



Transworld Research Network
37/661 (2), Fort P.O.
Trivandrum-695 023
Kerala, India

The Ethnopharmacology of Ayahuasca, 2011: 1-21 ISBN: 978-81-7895-526-1
Editor: Rafael Guimarães dos Santos

1. Indigenous and mestizo use of ayahuasca. An overview

Luis Eduardo Luna

*Wasiwaska, Research Center for the Study of Psychointegrator Plants
Visionary Art and Consciousness, Florianópolis, Brazil*

Abstract. Ayahuasca, a psychotropic beverage used by numerous indigenous groups of the Upper Amazon, the Orinoco Basin and the Pacific Lowlands of Colombia and Ecuador, has an important role in their medico-religious, artistic and social lives. Its use was later incorporated in healing ceremonies among the mestizo population of Peru, Ecuador and Colombia. This chapter presents an overview of such uses among some indigenous groups as well as that of contemporary practitioners in the Peruvian Amazon region.

1. Introduction

It is my intention to give an overview of indigenous use of ayahuasca, and a discussion on the so-called *vegetalismo* phenomenon among the mestizo population of the Peruvian Amazon. I will also add a brief commentary about

Correspondence/Reprint request: Dr. Luis Eduardo Luna, Wasiwaska, Research Center for the Study of Psychointegrator Plants, Visionary Art and Consciousness. Florianópolis, Brazil
E-mail: leluna47@hotmail.com and www.wasiwaska.org

the so-called “ayahuasca tourism” phenomenon. The part related to the indigenous realm is mostly based on written sources, as my first-hand experience was limited to short stays with few indigenous groups¹. The part related to *vegetalismo* is mostly based on my own fieldwork during 1980-1988. I was unfortunately not able to fully examine an excellent recent in study on the phenomenon by Beyer[1].

2. Part I: Indigenous use of ayahuasca

2.1. European perception of sacred plants in the Americas

Although Europeans learned very early about the use of psychotropic plants among the indigenous population of the Americas, they ignored their properties, with exception of tobacco. These plants were used in a spiritual/religious context, a realm that in Spain was in the hands of the Catholic Church, which judged them as vehicles of communication with the Devil, a perception that basically has not changed in our contemporary world, in which Amerindian sacred plants have been, with exceptions, criminalized.

The first book written in Spanish in the New World (1497-8) was the Chronicle of Catalan friar Ramón Pané’s, at the orders of Columbus, and partially dedicated to the description of the beliefs and ceremonies of the Taíno, on the island of La Española (now-a-days Haiti and Santo Domingo)[2], an indigenous population originally from the Orinoco region who populated the Antilles, taking with them the use of *cohoba* (*Anadenanthera peregrina*). Pané was the first European to describe how their shamans “came out of their minds” to communicate with the *cenis* or spirits.

Juan Cárdenas, a chronicler, wrote on 1591 in reference to *peyotl* (*Lophophora williamsii*) that the natives who eat it “lose their senses, see visions of terrifying sights like the devil, and are able to prophesy their future with ‘satanic trickery’”[3]. In a religious manual of 1760 there were questions that equated the eating of peyote with cannibalism[4].

¹ From the onset I have to point out that my personal experience with indigenous use of ayahuasca is restricted to one session – for me life changing – with Don Apolinar Jacanamijoy, an Ingano “taita” whom I knew since childhood, and his son Roberto Jacanamijoy; one period of a month in the Sibundoy Valley with two Kamsá shamans, Don Salvador Chindoy and Don Miguel Chindoy, father and son; another month in Santa Rosa de Pirococha, a Shipibo small settlement, under the care of Don Basilio Gordon; perhaps half a dozen sessions with Don Benito Arévalo, a Shipibo, and later a few with his son Don Guillermo Arévalo; finally two weeks with a Campa shaman in Rio Palcazú, when I was in isolation doing the diet. The rest of my fieldwork, carried out during 1981-1988, was with mestizo practitioners.

There was a similar perception by the religious authorities regarding ayahuasca. One of the earliest sources is from Father José Chantre y Herrera in his history of the Jesuit missions from the late seventeen and early eighteen centuries, who speaks about a “diabolic brew”[5]. Missionaries of the Montfortian Congregation, most of them Dutchmen, established in 1914 among the Tukano, Desana, and Pira-Tapuka of the Papurí River immediately prohibited the use of yajé and destroyed most of its ritual paraphernalia[6]. This persecution by the part of religious missionaries comes to our days. In the mid eighties I heard similar stories in the Peruvian Amazon as carried out by members of the Summer Institute of Linguistics, and in the nineties near Manaus, Brazil, a group of Tukanos complained to me that Salesian missionaries prohibit them to take *caapi*.

2.2. A question of terminology

The Quichua term *ayahuasca* (also spelled *ayawaska*), from *aya* = spirit, ancestor and *waska* = vine, is not precise. In contemporary literature it is used to refer to the concoction of *Banisteriopsis caapi* plus *Psychotria viridis*. It is also sometimes used to refer to a beverage – a concoction or a cold infusion – made of *B. caapi* plus *Diplopterys cabrerana* (known as *chagropanga*, *chiripanga* or other vernacular names), which is locally known as *yajé* (also spelled *yagé*). To complicate matters both the term *ayahuasca* and *yajé* are used to refer to *Banisteriopsis caapi* by itself. I propose to use the term *ayahuasca*, common in Peru, Bolivia, Brazil and parts of Ecuador, when referring to the first preparation. The term *yajé* will designate the second preparation. We use the term *caapi* when referring to a preparation made only of *Banisteriopsis caapi*, as well as to the plant itself. Given that this vine is the essential element, when referring to the whole phenomenon I will talk about the *caapi* complex.

It is relevant to point out that indigenous groups distinguish several “kinds” of vines to refer to what western botanists see as just one species. This means they have a much more refined taxonomy, based not only on the morphology of the plant, but also on its effects, which may differ according to the type of soils it grows, the part of the plant used, the season and the moon in which the vine is harvested, and other factors. Langdon examined *yajé* classification among the Siona of the Colombian southeast[7]. There has not been, as far as I know, any inter-ethnic comprehensive study focusing on the vernacular taxonomy of *Banisteriopsis caapi*.

We have to view the *caapi* complex in the context of the use of other psychotropic plants, such as tobacco, *Anadenanthera* and *Virola* snuffs, as well

as other plants, psychotropic or not, with religious/spiritual significance². No doubt many Amazonian indigenous groups have a great interest in mind-altering plants. They are specialists in the pharmacology of consciousness.

A bibliographical investigation in 1986 resulted in references to the use of *B. caapi* with or without additives among seventy-two indigenous groups belonging to several linguistic families[10]. This list is most probably not exhaustive. The use of *B. caapi* has been adopted in later times by some of these groups, and it is still expanding, even outside of the Amazon area, for example among the Guarani of southern Brazil[11]. Bravec de Mori argues for the relative recent introduction of ayahuasca south of Iquitos[12]. The point of dispersion of the use of *Banisteriopsis caapi* is not known, or when this might have happened. The origin of its use may forever remain a mystery.

We have no evidence of indigenous group using ayahuasca outside the Upper Amazon. In the early nineties I heard that natives of Marajó, the large island located at the mouth of the Amazon River (no specific ethnic group was named) sold *Banisteriopsis caapi* to Umbanda (an Afro-Brazilian religion) centers, to be used for herbal baths, and I saw it being cultivated for this purpose at an Umbanda center in Porto Velho, in the Brazilian State of Rondônia. No fieldwork in this area has been carried out on this subject.

Ayahuasca and *yajé* have many other vernacular names[10,13]. In Brazil religious organizations that use ayahuasca as a sacrament call it either *santo daime* or *vegetal*.

2.3. Importance of the *caapi* complex

Richard Evans Schultes (1915-2001), a pioneer in the study of Amazonian psychoactive plants, summarizes thus the importance of *caapi* among Indian tribes:

“Probably no other New World hallucinogen – even peyote – alters consciousness in ways that have been so deeply and completely evaluated and interpreted. Caapi truly enters into every aspect of living. It reaches into prenatal life, influences life after death, operates during earthly existence, plays roles not only in health and sickness, but in relations between individuals, villages and tribes, in peace and war, at home and in travel, in hunting and in agriculture. In fact, one can name hardly any aspect of living or dying, wakefulness or sleep, where caapi hallucinogens do not play a vital, nay, overwhelming, role”[14].

² For a comprehensive discussion of the botany of ayahuasca see Ott[8,9].

Reichel-Dolmatoff, whose studies of the Tukano indigenous groups of the Colombian Vaupés threw new light to the role of *caapi* in those societies, wrote the following:

“The use to which these hallucinatory trances are put by the different Indian tribes varies from curing rituals to initiation ceremonies, and from the violent frenzy of warriors to ecstatic religious experiences. In all cases, it seems, yajé is thought to provide a means of being transported to another dimension of consciousness, which, in the daily life of the individual or of the group, acquires great importance. It would seem, then, that without exploring this dimension, a knowledge of aboriginal culture is impossible”[6].

It is not surprising that the origin of *caapi* is found in the myths³. Here two examples. The first myth is from the Tukano of the Colombian Vaupés territory, an agriculturist indigenous group that lived in relative isolation when Reichel-Dolmatoff collected it in the late sixties[6], and which was recited in many ceremonies. Here a highly abbreviated form based on the narratives he collected:

It happened in the beginning of time, when Anaconda-Canoe was ascending the rivers to settle mankind. *Yajé* woman, the first woman of creation, had come with the men, the ancestors of the Tukano. She was impregnated through the eye by the intense yellow light of the Sun Father, the phallus, the Master of *Yajé*, in the House of Waters, the first maloca [communal house], by a roaring and foaming fall. The woman left the maloca while the men were preparing *cashiri* beer and gave birth to the *yajé* vine in the form of the a radiant child. She then enters the *maloca* with her child, the men becoming dizzy, seeing red colors, the blood of childbirth, and losing their senses. The woman asked: “Who is the father of this child”? One man had kept a clear head. He said: “I am his father”. He took one of his copper earrings and broke it in a half, and with the sharp edge he cut the umbilical cord, a large piece, which is why *yajé* comes in the shape of a vine. The others grabbed him by his fingers, arms and legs, tearing him into peaces, each getting his own kind of *yajé*, and which give their identity to various groups within the Tukano and the rules by which to live.

³ When Steven White and I were preparing *Ayahuasca Reader: Encounter with the Amazon's Sacred Vine* [15], we noticed that the indigenous myths we found were referring to *B. caapi*. We did not find any myth referring solely either to *Psychotria viridis* or *Diplopterys cabrerana*. This is interesting given that it is the admixture plants that contain the visionary alkaloid (DMT).

Even though at first sight we would have among the Tukano a heavenly origin of *caapi*, the abode of Father Sun is in *ahpikondiá*, the underworld, and the source from which all life springs and to which the souls of the virtuous return after the body's death. An underwater origin of *nishi pai* (ayahuasca) is found among the Cashinawa and other indigenous groups of the Pano linguistic family of the Peruvian and Brazilian Amazon. There are several variations on this myth. Here in an abridged form, based on a narrative collected by Lagrou in the Purus River[16]:

Yube, the ancestor of the Cashinahua, went hunting by a lake not far from a genipap tree [*Genipa americana*, used by indigenous groups to paint their bodies]. While he was hiding a tapir arrived, took a genipap fruit in his mouth and threw it to the lake. An anaconda rose from the lake and as she left the water turned into a beautiful woman, her body covered by genipap designs. They made love. When Yube went back home he did not eat any of the food his wife had prepared, nor was able to sleep, his mind on the beautiful woman he had seen. The next morning he went to the lake, took three pieces of fruit and threw them in the water, and as the woman came out he tried to lay her down. The woman resisted and transformed into the anaconda, almost suffocating him. Yube explained why he had come, and lied saying he was single. The woman said that she was looking for a husband. If he wanted to make love to her he had to live with her in the lake. He agreed, made love to her, and the woman squeezed the sap of a leaf in his eyes so that he would not be afraid. She had him climb on her back and took him to her family in the lake. Yube got used to living with the anacondas, work for his father-in-law and made three children with her wife. One day the snake people were going to take *nishi pai* (ayahuasca) and his wife warned him against taking it, but he insisted he would take it. He went with his father-in-law to collect the vine and the leaves. When he drank the brew he became afraid and cried: "The snakes are swallowing me". The snake people were offended and nobody wanted to speak with him any longer, nor gave him food. He went to the forest where he met the little fish that told him he was in great danger, as the snakes were going to kill him. The fish put the juice from a leaf in Yube's eye and took him to a stream where his previous wife use to go to cry for him since he disappearance three years ago. She recognized him, gave him food, and he lived there for a whole year hiding from the snakes. Then a child was born. He went to the forest to find genipap to paint his newborn child but it rained and the rivers began to rise. He slipped into a stream and a snake, his youngest son, got hold of his big toe. Then his oldest daughter swallowed his whole foot, and his snake wife gulped down his whole body until his armpits. He cried for help, his kin rescued him, but his bones were broken. He wanted to know when he was going to die and asked them to bring all sorts of vines and leaves until he

recognized the right ones to prepare *nishi pai*. He gave his people the brew, who learned how to make it. During three nights he sang the songs he had learned from the snake people and then he died. He was buried and *kawa* leaves [*Psychotria viridis*] came out of his eyes and four kinds of vine grew from his limbs. His people prepared the drink but did not know the songs. One of the boys who had not taken the brew with the ancestor, but who had listened carefully, remember the songs, which is the reason why the Cashinahua know these songs.

Among Záparo and Peruvian mestizo vegetalistas the origin of the two plants involved in the preparation of ayahuasca come from the bones and blood (or simply from the grave) of a human being. A variation of this myth was later incorporated as the central myth of the *União do Vegetal*, one of the Brazilian organizations using ayahuasca.

The fact there are such myths may indicate that the *caapi* complex is probably old, but we have no certainty, as the earliest unequivocal record is from the eighteenth century. The botanical distribution of *Banisteriopsis caapi* encompasses a huge area, and it is easily cultivated, as exemplify by the use of *pildé*, one of the vernacular names given to the beverage, by indigenous groups of the Pacific lowlands of Colombia and Peru[6], where it must have been introduced, as the plant could not have migrated naturally across the Andes Mountains.

Recent studies are showing that large areas of the Amazon Basin were probably heavily populated. Extensive areas of the so-called *terra preta do indio*, anthropogenic soils of extraordinary quality for intense cultivation, reveal perhaps large human populations. In Beni, in the Bolivian Amazon, huge areas were dedicated to raised agricultural fields, dikes and reservoirs and fish-corralling fences, demolishing the theory that the Amazon had not enough protein to sustain large human populations[17,18]. Numerous geoglyphs in Acre, in the Brazilian Amazon, reveal habitation – and therefore resources – in areas paradoxically now dedicated to cattle ranching. Certainly the astonishing ceramics found along the Amazon River (for example those of Santarem and Marajó), which Fray Gaspar de Carvajal in 1513 praised as “the best in the world, better than those of Malaga”⁴, reveal huge cultural

⁴ Here the original Spanish text: “En este pueblo estaba una casa de placer, dentro de la cual había mucha loza de diversas hechuras, así de tinajas como de cántaros muy grandes de más de veinte cinco arrobas, y otras vasijas pequeñas como platos y escudillas y candeleros desta loza de la mejor que se ha visto en el mundo, porque la de Málaga no se iguala con ella, porque es toda vidriada y esmaltada de todas colores y tan vivas que espantan, y demás desto los dibujos y pinturas que en ellas hacen son tan compasados que naturalmente labran y dibujan todo como lo romano”. (p. 69)

sophistication[19]. What role *Banisteriopsis caapi* may have had in culturally diverse pre-Columbian Amazon we don't know. Near Santarem were found beautifully made ceramics with the jaguar and other shamanic motives in which a small drink was used obviously ceremonially. As far as I know there has been no identification of what drink these ceramics may have contained.

2.4. Indigenous spirituality and shamanism

Indigenous ayahuasca use can only be understood within the context of indigenous spirituality. According to its worldview there is an underlying spiritual aspect to everything that exists, an intimate relationship and even dependency between the seen and the unseen, between the world of nature and human creation on one side, and normally invisible and intelligent forces. The preservation of the individual and the community, and therefore human action, depends on finding the proper balance in this complex reality. Sacred plants, such as ayahuasca, facilitate the perception of such complexity. Gifted individuals may establish alliances with spiritual forces and interact for the benefit (or detriment) of others. They are able to interpret natural phenomenon finding hints that reveal the development of unseen forces that determine human existence. They are curious, interested in plants and animals, weather conditions, natural phenomena and the traditions of his community. They are therefore the recipients of the myths, narratives, songs, and spells. They have clear visions when under the influence of sacred plants, or are able to shed light upon the visions and experiences of others. They are intellectuals and humanists. These are the shamans or *payés*, both feared and seek for when the situation thus requires it. They undergo especial training, which implies dietary restrictions, the avoidance of sex, sojourns with shamans of neighboring indigenous groups and the acquisition of helping spirits, powerful objects, magical arrows and metaphors that help them in their practice. They are both knowledgeable of their natural environment as the masters of complex normally unseen supernatural realms.

2.5. Types of rituals

Reichel-Dolmatoff[6] pointed out that among the Tukano there are two kinds of *caapi* rituals. On one hand there are the great collective ceremonies involving one or more exogamic units which involve dancing, singing, and recitations, accompanied by rattles, flutes, fifes and other musical instruments, and which emphasizes the divine origin of their social laws, also the ceremonies connected with the individuals life cycle such as initiations

and burials, and above all the ancestor-communication Yuruparí ceremonies. On the other hand the more intimate sessions devoted to shamanic practices, such as healing and divination, finding game or learning about the plans of the enemy during warfare, and involving just a few individuals. He also indicated that in the Vaupés only *Banisteriopsis caapi* was used in collective rituals, while in shamanic séances, in which “special effects” are desirable, *Banisteriopsis rusbyana* (and old name for *Diplopterys cabrerana*) was also added. Collective rituals taking place in 1923 were described by Karsten among the Shuar of Ecuador[20], particularly those related to victory feasts, and in 1934 by Goldman among the Cubeo of the Colombian Vaupés region[21], related to ancestor cults. Due to the missionary activity and other western influences, most collective rituals do not exist any longer. It is the intimate shamanic use that has been preserved and transformed, with external influences, in the sessions of mestizo ayahuasqueros.

2.6. Uses of the *caapi* complex

Many publications have dealt in one way or another with the use of yajé/ayahuasca by indigenous groups. It is not my intention to summarize here such studies. I will rather present the main uses, taken from indigenous groups belonging to several linguistic families and cultural subdivisions (hunter gatherers, agriculturists, savanna dwellers, etc.). Not all elements are necessarily present in each indigenous group, and some of them are deeply intertwined, so that differentiation is difficult. This will give us an idea of the range of uses among the indigenous populations of the Amazon and Orinoco Basins, and the Pacific lowlands of Colombia.

2.7. Contact with the primordial spiritual realm

The main function of ayahuasca/yajé is to enter into contact with the unseen side of reality. Harner[22], referring to the Shuar of the Ecuadorian Amazon, points out that the true forces behind daily life are in the supernatural realm, the true reality, and can only be accessed through the psychedelic experience. For the Cubeo, according to Goldman[21], the exaltation of intoxication and frenzied emotional experience is sacred, and *caapi* is used primarily to enter into contact with the ancestors. Harner calls this modified state of consciousness “shamanic state of consciousness”[23]. Winkelman[24] proposes the term “integrative consciousness” using a highly convincing neurophenomenological approach to shamanism that bridges the realm traditionally found within anthropological and religious studies, with the neurosciences.

Traveling to other dimensions and helping others to undertake without danger journeys to the other side of reality is the specialty of the shaman. In the case of the Siona, according to Langdon[25,26], the shaman conducting the ritual, through his songs, take the assembly into specific region of their cosmos, each characterized by its particular sounds, rhythms, music, smells and colors.

The process of entering the other side of reality may be experienced in terms of dismembering, death, and resurrection, a common motive found in shamanistic traditions globally. Referring to the Tukano of the Colombian Vaupés, Reichel-Dolmatoff writes the following:

“Recognizing that the individual must pass from one dimension of existence – or cosmic plane – to another to communicate with the spiritual or invisible world, the Tukanos take caapi to effect this transport. The trip represents to them the process of birth and breaking through the wall that separates the two cosmic planes and signifies, according to anthropological studies, the rupture of the placenta. Drinking caapi is often interpreted as returning to the ‘cosmic uterus’. Since they insist that they sometimes come to know death while under the influence of the drug, the Tukanos consider the return to the cosmic uterus as an anticipation of death which permits contact with the divinity or visitation with the source and origin of all things”[6].

A related metaphor is found among the Kamsá of the Colombian Putumayo. After birth the baby’s umbilical chord is severed, separating him from his mother’s placenta. According to their view, *yajé* is like a new umbilical chord connecting the person to the whole cosmos.

2.8. Transformation and communication with the animal and plant world

A common motive in shamanism everywhere is transformation into an animal to perform certain tasks. In the Amazonian region one of the main shamanic motives is that of jaguar transformation, especially to attack enemies. In some cases the shamans may become other great predators, such as the harpy eagle and the anaconda. These three animals crown the Amazonian trophic pyramid. The shaman may either transform into an animal, or an animal or a plant may adopt anthropomorphic features to communicate with humans. We are here confronted with a radically different epistemology, one that presupposes the possibility of perceiving the world from the point of view of a non-human creature, something which cannot be rejected as a totally far-fetched way of thinking, even though difficult to

comprehend without direct experience of the states of consciousness in which it is based. A dialogue of worldviews is needed, one that goes beyond ethnographic curiosity and which accepts that other approaches to reality are indeed possible. Western science, due to prejudices, is largely totally ignorant about the possibility of acquiring actual information about the natural world in non-ordinary states of consciousness.

2.9. Divination, healing and warfare

Getting information from other realms is indeed one of the main functions of the *caapi* complex. It is used to locate animals in the forest, to find out about relatives in distant places, to know the cause or etiology of illness, to get to know the plans of the enemies, etc. When Karsten asked the Shuar why they drink *natéma*, he got the following answer: “It is in order that the people may not die away”. He then adds the following commentary: “By this kind of divination they try to find out what dangers are threatening the family, whether enemies are planning an attack against them, whether evil sorcerers are operating against them, whether they will be successful in their own undertakings, and so forth”[20].

Ayahuasca/yajé is used to diagnosis and to look for the deeper cause of illness. Sometimes also the patient may take it to contribute to find the etiology of the ailment. Sucking, blowing tobacco smoke over the patient or over the medicinal plants used, songs and incantations are usually essential. Some indigenous groups may use it in conjunction with other plants. Such is the case of the Tukano, who use *vihó*, a DMT containing snuff prepared from the sap of *Virola* species. Often medicinal plants are collected under certain dietary conditions, for example before dawn and without having eaten anything, as well as after invoking the spirits of the plants or making offerings to them.

Given that illness is usually thought as the result of the action of an animated agent, fighting it is part of the healing process. The shaman has the double role of healer and sorcerer, protecting his community but at the same time attacking its enemies, either by transforming into a jaguar, or by sending back the illness to the person who sent it, or through helping spirit animals.

It seems that among some indigenous groups *caapi* was used with warfare. Spruce described in 1852 how the person who has taken *caapi* would “bursts into a perspiration, and seems possessed with reckless fury, seizes whatever arms are at hand, his murucú, bow and arrows, or cutlass, and rushes to the doorway, where he inflicts violent blows on the ground or the doorposts, calling out all the while, ‘Thus would I do to mine enemy

naming him by his name) were were this he!⁵” Calavia[27] pointed out that Yaminahua memories of life before the pax branca (the peace imposed by whites), suggest a conception of ayahuasca that might seem strange or perhaps even scandalous in another context: the plant-substance is a bloodthirsty agent associated with war and vengeance that eventually is tempered by the blood of a dead relative. It is also the instrument of an aggressive shamanism in which therapy is defense and counter-attack.

Not keeping dietary prescriptions when hunting, having contact with menstruating women or childbearing women, not paying respect to the spirits when approaching special places in the forest, may cause illness.

2.10. Acquisition of songs and designs

In some indigenous groups there seem to be an intimate relationship between the experiences in other realms through yajé/ayahuasca and visual expressions in body painting and the patterns used in the ornamentation of communal houses, weapons, paddles, stamping tubes, ceramics, and other objects. Songs and dances are also said to derive from experiences on the other side of this reality.

According to Father Plácido de Calella, a missionary who worked among the Siona, in the beginning of the 20th century, “during these hallucinations the shaman and the other participants claim to see large crowds of people, called “yajé people” (*yagé-pai*) and who sing and play musical instruments. When the trance is over the men copy the design motifs of the body paint of these spirit-beings and use them to adorn their own faces”[28]. Langdon later confirmed this idea, while also by reporting that most Siona narratives can be characterized as shamanic, in the sense that they deal with shamans and/or with experiences in the occult world when dreaming or taking *yagé*.

Reichel-Dolmatoff[6], when discussing with a Tukano of the Colombian Vaupés Territory the colorful designs on the exterior of one of the communal

⁵ It has always puzzled me the rapid reaction in the persons taking *caapi* described by Spruce, who wrote: “*This is all I have seen and learnt of aya-huasca. I regret being unable to tell what is the peculiar narcotic principle that produces such extraordinary effects. Opium and hemp are its most obvious analogues, but caapi would operate on the nervous system far more rapidly and violently than either*”. Such rapid effects are not at all what I have observed throughout the years participating in *yajé* and *ayahuasca* rituals, where usually between half and hour and an hour pass before feeling the effects. Could it be that the type of diet held has such a direct diverse effect among indigenous populations and more westernized participants? More studies are needed to elucidate this apparent anomaly.

houses, received the following explanation: “We see these things when we drink *yajé*”. A subsequent study of the patterns revealed that certain motifs had meaning, almost always phrased in terms of fertility symbolism. Reichel-Dolmatoff compared Tukano designs with phosphenes (light patterns originated within the eye and the brain) isolated by Knoll[6,29]. “The similarities are such [he concludes] that there can be no doubt left: The decorative patterns of the Tukano are almost whole derived from drug-induced inner light experiences”. The geometrical patterns would only represent the initial stage of neurophysiologic stimulation. A second stage would be marked with the onset of figurative representations, in turn culturally modeled.

Among the Shipibo of the Ucayali River (Peru), the extraordinary designs that cover the ceramics, skirts, and previously other material objects of this culture, are inspired by *nishi-pai*. According to Gebhart-Sayer the shaman ascends to higher realms where he listens the melodies from the spirits and sing with them. Those songs have a visual manifestation that the women transmit in their art[30]. The Shipibo believe their bodies are covered by invisible designs. Illness is the disruption of the patterns, and the songs of the shaman restore their order and beauty. Healing is thus an aesthetic endeavor. While doing fieldwork in Santa Rosa de Pirococha, a Shipibo settlement by the Ucayali River, I asked Don Basilio Gordon, a shaman, about the plants he used to heal his patients. He said that it is enough to know the songs of the plants to be able to cure. The plants are needed only if you do not know their song.

2.11. Promotion of social order

Caapi and other sacred plants are considered among some indigenous groups as promoting social order. Brown[31,32] referring to the Aguaruna of Peru writes: “Adults sometimes remark that their children control more knowledge (e.g., the ability to read and write) because they attend school, but that they are often “stupid” (*anentáimchau*, literally “without thought”) because they no longer undergo the rigorous training linked to the use of hallucinogenic plants. This lack of thought manifests itself in such antisocial behavior as fighting with close kinsmen, attempting suicide, maintaining an unseemly interest in sexual adventures, and otherwise affronting traditional morality”. For the Aguaruna, it is not enough simply to know facts; one must learn to think well by bringing together the body, the emotions, and the intellect in the epiphanous context of the visionary experience.

According to Reichel-Dolmatoff *yajé* gave the Tukano their life, the rules by which they should live, their way of life. Karsten reports that among the

Shuar “both men and women are, by drinking *natéma*, made strong and clever for their different occupations and duties, the men for hunting, fishing, war, etc., the latter for agriculture, for the education of the children, for the care of the domestic animals, and for other domestic work incumbent on them”[20]. For the Siona *yagé* is central to their notions of well being and health, as well as their acquisition of knowledge[26].

3. Part II: Mestizo use of ayahuasca

3.1. The use of ayahuasca among the mestizo population of the Peruvian Amazon

Although there has been missionary activity in the Amazon region since the middle of the 16th century, the greatest and most devastating western influence in this region took place during the so-called rubber booms in 1879-1912 and 1945-47. The great demand of rubber caused by the industrial revolution created chaos among indigenous populations, many subjected to slavery and moved around to other Amazonian regions. There was also a period of intense biological and cultural mixture of westerners and the indigenous people. Practitioners appeared conducting healing rituals in which indigenous Amazonian ideas and the use of ayahuasca (and other plants) were integrated with Andean and Christian beliefs. This is the so-called *vegetalismo* phenomenon, from *vegetal*, the name given to plants with extraordinary properties, such as ayahuasca. I dedicated several years to the study of this tradition in the period between 1981-1988, and was the subject of my doctoral dissertation and several other publications[33,34].

My main informant and friend was Don Emilio Andrade Gómez, a mestizo *vegetalista* who lived 12 kilometers from Iquitos, by the road that now connects the city with Nauta, in the south, where he received patients Tuesdays and Fridays, at times (not always) drinking ayahuasca. I became a sort of apprentice, as well as that of Don José Coral, a *vegetalista* friend of his, who lived a few kilometers away. This took place before the current flux of westerners arriving to Iquitos in search for ayahuasca. As an educated Westerner I think I was alone in this quest at that time. As a mestizo (I was born in the Colombian Amazon, of non-Amazonian parents) I was simply part of a tradition, now at least one hundred years old. Don Emilio took ayahuasca for the first time in 1937 at the age of fourteen. His teacher was Don Juan Hidalgo Nina, also a mestizo, who in turn had Don José Benavides Sánchez as his teacher.

3.2. Plant teachers

For me the greatest discovery was the concept of plant-teachers. Don Emilio considered ayahuasca as one of many *doctores*, plant-teachers, plants that give knowledge⁶. He called these plants *doctores*: ojé (*Ficus anthelmintica*), toé (*Brugmansia* sp.), catahua (*Hura crepitans*), clavohuasca (*Tynanthus parunensis*), ayahúman (*Courupitas guianensis*), and many others. Don Emilio called them collectively as *vegetales*, hence the name *vegetalista*, which refers to a person that has learned from those plants. Within *vegetalistas* there are specialists in one or other plant, for example *tabaqueros*, *toeros*. There are also *paleros* (specialists in certain large trees, or *palos*), who have great reputation, or *perfumeros*, specialized in the use of perfumes from certain plants in order to heal. The bark or other plant of these trees may be added to the ayahuasca when it is being prepared, or may be taken also independently. Don Emilio use to say that he was only an “*ayahuasquerito*”, a little ayahuasquero, but there were others with greater powers, those who learned from big trees in which ayahuasca may climb and grow. These plants can also be taken for medicinal purposes, or solely in order to make the body strong, not necessarily to learn from them.

3.3. Initiation

In order to learn from the plants it is necessary to *diatar* (maintain a certain diet). This term implies not only food restrictions, but also sexual segregation (if possible isolation, or at least not having sexual intercourse) and certain ritual procedures. The initiate must abstain salt, sugar, fruits and fish containing much fat. Basically it should be manioc or rice, plantains, and just a little fish from time to time. It is a process of purification that opens the contact to the spirits of the plants. Vomiting is conceived as helping the purification process. The shaman is there first of all to protect the initiate. Sometimes, as a result from an illness, a person may go into diet and isolation by himself (I use here the masculine, but there are also cases of female practitioners), and in the process becoming a healer.

It is often said that the initiate is first tempted by spirits to receive certain powers. If taken, the initiate may become a *brujo*, a sorcerer. If the initiate refuse those powers and continue his training then he becomes a healer.

⁶ The idea of ayahuasca as a teacher is present in Brazil among practitioners of Santo Daime, “o professor dos professores”, “o mestre de todos os ensinós”[35].

3.4. Icaros, the magic phlegm and concepts of illness

In this tradition the essence of power and wisdom is in the *icaros*, the songs the spirits of the plants (or other spirits) teach the initiate, either when taking ayahuasca or other plants, or in the dreams that follow such ingestion. *Icaros* may have various functions. They may be invoked for protection, to call certain spirits, to heal particular illnesses, to travel to specific places, to give strength or to diminish the effects of ayahuasca, etc. A *vegetalista* may possess dozens of *icaros*, their complexity often being an indication of his power. *Icaros* are an essential part of the work of a *vegetalista*. An *icaro* is always sung over the ayahuasca brew before taking it, and ceremonies basically consist of a *vegetalista* singing during several hours his *icaros*, often accompanied by a *schacapa*, a bundle made of *Pariana* leaves, a tradition found among indigenous practitioners such as the Kamsá or Ingano in Colombia.

Icaros must often be learned directly from the plants, particularly during the initiation period or when the *vegetalista* decides to spend time in isolation to replenish his healing energies. They may be also learned from other practitioners. It is said that *icaros* may leave a person all-together to go into another one. They can be stolen from another person, or being forgotten due to some sort of sorcery from the part of envious practitioners.

During initiation the neophyte may receive from his teacher (or from plant-spirits) a magic phlegm called *mariri*, *yausa* or *yachay*. This is said to be planted like a tree, growing inside the initiated to extract the illness from his patients, which may be caused either by the intrusion of a pathogenic object, often called a *virote*, the name given to the arrows Spaniards shot with their crossbows, in an area where powder often got wet making fire weapons unusable. It is also possible to harvest those *virotas* and keep them in the phlegm for later use as a weapon. Sucking and blowing are essential elements in a healing session, especially certain areas of the body such as the *boca del estómago* (solar plexus), the top of the head, the temples, and along arms and legs. As in other traditions, hiding an insect or a small thorn in the mouth and pretending it was extracted from the body of a patient, is part of the tools of the *vegetalistas* to elicit a psychosomatic response. Some practitioners may use certain stones, called *encantos*, to help in the extraction of illness.

Illness may be also conceived as the result of soul loss due to fright or sorcery. Since illness is conceived as caused by an animate agent – human or supernatural –, healing is often associated with defense and counter-attack. *Vegetalistas* are particularly vulnerable during ayahuasca sessions. Stories about practitioners being wounded or killed during such sessions abound. Protection is then necessary. Through certain songs – as is also the case with

the Shipibo of the Ucayali River – the person may be covered by an *arkana*, described as some sort of metal shirt covering the body of a person, thus protecting her from pathogenic darts.

It is also normal, especially in difficult situations, to invoke Jesus and Mary, angels with swords, animal protectors (Amazonian as well as lions, elephants, and the like), soldiers with guns, war airplanes, flying saucers, etc. Whenever a new symbol of power emerges, it is easily incorporated in this highly syncretic tradition.

The concept of illness may apply also to bad luck in business or in love, and special ceremonies are held to treat those situations that include the use of magnets (to make the person attractive), perfumes and certain plants. There are also ideas found in other parts of the Americas. For example certain winds or *vientos*, or whirlpools may cause the illness. Unexpected encounters with spirits may cause fevers and even death. In all situations *icaros* are essential in the healing process as well as protecting the person from further attacks.

3.5. Spirits

Seeing beings seems to be a universal feature of ayahuasca intake. Spirits may adopt any shape, as indigenous people or as people from any part of the world. They may be also animal, therianthropes, or completely alien and believed to be of extraterrestrial origin or living in other realms within our world, in the forest, the bottom of lakes or rivers, the interior of the Earth, etc. Their dresses may seem royal, ancient or futuristic, luminous, huge or small, benevolent or at times threatening, fully visible or composed of appearing and disappearing lights of any colors. Often they communicate telepathically, with gestures or with words (less common). Obviously, their appearance depends on human culture.

The plasticity of Peruvian *vegetalismo* can be seen in the adoption of modern technology. They may communicate with the language of radio, like described by Chevalier[36], or in “computer language” as reported by Beyer[1]. Don Emilio told me that the first time he took ayahuasca he saw luxurious cars, trains, boats, helicopters and peoples of all kinds. Later he saw “doctores” who came from all over the world: “They all came, French, English, Americans, Chinese, Japanese, Spanish, Chileans, these doctors were from all places”. The adoption of modern technology has been observed by Chaumeil[37] in contemporary Yagua medical practices. He describes innovations like telephones, parabolic antennae, syringes etc. as being used by nowadays Yagua “shamans” for communication with spirits, for spiritual operations.

Particular spirits are believed to live in the surrounding forests, lakes and rivers. This was perhaps even more when I was conducting my fieldwork than today, due to the continued deforestation and urbanization process. The *Chullachaqui* (uneven foot in Quechua) may adopt the shape of a relative or a friend to lure a person walking alone into his forest realm, never to return. If this spirit is offended he may produce dangerous storms or make people sick. The *Chullachaqui* is believed to have as its dwelling in what they call *supay chacras*, areas where only *Duroia hirsute* grows, a small tree that through its chemistry prevents the growth of other plants nearby. The water realm is especially powerful. Mermaids may seduce men or pink dolphins may seduce women to take them into their world. Two giant serpents preside those two realms: the *Sachamama* or mother of the forest, and the *Yakumama* or mother of the water. They are ambivalent with respect of human beings, but *vegetalistas* may establish a rapport with them for the benefit of their patients.

4. A comment on ayahuasca tourism

I would like to end with a brief commentary on the phenomenon currently known as “ayahuasca tourism”, and which is taking place first of all in the Peruvian Amazon, especially around Iquitos. It is an occurrence with international repercussions, given the number of practitioners of many nationalities emerging from this tradition that are conducting ceremonies in non-Amazonian countries.

My knowledge of this phenomenon is superficial. In July 2005 I was invited as a speaker to a conference in Iquitos, a city I had not visited for many years. Having done fieldwork (and experiential training) in that area in the early eighties, I was nearly shocked to see the buses full of people from all over the world going to participate in ceremonies with this or that indigenous or mestizo practitioner. Obviously much had happened during this twenty-five year gap in which I had been absent.

New studies have emerged, most notably those of Dobkin de Rios, who has taken what is in my view an extreme position. Given that DMT, the visionary agent present in both *Psychotria viridis* and *Diplopterys cabrerana* is an illegal substance, emanating from 1970 Control Substances Act of the United States of America, she considers this phenomenon as a manifestation of international drug trafficking. People arriving to Iquitos are empty souls looking for a high, while most practitioners meeting the demand simply charlatans looking for profit and taking advantage of female participants[38,39]. I see this phenomenon in a different way, rather as a

sort of continuation of the vegetalismo tradition turned international, with positive as well as negative aspects. It is not my intention to examine here such a complex phenomenon. I rather prefer to point out to a recent study, which I find most welcomed. I am referring to Evgenia Fotiou's doctoral dissertation about ayahuasca tourism in Iquitos. She writes:

“Through my data I show that the western interest in ayahuasca is much more than a pretext for drug use but rather is often perceived as a pilgrimage and should be looked at in the context of a new paradigm, or rather a shift in the discourse about plant hallucinogens, a discourse that tackles them as sacraments, in sharp contrast to chemical drugs. Ritual in this context is instrumental but not as something that reproduces social structure; rather it fosters self transformation while at the same time challenging the participants' very cultural constructs and basic assumptions about the world”[40].

Fotiau sees ayahuasca tourism as a two-way avenue in which indigenous and mestizo ayahuasqueros absorb –once more- certain western ideas and adapt their practices to the expectations of non-Amazonians, while people from other countries adopt indigenous ideas about intelligent plant spirits and the like. This is not at all something new. As we have seen earlier, exchange of symbols and power metaphors have been an essential part of Amazonian shamanism.

We are now in a phase beyond ayahuasca tourism. Ayahuasca is becoming –in a modest scale, of course- a global phenomenon, with practitioners coming from various traditions, such as the Brazilian religious organizations, and with the absorption of a number of therapeutic techniques. There is an increasing number of people who for one reason or another decided to conduct rituals in their own settings.

It is my impression, corroborated by a study by Winkelman[41] that more often than not most of the people taking ayahuasca now-a-days do it with the intention of finding guidance from within, for personal growth, or in search of spiritual experiences. Claudio Naranjo observed in 1967 when doing experiments with harmaline, an alkaloid mostly found in trace amounts, but also present in significant amounts in certain brews, pointed out that “concern with religious and philosophical questions is frequent”[42]. Shanon[43] has pointed out similar ideas regarding ayahuasca intake among Westerners, a position I also ratify. More so, I believe ayahuasca/yagé, as well as other sacred plant preparations from the Americas and beyond, have extraordinary potential in the study of consciousness and as cognitive tools. More studies should be conducted, as well as public discussions as how to deal, in a positive way, with one of the greatest discoveries of Amazonian people.

References

1. Beyer, S.V. 2009, *Singing to the Plants. A Guide to Mestizo Shamanism in the Upper Amazon*, University of New Mexico Press, Albuquerque.
2. Pané, R. 1944, In: *Historia del Almirante de las Indias Don Cristóbal Colón – Colección de fuentes para la Historia de América*, F. Colón, Editorial Bakel, Buenos Aires, 163.
3. Cárdenas, J. 1591, *Primera Parte des Segretos Maravillosos de las Indias*, México.
4. Schultes, R.E., and Hofmann, A. 1979, *Plants of the Gods – Origins of Hallucinogenic Use*, Alfred van der Marck Editions, New York.
5. Chantre y Herrera, J. 1901, *Historia de las Misiones de la Compañía de Jesús en el Marañón español – 1637-1767*, Madrid.
6. Reichel-Dolmatoff, G. 1975, *The Shaman and The Jaguar – A Study of Narcotic Drugs Among the Indians of Colombia*, Temple University Press, Philadelphia.
7. Langdon, J.E. 1986, *Las clasificaciones del yajé dentro del grupo Siona: etnobotánica, etnoquímica e historia*. *América Indígena*, vol. XLVI.
8. Ott, J. 1993, *Pharmacotheon – Entheogenic Drugs, their Plant Sources and History*, Natural Products CO., Kennevick.
9. Ott, J. 1994, *Ayahuasca Analogues – Pangaen Entheogens*, Natural Products CO., Kennevick.
10. Luna, L.E. 1986, *Vegetalismo – Shamanism Among the Mestizo Population of the Peruvian Amazon*, Almqvist & Wiksell International, Stockholm.
11. Brabec de Mori, B. 2011, In: *The globalization of the uses of Ayahuasca*, H. Jungaberle and B.C. Labate, (Eds.), Göttingen-Bern-Wien-Oxford, Hogrefe.
12. Rose, I.S., and Langdon, E.J. 2010, *Diálogos (neo)xamânicos: encuentros entre os Guarani e a ayahuasca*. *Revista Tellus*, 18, 83.
13. Rátsch, C. 2005, *The Encyclopedia of Psychoactive Plants – Ethnopharmacology and Its Applications*, Park Street Press, Rochester.
14. Schultes, R.E. 1982., *J. Psychoactive Drugs*, 14, 205.
15. Luna, L.E., and White, S. 2000, *Ayahuasca Reader – Encounters with the Amazon's Sacred Brew*, Synergetic Press, Santa Fe.
16. Lagrou, E. 2000, In: *Ayahuasca Reader – Encounters with the Amazon's Sacred Vine*, L.E. Luna and S.F. White, Synergetic Press, Santa Fe.
17. Balé, W., and Erickson, C.L. (Eds.). 2005, *Time and Complexity in Historical Ecology: Studies in the Neotropical Lowlands*, Columbia University Press, New York.
18. Erickson, C.L. 2005, In: *Time and Complexity in Historical Ecology: Studies in the Neotropical Lowlands*, W. Balé and C.L. Erickson (Eds.), Columbia University Press, New York.
19. Carvajal, G. 1986 [written 1542], In: *La aventura del Amazonas*, A. Carvajal and A. de Rojas (Eds.), Ed. de Rafael Díaz, Madrid.
20. Karsten, R. 1935, *The Headhunters of Western Amazonas – The Life and Culture of the Jibaro Indians of Eastern Ecuador and Peru*. *Societas Scientiarum Fennica. Commentationes Humanarum Litterarum VII. 1*. Helsinki.
21. Goldman, I. 1963, *The Cubeo, Indians of Northwest Amazon*. The University of Illinois Press, Urbana.

22. Harner, M.J. 1972, *The Jívaro: People of the Sacred Waterfalls*, University of California Press, Berkeley.
23. Harner, M.J. 1980, *The Way of the Shaman – A Guide to Power and Healing*, Bantam Books, Toronto, New York.
24. Winkelman, M. 2010, *Shamanism: A Biopsychosocial Paradigm of Consciousness and Healing*, ABC-CLIO Publishers, Santa Barbara.
25. Langdon, J. 1992, In: *Portals of Power: Shamanism in South America*, J. Langdon and G. Baer (Eds.), University of New Mexico Press, Albuquerque.
26. Langdon, J.E. 1979, In: *Spirits, Shamans and Stars*, D. Browman and R.A. Schwartz (Eds.), Mouton Publishers.
27. Calavia, O. 2000, In: *Ayahuasca Reader – Encounters with the Amazon's Sacred Brew*, L.E. Luna and S. White (Eds.), Synergetic Press, Santa Fe.
28. Calella, P. 1935, *Boletín de Estudios Históricos*, 73-4, 49.
29. Reichel-Dolmatoff, G. 1978, *Beyond the Milky Way*, UCLA Latin American Center, Los Angeles.
30. Gebhart-Sayer, A. 1986, *Amazonía Indígena*, 46.
31. Brown, M.F. 1978, In: *The Nature and Status of Ethnobotany*, R.I. Ford (Ed.), Michigan, Museum of Anthropology, University of Michigan. *Anthropological Papers No. 67*, 1, 118.
32. Brown, M.F. 1985, *Tsewa's Gift: Magic and Meaning in an Amazonian Society*, Smithsonian Institution Press, Washington.
33. Luna, L.E. 1984, *J. Ethnopharmacol.*, 11, 135.
34. Luna, L.E., and Amaringo, P.C. 1991, *Ayahuasca Visions: The Religious Iconography of a Peruvian Shaman*, North Atlantic Books, Berkeley.
35. Albuquerque, M.B. 2011, *Epistemologia e saberes da ayahuasca*, Eduepa, Belém.
36. Chevalier, J.M. 1982, *Civilization and the Stolen Gift: Capital, Kin, and Cult in Eastern Peru*, University of Toronto Press.
37. Chaumei, J.P. 1983, *Voir, Savoir, Pouvoir – Le chamanisme chez les Yagua du Nord-Est peruvien*. Éditions de l'École des Hautes Études en Sciences Sociales, Paris.
38. Dobkin de Rios, M. 2006, *Mea Culpa: Drug Tourism and the Anthropologist's Responsibility*, *Anthropology News*.
39. Dobkin de Rios, M., and Rumrill, R. 2008, *A Hallucinogenic Tea, Laced with Controversy – Ayahuasca in the Amazon and the United States*, Praeger, Westport Connecticut and London.
40. Fotiou, E. 2010, *From medicine men to day trippers: Shamanic tourism in Iquitos, Peru*. Doctoral dissertation. Dept. of Anthropology, University of Wisconsin-Madison.
41. Winkelman, M. 2005, *J. Psychoactive Drugs*, 37, 209.
42. Naranjo, C. 1967, In: *Ethnopharmacological Search for Psychoactive Drugs*, D.H. Efron (Ed.), Public Health Service Public. No. 1645, Washington.
43. Shanon, B. 2002, *The Antipodes of the Mind – Charting the Phenomenology of the Ayahuasca Experience*, Oxford University Press.

5 INTRODUCTION Ayahuasca is a psychoactive plant brew that has been used for healing and divination throughout the Amazon regions of South America. Ayahuasca shamanism has long been of interest for anthropologists seeking ethnographic insight into the rituals and beliefs of those once considered "primitive people". The final section of the chapter is an overview of Narby's (1998) 11 anthropological hypothesis, which interrelates scientific and indigenous knowledge. Central to the mestizo and indigenous use of Ayahuasca, is the belief that there is an "underlying spiritual aspect to everything that exists" (Luna 2011, p. 8). Mestizo and indigenous Ayahuasca practitioners are commonly known as Vegetalistas in the upper Amazon. Ayahuasca tea is a traditional spirit medicine used in healing ceremonies among indigenous peoples in and near the Amazon. It is an entheogenic or psychotropic (mind altering) beverage typically made from the *Banisteriopsis* cap vine, often in combination with other plants. Ayahuasca tea is now being sought out by people around the world for the treatment of a variety of medical conditions including cancer. Ayahuasca is mostly prohibited in the U.S., due to the Drug Enforcement Administration (DEA) which has labeled one of ayahuasca's constituents (DMT) a Schedule 1 drug. Indigenous and mestizo use of ayahuasca. An overview. The Internationalization of Ayahuasca. Looking for more life-saving content? Indigenous traditions consider the *B. caapi* vine to be the main ingredient of ayahuasca and name the brew after the native species (eg, ayahuasca, natem, yagã, nixi pae). In research studies, it is important to keep in mind the potential diversity of components of ayahuasca (Brierley & Davidson, 2012), since it has come from a number of different plants and cultivars collected at different times. Compared to other psychedelics, the pharmacology of ayahuasca is particularly complex. Ayahuasca is used as a traditional spiritual medicine in ceremonies among the Indigenous peoples of Amazonian Peru, many of whom say that they received the instructions in its use directly from the plants and plant spirits themselves. Ayahuasca was first described outside of Indigenous communities in the early 1950s by Harvard ethnobotanist Richard Evans Schultes, who became aware of the Native communities who use it for divinatory and healing purposes. Safety and side effects of ayahuasca in humans--an overview focusing on developmental toxicology. -- <https://www.ncbi.nlm.nih.gov/pubmed/23662333>. Health status of ayahuasca users. - <https://www.ncbi.nlm.nih.gov/pubmed/22761152>. Pic-Taylor et al (2015). The region of traditional Ayahuasca use is the Upper Amazon, that is, the western part of the Amazon Basin, and the western part of the Guiana Shield. (The Guiana Shield, which encompasses much of Colombia, Venezuela, Guyana, Surinam, and French Guiana, is not technically part of the Amazon Basin, as its rivers do not drain to the Amazon River, but ecologically and culturally it is considered as part of the Amazon rainforest, and we will hereinafter use the terminology that includes the Guiana Shield as part of the "Amazon.") Close to 100% of indigenous ethnic groups here traditionally use Ayahuasca (and this also contains the centers of mestizo traditional usage, Iquitos and Pucallpa in Peru).