where he was introduced to ayahuasca at the age of 17 by an Indian. He maintained a diet during 2 years, and learned medicine from the spirits of the plants. After working for years as a gatherer of various jungle products, he moved to Iquitos in 1973, wishing to give his children the opportunity of a better education. Today he drinks ayahuasca only occasionally, when sick people are brought to him. He works in a hardware store, and has never supported himself by the practice of medicine in spite of considering himself a good doctor.

Mythology

All four informants participate in the basic cosmivision of the area in which there are two parallel worlds, the world of the earth and the world of the water. They do recognize the existence of another world, in higher space, but it has little importance in their legends. I noticed in general very slight interest in the sky, and their astronomical knowledge seems to be limited to observation of the sun and the moon, for orientation and for controlling the growth of their crops.

The world of the water seems to be especially important. It is the home of the yacuruna and the sirenas (mermaids), who at times adopt human bodies and come out of the water, quite often for the purpose of copulating with humans or of stealing a partner to be taken to their underwater world. The yacuruna are very often associated and even identified with the bufeos (freshwater dolphins, considered malignant beings) and the mermaids also with anacondas (water boas). All four informants have an enormous repertoire of stories telling about one or another episode in which a woman or man was stolen and taken into the water, or about women who became boas during the night, thus revealing their true identity.

Three of the four informants believe in the possibility of acquiring the power to visit the underwater world. Don Emilio told me that by taking the juice of the shoots of raya-balsa (*Montrichardia arborescens* Schott) and dieting for 6 months, one would be able to travel under the water. Don Jose has told me

the same thing, but by taking renaco (*Ficus* sp.). He claims that some of his murrayas or spirits that help him in his shamanic practices were, when alive, the product of the mating of human fathers with mermaids. Don Celso told me how he lost his opportunity of becoming a sume (a shaman who is able to travel under the water), when during his diet period and under the effects of ayahuasca a huge boa came to devour him, but he refused at the last moment to enter fully into its mouth. If he had done so, the snake would have vomited him into the underwater world. Don Alejandro, on the other hand, does not believe that it is possible to travel bodily under the water.

Another very important mythological being, who is supposed to live in deep jungle, is the Chullachaqui, known also under the names of Sacharuna, Shapshico, Yashingo or simply Supay, a Quechua name that today is used in the area as a synonym for the devil. The Chullachaqui is supposed to look exactly like a human being except for one of his feet, which is described as resembling that of a goat, a deer, a dog or some other animal. He is the lord of the animals, and "king of the jungle". On occasions it is possible to become his friend, and then he offers the ability to hunt with great success. Most often an encounter with a human being results in the person's becoming mad or ill. All my informants claim to have seen him, either in person or in their dreams. According to them, he has his chacra (small plantation), and very often lives in places where a tree called chullachaqui caspi (*Tovomita* sp., *Guttiferae*) grows. The association is due to the fact that the roots of this tree form a sort of "foot", growing out of the soil. This tree is, on the other hand, one of the plant teachers.

Don Emilio mentioned to me the existence of creatures living under the earth, called Mana Ocoteico, which means "without anus", creatures that form part of the Yagua shamanism, as described by Chaumeil (1979,1982). However, these beings do not play any important role in the cosmivision of the mestizo shamans I have met. Quite common, however, is the belief in the existence of buried cities in which the spirits of the Inca live, evidently of Andean origin.

Crucial to shamanic practices is the belief that many plants, if not all plants, each have their own "mother" or spirit. It is with the help of the spirits of some of these plants, which I have called "plant teachers", that the shaman is able to acquire his powers.

The Plant Teachers

When the four informants were questioned about the origin of their knowledge they all answered: *La purga mlsma te ensena* (The purgative itself teaches you), referring to the ayahuasca beverage. Other plants, some of which I learned were used as additives to ayahuasca, were also mentioned. Suspecting that at least some of them might be psychoactive, I started to make a list and if possible collect all those plants that teach medicine. I found in the shamans' reports that plants they called *doctores* or *vegetales que ensenan* (plants that teach) either: (1) produce hallucinations if taken alone; (2) modify in some way the effects of the ayahuasca beverage; (3) produce dizziness; (4) possess strong emetic and/or cathartic properties; (5) bring on specially vivid dreams. Quite often a plant has all these characteristics, or some of them. I was somewhat perplexed about how to find the right way of questioning my informants about the plant teachers. If I use, for instance, the Spanish verb *marear* (to make you dizzy), for example: *Don Celso marea esta planta?* (Don Celso, does this plant, when taking it, make you dizzy?)

The answer could be: "Yes, it is a good medicine", or "Yes in our dreams the spirit of the plants presents itself to you", or , "Yes, it makes you throw up everything, or "Yes, it teaches you", or "Yes, it makes you see beautiful things", or finally "Yes, if you combine it with ayahuasca". Similar answers were given to me when I put the questions differently, Iike, Don Emilio, ¿es esta planta doctor? (Is this a plant teacher?) or Don Alejandro, ¿tiene madre esta planta? (Does this plant have its "mother"?). This set of associations is interesting indeed. The association of psychoactive plants with emetics and vermifuges has been pointed out by Rodriguez and Cavin (1982). The association between dreams and hallucinations is a common theme in shamanic literature. As far as I understand, all psychoactive plants are considered potential teachers. I once asked Don Emilio if he had ever taken the mushroom *Psilocybe cubensis*, which grows widely throughout the region on cow dung. He answered positively: Bonito se ve. Dietandole debe enseñar medicina (You see beautiful things. If you keep the diet it might teach you medicine).

The four informants I worked with do not agree as to whether all plant teachers produce visions. According to Don Alejandro, all the plants that have "mothers" marean (make you dizzy). This implies that there are plants without "mother", with which Don Celso and Don Emilio do not agree. Don Celso says: The mother of the lant is its existence, its life". Don Emilio affirms that all plants, even the smallest, have their mother. Some of the plant teachers produce visions only when associated with ayahuasca. Others produce only una mareacion ciega (a blind dizziness), in which you do not see anything. Other plants teach only during the dreams.

The following plants are considered to "teach medicine" if the proper diet is kept, and can be added to the ayahuasca beverage (*Banisteriopsis caapi* + *Psychotria viridis*): Tobacco (a variety called mapacho in the area), toé (*Brugmansia suaveolens*), uchu-sanango (*Tabernaemontana* sp.), ayahuma (*Couroupita guianensis* Abl.), caupuri (*Virola surinamensis* (Rol) Warb), tangarana (*Triplaris surinamensis* Chamisso), chuchuhuasi (*Maytenus ebenifolia* Reiss), hiporuru (*Alchornea castaneifolia* (Willd.) Juss), mucura (*Petiveria alliacea* L.), lupuna (*Ceiba pentandra*)*, clavohuasca (*Tynanthas panurensis*)*, bellaco caspi (*Himantanthus sucuuba* (Spruce) Woods) (Soukup, 1970), huairacaspi (*Cedrelinga catanaeformis* Ducke) (Soukup, 1970), huacapu (*Vouacapoua americana* Aubl.) (Soukup, 1970), chullachaqui caspi (*Tovomita* sp.), cumala (*Virola* sp.), catahua (*Hura crepitans* L.), abuta (*Abutagrandidifolia*), amasisa (*Erythrinaglauca*) (Villarejo, 1979; Chaumeil, 1982), nuc-nuc pichana (*Scoparia dulcis* L.), bobinsana (*Calliandra angustifolia*) (Soukup, 1970), chirc sanango (*Brunfelsia grandiflora* D. Don ssp. *schultesii* Plowman), remo-caspi (*Pithecolobium laetum* Benth.) (Williams, 1936), renaco (*Ficus* sp.), tahuari (*Tabebuia* sp.) (Williams, 1936), capirona negra (*Capirona decorticans* Spruce) (Williams, 1936), and cumaseba negra, tamshi, puca lupuna, garabato, millo renacuilla, murure, palisangre, of which at this point I have only the common names. Some of these plants (tobacco, toe, catahua, mucura, chirc sanango and others) may be taken alone. This is also the case for suelda con suelda (*Phtirusa pyrifolia* HBK Eichler), raya balsa (*Montrichardia arborecens* Schott), ajo sacha (*Mansoa alliacea* (Lam) A. Gentry and oje (*Ficus insipida*) (Encarnacion, 1983).

*Personal communication and tentative plant identification by botanists at the Herbarium Amazonense, Iquitos.

Don Emilio suggests a certain order in taking and following the proper diet for plant teachers. This is for him the ideal order: ayahuasca, tobacco, renaco, chullachaqui caspi, tahuari, huairacaspi, caupuri, palisangre, perfume, camalonga, agua florida, pedernal, creolina, alcanfor, tambor huasca, chuchuhuasi, lupuna. In his list there are five elements that are not plants: perfume, agua florida and alcanfor (camphor), which are made of the essence of plants, pedernal (flintstone) and creoline (a strong commercial disinfectant). The list of additives is an open one, and I often hear about new ones.

In some cases it is clear that by ingesting and following the diet for a plant the shaman is trying to participate in some of its qualities. Many of the plant teachers are very tall trees, that resist heavy rains, winds and inundations. The shaman will then be able to withstand the elements in the same way.

The appearance of the spirits can vary greatly. They assume different human or animal forms. The only concurrence I found among the informants is that the spirit of ayahuma is a man without a head. Quite often the spirits present themselves as small people of beautiful and strong constitution. The "mother" of tangarana is supposed to be the ant that lives in a symbiotic relationship with this tree. Don Alejandro reported that he had used the shoots of this plant instead of chacruna (*Psychotria viridis*), as an additive of ayahuasca with positive results. This is in fact very interesting. The mechanism that has been proposed to underlie the oral activity of ayahuasca, and which has been confirmed recently by McKenna and Towers (1984), postulates that the p-carbolines present in *Banisteriopsis caapi* are highly reversible inhibitors of monoamine oxidase (MAO), protecting the N,N-dimethyltryptamine (DMT) present in *Psychotria viridis* (as in *Diplopterys cabrerana*) from deamination. If the effects of ayahuasca are primarily due to the DMT, perhaps the shoots of tangarana contain a similar component.

All four informants insist that the spirits of the plants taught them what they know. Don Celso never had a shaman as his teacher. On one occasion he made a very significant remark: "That is why some doctors believe that the uegetalismo (or science of the plants) is stronger than la medicina de estudio (Western medicine), because they learn by reading books. But we just take this liquid (ayahuasca), keep the diet, and then we learn". Don Alejandro told me that very soon he learned more than his teacher, an Indian captured by the caucheros (rubber workers), because the spirits of the plants taught him so much. Don Jose claims that his murrayas taught him everything he knows. As I mentioned earlier, he identifies them with the spirits of dead shamans. In his ecstatic trance they enter his body and talk to him in Cocama, a Peruvian tribe language. Don Jose is the only one of the four informants who manifests what could be labelled spirit possession. He sometimes maintains long dialogues with the spirits, who talk through his mouth in a loud voice.

The spirits, who are sometimes called doctorcitos (little doctors) or abuelos (grandfathers) present themselves during the visions and during the dreams. They show how to diagnose the illness, what plants to use and how, the proper use of tobacco smoke, how to suck out the illness or restore the spirit to a patient, how the shamans defend themselves, what to eat, and, most important, they teach them icaros, magic songs or shamanic melodies which are the main tools of shamanic practices.

Arkana

The practice of medicine and other shamanic activities implies tremendous dangers for the person of the shaman. A common topic of conversation among them is the account of struggles they have been forced to have with rival shamans who are jealous of their powers, or who are trying to prevent the healing of some person they have harmed. A shaman must protect himself when preparing his remedies, because even the plants themselves might harm him. That is why seeking protections against such dangers is an extremely important part of the process of learning. A shaman must be a strong person physically and spiritually. Each of the four informants I worked with considers himself a survivor of innumerable encounters with black shamans or with evil spirits. Very often these struggles take place during sleep. The shaman will dream that he is attacked. If he loses the combat, he may never wake up, or will be badly hurt. One of the functions of the diet is to make a person strong. And the constant use of tobacco has a similar function, the smoke of the plant being a strong defense against evil people, Yacuruna, Chullachaqui and bad spirits.

Arkarta in the Quechua language means "defense" (J. Szeminski, pers. commun.). I questioned each of my four informants about their arkana. Don Jose told me about four of them: huairamanda arhana, yahtamanda arhana, yahumanda arhana and meolinamanda arhana. Huairamanda arhana is a hurricane which will blow away his enemies. The other three are defenses against enemies coming from the earth, water and air. He describes them as darts which were given to him by his murraya or spirits. On the other hand these spirits guard the place where he is taking ayahuasca.

Don Celso, when curing serious cases of witchcraft, surrounds himself with all his defenders. These are animals representing air, water and earth; the condorpischu, a little white bird with a red neck, will fly around his head. A lion will be on his right shoulder, a black panther on his left shoulder and an elephant in front of him. To defend him from enemies of the water he is surrounded by a mermaid, a naca-naca (*Micruus* sp., a poisonous snake), a white eel and a lobo marino or nutria. A shushupi (bushmaster), another very poisonous snake, will be around his neck, with its head beside his mouth. His last defense if he is in great danger is a school of piranhas, small voracious fish that will devour his enemies.

Don Emilio, when taking ayahuasca, places four angels armed with swords in the four corners of his home. His personal defenses are a little bird that will alert him in case a witch is approaching, a black bull and a huge winged Brazilian black man with daggers in his hand and belt, who will follow the bad spirits and shut them in dark tunnels in the Andean mountains.

Don Alejandro also places four guardians around him. These are the

"mother" of four trees and they are armed with guns. In case of great danger he has another weapon impossible to resist: a war airplane, that will bomb and destroy his enemies. When I questioned him as to how he acquired such a weapon from the spirits, he told me that he could not answer. It was a "professional secret".

There are further means of defense. Don Emilio prepares desiccated toads which he fills with a mixture of tobacco and patiquina (*Diffenbachia alba*),

and which are supposed to catch magic darts thrown towards the owner of the house in which they are placed. He does something similar with the horn of a black ram.

Above all, it must be remembered that there are icaros whose function is to defend the shaman. Having strong icaros is a sine qua non for surviving as a medicine man. I should add that both Don Emilio and Don Jose have told me on occasions that the highest and most powerful defense is Jesus Christ on whom they called for help.

Transmission of Power

At one point during the initiation, either the spirits of the plants, or the teacher, or both, transmit to the initiate a phlegm called yachay, yausa, mariri or simply "medicine", with the help of which he will be able to suck out the illness from the bodies of his patients. Don Jose told me how his murrayas vomited into the ayahuasca pot several snakes, which he ingested. These were a naca-naca, a rattle snake, a provinciana, a bush master an: an eel, considered by local people to be a snake. Several days after this initiation the murrayas taught him how to regurgitate and with the help of tobacco smoke place in his mouth his mariri, which will help him to suck out the illness. Without his mariri the illness would penetrate his body and kill him. Don Alejandro told me how after 3 months of study his Indian teacher told him he was going to "plant" the yachay in him. With the help of the neb of a pinshe, a toucan, he blew tobacco smoke and liquid through each of his nostrils. He then regurgitated a phlegm in a little bowl and gave it to him to drink, together with tobacco juice. Don Alejandro described this moment of the initiation as the most difficult one. Don Celso told me that the yausa or yachay are always two, "male" and "female", about 12 and 8 cm long. With their help he sucks out the illness. When it is in his mouth, he separates the yachay and throws the illness away. He then ingests the phlegm again. He told me that the spirits presented him with his yachay, which was of four colours: white, yellow, blue and green. He could have accepted, but refused, phlegm of red colour, bones, thorns and razors. They are for causing harm to other people. Don Emilio describes his yachay as a sort of magnet, which will attract the illness when he sucks on the place where it is located. The yachay can be stolen by a sorcerer, if one is not careful. The loss of his powers will result, sooner or later, in the death of the shaman, who will then be at the mercy of his enemies. According to Don Jose if one receives his mariri from a teacher, and does not keep the prescribed diet, the mariri returns to him and causes him harm or even kills him.

As I mentioned earlier, there are two main causes of magic illness: the loss of the spirit (which can be taken by a sorcerer and thrown away, either into space or into tunnels under the earth, whence it can be rescued by a shaman), or the penetration of a magic dart or virote. The description of these uirotes given to me are very similar to that of the yachay. They are phlegms that penetrate the body of the victims. Among the magic illnesses caused by a phlegm, there is one which is fairly common. It is called cunyatuya, which will strangle the victim in a matter of a few weeks.

Both Don Celso and Don Jose told me that when they extract uirotes from their patients, sometimes they find "good" ones that they will incorporate into their mariri. In other words, although they differentiate between virote and yachay or mariri, it seems to be the same thing but with different functions; that of curing, of protecting, or of causing harm. The parallels with the

descriptions given by Harner (1973) of the tsentsak of the Jivaro Indians and the flechettes of the Yagua described by Chaumeil (1982) are evident. Once the mariri has been "planted" in the initiate, it will grow like a plant. Its development depends on the length of the diet.

The Diet

Of paramount importance, repeatedly stressed by all four informants, is the necessity of keeping a very strict diet and total sexual abstinence during the period of apprenticeship. It is through the diet that the plants reveal themselves to the initiate, either in visions or in dreams. The length of the diet will determine his knowledge and his strength. In some cases the spirits themselves will appear and prescribe the duration and character of the diet. Even after the shaman has withdrawn from the isolation required during apprenticeship, and starts his shamanic practices, periods of diet are recommended, -especially when treating difficult cases and/or when preparing certain medicines. It is quite common to keep the diet for one or several days after the ingestion of ayahuasca or other plant teachers, if used only for the purpose of curing. When learning from the plants the diet's duration may be of several months and even up to several years.

The "ideal" diet consists of cooked plantains, smoked fish and sometimes carne de monte, the meat of certain jungle animals. Rice and manioc seem to be accepted by some ayahuasqueros. No salt, sugar or any other condiments, fats, alcohol, pork, chicken, fruit, vegetables or cold beverages can be ingested. The food must be prepared either by the shaman himself, or by a premenstruate girl or a postmenopausal woman. All other contact with women should be avoided. I have not found clear reasons for the prohibition of certain animals as food. No doubt it must have its origin in native food taboos whose context has been forgotten. According to my informants the following fish can be eaten: Sabalo (*Brycon melanopterus*, *B. erythropterus*), boquichico (*Prochilodus nigricans*), bujurqui (*Ciclaurus festivum*, *C. severum*), anashua (*Crenicichla johanna*), tucunare (*Cichla ocellaris*), sardina (*Triportheus angulatus*, *T. elongatus*), paco (*Colossoma bidens*), gamitana (*Colossoma macropomum*), corvina (*Plagioscion auratus*, *P. squamosissimum*), paiche (*Arapaima gigas*), palometa (*Mylossoma duriensis*, *M. aureum*), carahuasu (*Astronotus ocellatus*) and fasaco (*Hoplias malabaricus*). Certain birds such as panguana (*Crypturellus unicolor*), pungacunga (*Penelope jacquacu*), perdiz and pava can be eaten, as can reptiles such as lagarto blanco (*Caiman sclerops*) and several species of boa (Fam. Boidae). On the other hand, the following animals cannot be eaten during the diet: mammals, such as sajino (*Tayassu tajacu*), huangana (*Tayassu pecari*), sachauaca (*Tapirus terrestris*), motelo (*Testudo tabulata*), huapo negro (*Pitheca monachus*), huapo colorado (*Cacajao calvus nubicundus*), coto (*Alouata seniculus*), choro (*Lagothrix lagothricha*), maquisapa (*Ateles paniscus chamek*, *Ateles paniscus belzebuth*), mono negro and mono blanco; certain birds such as guacamayo rojo (*Ara macao*), paujil (*Mitu mitu*) and trompetero (*Psophia leucoptera*); certain reptiles such as shushupi (Fam. Crotalidae) and jergon (*Bothrops atrox*); finally certain species of fish, such as pana (*Serrasalmus spilopleura*, *S. nattereri*, *S. rhombeus*) and zungaro (*Trichomycterus* spp.). A complete list would imply a knowledge of the fauna of the region that I have not yet acquired. I believe that the maintenance of some sort of altered state of consciousness seems to be part of the learning process. A more detailed study of the diet might be relevant.

The Icaros or Magic Melodies

I mentioned earlier that the spirits of the plants teach the initiate certain magic songs or melodies called icaros. Their role is extremely important, to the point that the number and quality of a shaman's icaros is the best expression of his knowledge and power. In fact, when being initiated, the first thing that must be learned is these icaros, which are highly individualistic, a particular gift of the spirits, although it must be noted that sometimes a teacher can transmit an icaro to his pupil.

The icaros have a wide variety of functions. There are icaros for increasing or decreasing the strength of the hallucinations. For calling defenders or arhena, for curing specific illnesses, for reinforcing the effect of medicinal plants, for attracting the love of a woman (huarmi icaro), for calling the spirits of dead shamans, for causing rain, wind or thunder, for bewitching, for hunting or fishing certain animals, for curing snake bites, for protecting oneself before sexual intercourse, etc. Don Emilio knows about 60-70 icaros, most of which I have recorded. Don Jose, Don Alejandro and Don Celso all claim to know over 100. The Chilean ethnomusicologist Alfonso Padilla, of Helsinki University, studied the material collected during my first period of fieldwork. Based on that, he wrote brief descriptions and transcriptions of some of Don Emilio's icaros, which are included as an appendix to this paper.

All four informants sing in the Quechua language. Don Emilio knows a few icaros in Spanish. Don Jose sings in Quechua, Cocama and Omagua and sometimes in a mixture of the three languages. Cocama and Omagua are two languages of the Tupi-Guarani family but are not mutually intelligible (Mason, 1950). There is great prestige and power associated with the use of native languages and the shamans speak to their spirits in these languages. Both Don Jose and Don Celso claim that they learned the languages not from Indians but from the spirits. In my conversations with other vegetaIistas I found that the teaching of native languages by plants is quite a widespread belief.

As far as I have understood, some of the spiritual struggles the shamans have with each other are through icaros, and learning strong icaros is vital to survival. The number of icaros depends on the length of time of the diet. Don Alejandro told me that if you know the principal icaro of a shaman, you can attract his defenders when he dies, and can incorporate his knowledge.

I must add that some of the icaros I have heard are indeed of great beauty, and the recording of as many as possible of the magic melodies of the shamans of the area, with the proper contextual information, is a task which urgently needs to be carried out.

Conclusion

Specialists of native Amazonian shamanism will find many parallels between what I have described here and what they have found among different Indian groups. There is no doubt that the belief systems have lost much of their coherency, and only fragments can still be found here and there. Nevertheless shamanism as such has remained alive, and the transformation of some of its elements, as we have seen in the case of the arkana's incorporation of modern weaponry, demonstrate its vitality. On the other hand there is the danger that the pressures of urban life must eventually put

an end to this rich tradition. None of the four informants I worked with has a successor. They all complain that the young people are not interested or are not able to endure the diet and continence necessary for learning from the plants. Their roles are readily assumed by charlatans who do not possess even a minimum of their knowledge of the myths, legends, flora and fauna of the region. The disappearance of this shamanic tradition would be a great loss.

Appendix

THE ICAROS OF DON EMILIO ANDRADE GOMEZ

This analysis is based on 7 out of 56 icaros taped by Luna in July and August 1981.

ALFONSO PADILLA

(Translated from Spanish by Luis E. Luna)

Luis E. Luna has already explained the role and position of the music employed in shamanic rituals among the mestizo shamans of the Peruvian Amazon (Luna, 1984). I will not refer to this question, although it is of crucial importance from the point of view of ethnomusicology. Don Emilio's icaros, like the shamanic music of the area in general, present two main issues: first, what relationship exists between the icaros sung by Don Emilio and the regional musical culture; second, whether there exists any semiotical connotation of the melodies, scales, rhythms and the other musical parameters used by the shaman. This last issue demands the analysis of all the icaros known by Don Emilio, the exact function of each of them in the ritual, and the revealing of the precise meaning of the icaros sung in Quechua or any other Indian language. As it is not possible to treat all these problems in this brief paper, we will concentrate our attention on the relationship of Don Emilio's repertoire with the music of the area, through the analysis of the "style" of his icaros.

Don Emilio has said that it was the spirit of the plants or doctores, not any human being, who taught him his icaros. Probably no particular individual taught him such songs and melodies, but he himself composed them, although attributing to a third person - the doctores - the creative function. The following analysis seeks to show that Don Emilio's icaros present essential similarities with the Indian, folk and popular music of the area. This is not so by chance, as he seems to be rather familiar with the several types of music that it is possible to listen to in Iquitos. He himself plays the mouth organ for pleasure, i.e. it is not incorporated into the shamanic ritual.

It seems that the basic ideas of the "intonation theory" are applicable to Don Emilio (Ling, 1982). Such theory maintains that the human being has in his mind, as a store-house, a number of the musical elements of a certain culture, such as melodies, scales, harmonies, harmonic functions, metric and rhythmic patterns, tempo, dynamics, timbres, etc. Such elements conform to the peculiar musical vocabulary of a culture in a given period, most of the components of which have been appropriated by the members of such a culture. In the traditional music (popular, folk and primitive music), these elements function as the ingredients or raw material which the popular musician uses when composing new pieces. That is the reason why very frequently a certain folk song resembles many others. Don Emilio sings or whistles icaros the primary elements of which are present in the musical culture that surrounds him. That does not prevent him, however, from using procedures that sometimes differ from the usual musical forms of the area.

In Don Emilio's repertoire we find icaros that are tied to very old, even pre-Columbian, musical traditions. In others we find European (Hispanic) and African influences that came to Iquitos through the Creole folk and popular music. We will call the former "old", and the latter "new". But before starting the analysis, it is convenient to define the nature of the icaros. They are songs or whistled melodies used by the shaman during the ritual and other shamanic practices, and through which he increases the potency of the healing capacities of ayahuasca, tobacco or any other medicinal plant. Some icaros have other magical functions, such as the possibility of communicating with the spirits, to attract the spirits of people or game, etc. The shaman does not normally use any musical instrument except the schacapa - a bundle of dry leaves - which he utilises sporadically.

Melody

The "old icaros" ; in general, end their phrases in an ascendent shape (see icaros 1, 3, 4 and 6). The "new icaros"; on the other hand, due to the influence of popular music, have a tendency to end their phrases in a descendent shape. The construction of the phrases in the "old icaros" is more free than in the new ones. For instance the icaro del Brasileno presents a regularity that is typical of western music. The structure of the melodies is based both on steppy and leapy movements, sometimes very large. The minor second intervals are used considerably less than those of major second. The most used intervals are those of major and minor thirds. Quite common also are intervals of fourth. The larger intervals (from fifths to sevenths) are very infrequent in the music of the area. Don Emilio, however, uses them sometimes, which constitutes a peculiarity of his music. The abundant use of thirds is, on the other hand, in agreement with the Andean folkmusic. The internal relation of the intervals used by Don Emilio corresponds to those of the western tempered chromatic scale, which he assimilated through playing the mouth organ. The ranges most used by Don Emilio are those of fifth, sixth and octave, which agree with the regional music, but the two octave range used in icaro 5 is exceptional.

The scales used by Don Emilio offer great variety and include most of the scales found in the local music. In Don Emilio's repertoire one can find the simplest of the scales of the Andean music, and one of the oldest: the triphonic, which comprises only the three notes of the major chord (Alvarez and Grebe, 1974). The most frequent scale used by Don Emilio is, at the same time, one of the most characteristic features of Andean music, the diatonic pentatonic scale (icaros 1, 2, 4 and 6). The tonal center of icaros 2, 4 and 6 is fixed, but that of the icaro 1 alternates continuously between A and F#, a very common phenomenon in Andean folk music (The diatonic pentatonic scale contains both the major chord and its minor relative. It is possible therefore to modulate continuously from one chord to the other, and accordingly, its tonal center too). Something very interesting occurs in icaro 4, in which two pentatonic scales are used successively, when the scale B-C#-D#-F#-G#, with B as the tonal center modulates the scale E-F#-G#-B-C#, with E as the tonal center. This modulation in pentatonic songs is very rare, if it occurs at all, in the music of the region. Another type used is the church modal scales. For instance the Db-Myxolydian scale is used in icaro 7. A variety of the modal scales is the so-called synthetic scale, which is found in the icaros 3 and 5. In icaro 3 we have a Dorian scale, which is modified in the seventh grade thus, consisting of 8 notes, E-F#-G-A-B-C#-D-D#. In icaro 5 appears an Aeolian scale, where the sixth grade is missing, and the seventh is altered so that the complete scale is G#-A#-B-C#-D#-(E)-F#-Fx.

Harmony

It is easy to see that Don Emilio's icaros do not belong to classic Western harmony. However it is possible to apply to these icaros a modal harmony, as it occurs in the music of the area. Although such a problem will not be treated here, it is sufficient to point out that it is possible to apply to the *caro del Brasileno* a harmony which is used in popular music, since the relationship of this icaro to such a musical tradition is evident.

Rhythm

The analysis of the rhythms of the Don Emilio's icaros shows that it is possible to find in them, all the existing rhythms of the region. In the first place, there are icaros that use a regular rhythmic pattern. Once again it is the icaro 7 which reveals its relationship with popular music. The melodic rhythm carries internally the basic African rhythmic cell that arrived in Latin America, i.e. the syncopated motif. In this specific case, its external form is the rhythm of the Brazilian *baion*. (It is not fortuitous that this icaro is called the icaro of the Brazilian!). The rhythm of icaro 5 is also regular.

Another type of rhythm used is the additive, the basic structure of which is regular but which is sometimes lengthened by one or more beats. For example the material icaro, no. 4 has a regular meter of 2/4, which is lengthened by 3/4 during one measure at the end of each phrase, but which returns to the initial 2/4. In icaros 2 and 6 we find examples of irregular rhythm, where there are frequent changes of different rhythmic patterns. The most astonishing one is icaro 6, where there is an alternance of 2/4, 3/4, 2/8, 4/4, 9/8 and 5/8 meters. This icaro is rhythmically very rich and difficult to follow mentally, because the listener has no way of anticipating what follows. Its clear phrasing differentiates it from an icaro with free rhythm, as icaro 3, the first one that Don Emilio learned. In this last case the phrasing is more diffuse and it is full of syncopes that modify the position of the strong beats. Icaro 1 is an example of prosodic rhythm, which is very much used in the shamanic seance when the shaman calls the name of spirits or persons. In such cases the rhythm corresponds to the number of syllables contained in the words. This rhythm is the most fluid one, and it is difficult to fit it into precise rhythmic patterns.

Expressive features

The dynamics of Don Emilio's songs have few variations. He uses only piano and pianissimo. His singing is slow, quiet and denotes great security. It can be distinguished from the regional singing in that it does not use forte and fortissimo, or shouts. On the other hand it is possible to consider as part of the icaro the blows and suction sounds which often end the songs. The whistled icaros present more variation than the sung ones, since they contain soft aspirations and inhalations along with strongly whistled parts. A very important expressive element is the constant variation and Don Emilio introduces in the execution of the icaro. Usually, an icaro consists of a few melodic cells that are repeated several times. For instance icaro 5 consists of a 12-measures melody which is repeated five times. The 12-measures melody's structure is AB (AB) CB. The five repetitions are different, because they contain subtle melodic and/or rhythmic modifications. This feature, repeated in each of the icaros, is even more evident if one compares different versions of one and the same icaro, since the possibilities of variations are even greater, including variations in dynamics, tempo, timbre, etc.

Conclusions

It is possible to conclude that the doctores who taught Don Emilio his tcaros are none other than the thousands of popular musicians, most of them anonymous, who created, over the centuries, the rich musical tradition of the region where Iquitos is located. Here converge musical cultures from the jungle, the Andes, the coast and popular music containing European and African elements. Against this background Don Emilio has made personal contributions which proves that he is a person of great musical sensibility. A close analysis of his repertoire would certainly be of great interest, since his magic songs and melodies are a synthesis of the entire musical culture of the area.

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