

# Interspecies communication in the Western Amazon: Music as a form of conversation between plants and people

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## Abstract

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Among the indigenous peoples of the Western Amazon, where animistic cosmologies are the norm, relationships between human and other-than-human are mediated by various forms of communication. In this paper, I examine a type of shamanic song called “*icaró*”, found in Western Amazonian indigenous and mestizo communities. Using examples from the ethnographic literature, I discuss the acquisition and use of these shamanic songs to communicate with spirits and to effect change in the material world. Then, using the theory of phytosemiotics in conjunction with new research into plant communication, I show how the process of shamanic apprenticeship and the acquisition of *icaros* is a form of inter-species communication in which the apprentice intercepts and interprets the phytochemical signals inherent in plant communicative processes.

**Keywords:** interspecies communication, shamanism, Amazon, *icaros*, shamanic apprenticeship, ayahuasca

## Introduction

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In the Western Amazon, many indigenous and mestizo communities practice a form of shamanism that, due to its use of the psychoactive brew ayahuasca, has captured the world’s attention. However, the shamanism of the Western Amazon is a complex ritual and ethnomedical practice that uses not only psychoactive plants but also non-psychoactive plants, diet, and especially music as central elements of the shamanic process. In this paper I explore a type of shamanic music found in indigenous and mestizo communities of the Western Amazon, *icaros*. The acquisition of *icaros* through shamanic apprenticeship and their deployment in a ritual setting comprise a

form of interspecies communication, which in a broader sense is characteristic of the animistic cosmologies that have traditionally been the hallmark of indigenous Amazonian cultures. Here I review some of the ethnographic literature discussing the *icaros*, and I conclude by providing a theoretical framework in which this form of interspecies communication may be better understood by the Western scientific mind.

The ethnographic literature on the indigenous cultures of the Western Amazon recognizes the universal importance of music in shamanism. The musical form that is most often associated with Amazonian shamanism, usually glossed as “ayahuasca shamanism”, are those songs known as *icaros*. Luis Eduardo Luna writes that the term “*icaro*” comes “from the Quichua verb ‘*ikaray*’, which means ‘to blow smoke’ in order to heal” (Luna, 1992: 233). The ethnomusicologist Bernd Brabec de Mori (2011), however, writes that his Kukama (Cocama) advisers say that it is from the word *ikarutsu*, to sing, and that any song in Kukama is *ikara*. Among other groups, there are different kinds of music with various names and uses, but even among these groups, those songs associated with ayahuasca shamanism are still called *icaros* (Brabec de Mori, 2011).

Like other forms of music found in the Amazon (Brabec de Mori 2011; Riol, 2009; Rubenstein, 2012; Uzendowski, 2005), the singing of *icaros* is believed to have real effects in the material world. Many practitioners claim that *icaros* are the very embodiment of the healing properties of the plants with which they are associated (Luna & Amaringo, 1999), and that a shaman’s power is directly correlated with his knowledge of *icaros* (Luna, 1992). Luna (1984: 127) gives some examples of how the *icaros* are acquired and used:

The spirits of the plants will appear [to the initiate] in his dreams to teach him ‘*icaros*’, magic songs, with the help of which he can perform different activities, such as curing specific diseases, reinforcing the action of medicinal plants, calling special guardian spirits to assist him, attracting game or fish, causing a rival shaman to fall asleep, or attracting the attention or love of a woman.

Stephan Beyer writes that the *icaros* have three purposes: “to call spirits, to ‘cure’ objects and endow them with magical power, and to modulate the visions induced by ayahuasca” (Beyer, 2009: 66). Similarly, Norm Whitten, describing a healing session among the Runa of Ecuador, notes the use of song to communicate directly with the spirits, with the shaman “keeping the words bottled up in his throat, so that only the *supais* [spirits] can hear it” (Whitten, 1976: 157).

Likewise, some indigenous groups of the Western Amazon have a class of songs called *anent*, which like the *icaros*, are believed to have efficacy in the world of

human, plant and animal relationships. Riol (2009) writes that these secretive songs, of mythical origin and passed down along family and gender lines, are used to solve practical problems of everyday life.

These supplications can be addressed to any entity possessing a *wakán* [soul], meaning it can be convinced, seduced or cajoled via the highly symbolic character of the songs. These enchantments can therefore be directed to human beings, supernatural entities, and even certain categories of animals or plants (Riol, 2009: 25).

While *anen* may be regarded as shamanic in nature, due to the singer's ability to create changes in their world (Uzendowski, 2005), they remain primarily a tool of human agency. The *icaros*, however, introduce a different element: the agency of other-than-human beings. Luna shows that the *icaros* are a product of the two-way communication between shaman and plant-spirit:

It seems the preeminent mode of communication between the shaman and the spirits is through magic chants or melodies. The spirits often present themselves to the shaman while singing or whistling a particular *icaros*. When the shaman learns these *icaros*, he can use them to call on the spirits when he needs them. By singing or whistling the *icaros* of the plant teachers, the shaman invites the spirits to present themselves. Also, the guardian spirits, which may be anthropomorphic or theriomorphic, that all informants claim to possess are called through *icaros* (Luna, 1992: 240-1).

Luna's work highlights that aspect of the *icaros* that is of particular interest, namely, the mode of acquisition and transmission of these songs and accompanying information. Anthropologists report a widespread belief that these songs may be acquired directly from the spirits of certain plants, animals or other entities during dreams or in trance during the course of the shaman's apprenticeship and ongoing career (Beyer, 2009; Luna, 1992; Rittner, 2007). Jauregui (2011) found agreement on this subject among the participants in his study, which took place in the Ucayali Region near Pucallpa, Peru, and included healers of Shipibo-Conibo, Ashaninka, Matsigenka and mestizo identity. "According to the participants' beliefs", he writes, "knowledge is not transmitted orally by healers but through the mothers, spirits or entities that inhabit the natural world. Therefore, the knowledge transmission is of a trans-verbal nature as it occurs via dreams, visions and *icaros*" (Jauregui, 2011: 750).

### **Direct communication with plants?**

This question of direct communication with plants is of interest to a number of scholars of various persuasions. Tupper (2002), an education specialist, and Wright

(2009), a religionist, have both written on the subject of “teacher plants” among various groups, and Jauregui (2011) and Luna (1984, 1992) have both identified the concept of “teacher plants”, also called “*plantas con madres*” (plants with mothers) or “*doctores*”, as one of the central elements in the complex practice of ayahuasca shamanism.

The notion of “teacher plants” requires further explication, especially with regards to the *icaros*. The shaman’s apprenticeship centers on the practice of the *dieta*, whereby he or she will spend periods of days, even weeks, isolated in a small shelter in the jungle, removed from human interaction except for the person bringing food or medicine. The food is very plain, and a number of proscriptions severely restrict the apprentice’s activity. Each *dieta* is focused on a specific teacher plant, and the ingestion of this plant preparation may be alternated with or combined with the use of ayahuasca, which facilitates communication with other plants. The *dieta*, at its purest, is a process of physical and spiritual purification, rest and meditation. Stephan Beyer (2009: 60) explains, “The goal of the diet is to maintain an ongoing connection and dialogue with the plant; to allow the plant to interact with the body, often in subtle ways, and to wait for its spirit to appear, as the spirit wishes, to teach and give counsel”. What exactly does the plant teach the apprentice? A song. “That is how the plants teach you – sitting quietly in the jungle, with no place to go, listening for their song”, he writes (Beyer 2009: 56).

Indeed, among most groups of the Western Amazon, it is through the *dieta* that one learns how to heal, and the way to heal is through the *icaros*. Luna writes that during the *dieta*:

The spirits, or *mothers*, of the plants present themselves to the initiated, either during the visions they elicit or during dreams, and teach the shamans how to diagnose and cure certain illnesses, how to dominate evil spirits of the earth, water or air domains, how to travel through time and space, and how to perform other shamanic tasks... These powers are acquired mainly through the memorization of magic melodies or songs, called *icaros*, which the future *vegetalistas* learn from the spirits of plants, animals, stones, lakes and so forth... the number and quality of his *icaros* are the best gauge of the knowledge and power of a shaman (Luna, 1992: 232-3).

Each plant has its own song, and if the apprentice has prepared him or herself well, the spirit of the plant, often conceptualized as its “mother”, will present herself to the apprentice and teach him her *icaro*.

In his study on “*plantas con madres*”, Jauregui finds that an important step in the shaman’s apprenticeship focuses on improving the student’s sensitivity and intuition, and particularly his or her ability to listen, to learn, and even to sing the *icaros* of the

plants with which he or she will be studying.

During this phase, the initiates are also obliged to develop the capacity to “listen”, a fundamental faculty that will help them learn one of the essential therapeutic resources within the healers’ heritage, the *ikaros* or sacred shamanic melodies (Jauregui, 2011: 747).

One of the plants administered during this phase of the shaman’s apprenticeship is *chiric sanango* (*Brunfelsia grandiflora*), said to aid in dreaming. A non-psychoactive *Chenopodium* species (related to common food grains such as quinoa and amaranth) is used specifically to improve the memory (Jauregui, 2011). Certain *Cyperus*, or sedge, species are used to improve singing, an application that Glenn Shepard also reports among the Matsigenka (Shepard, 2011). This phase of the apprenticeship is so important precisely because of the importance of *icaros* to the shaman’s ability to heal:

Due to the fundamental role of the aforementioned *ikaros* within the practice of traditional medicine, the apprentices must learn to be more receptive, listen with greater attention, and soften their voice in order to achieve the correct vibrations that permit them to sing the *ikaros* properly. They must also learn the art of seduction, a skill that healers use with exquisite skill due to their good command and knowledge of psychological and cultural parameters (Jauregui, 2011: 748).

While purgatives and purifiers, including a decoction of the *Banisteriopsis caapi* vine by itself, dominate the first phase of the shaman’s apprenticeship, it is during this second phase, the improvement of the apprentice’s sensory capacities and learning abilities, that the well-known form of ayahuasca, the *Banisteriopsis/Psychotria* mixture, becomes an integral part of the process. Tertiary admixtures, Jauregui’s “*plantas con madres*”, may be included in the ayahuasca tea as well, and the ayahuasca acts as a sort of mediator, allowing apprentices “to have clearer visions that will facilitate their communication with the plant ‘mothers’” (Jauregui, 2011: 747).

Indeed, ayahuasca is often considered the master teacher, because its use facilitates knowledge of the healing effects of a range of other plants and substances. Whitten, in his ethnography of the Canelos Quichua, indicates that the role of ayahuasca is to facilitate communication with the spirits of other plants:

Ayahuasca mama, the serpentine vine spirit, and the “orphan female” spirit Yaji allow shamans and powerful shamans to maneuver in the domain of spirits. Where datura allows any Runa to collapse space and time and see *all* the spirits, Ayahuasca mama, herself a spirit of the huanduj, provides the necessary linkage to spirits which have acquired human souls (Whitten, 1976: 153).

Highpine (2012) reiterates Whitten's and Jauregui's findings. "Among the Napo Runa", she writes, "one of Ayahuasca's vital roles is teaching humans about *other* plants besides herself... She taught people the practice of *sasina* [*dieta*] so that they could use it to learn to communicate with other plants, not only herself" (Highpine, 2012: 11).

## Music and song

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The use of music in magico-religious contexts in the Amazon has been well documented and analyzed throughout the Amazon, from some of the earliest researchers (Katz & Dobkin de Rios, 1971) to the most recent (Beyer, 2009). Hill (2009: 104) cites a number of authors to support his conclusion that the auditory capacity is a privileged sensory mode among the indigenous peoples of the Amazon:

More generally, sound production and auditory perception are regarded as the main sense modes for mediating between humans, animals, and spirits throughout Lowland South America (Basso, 1985; Beaudet, 1997; Chaumeil, 1993; Gebhart-Sayer, 1985; Hill, 1993; Hill & Chaumeil, 2011; Menezes Bastos, 1995; Seeger, 1987).

Hill's notion of "materializing the occult" (2009: 103) leads toward Brabec de Mori's conclusion (2013) that the spirits themselves are "sonic beings", summoned into existence by the actions of the shaman during a curing ceremony. Uzendowski (2005), addressing women's music, asserts that the power of shamanic song is in mimesis and in the perspectival shifts that it enables. Dobkin de Rios and Katz (1975) provide a unique theory in which shamanic music provides a sort of metrical structure, a "jungle gym" for the consciousness, which shamans use to restructure their participants' mental states toward culturally appropriate ends.

Few authors, however, address the agency of the plants or the plant spirits in this process, as might be warranted by the wealth of ethnography that discusses teacher plants and the transmission of songs and knowledge experienced by shamans during the *dieta*. Swanson (2009) addresses the *perception* of plant agency by Runa, in which songs addressed to food and medicinal plants are meant to seduce, pacify, resist, or otherwise engage productively in exchange with a potentially dangerous plant *supai*, or spirit. Rubinstein suggests that song is the language of the spirits, but he dismisses the impenetrability of the language as an attempt by the Shuar to create "a space in the mundane world where the truth of the imagination may abide" (Rubenstein, 2012). Such explanations, relying as they do on subjectivity, symbolism and the solitary imagination, don't explain why one person's inner experience, as expressed in particular forms of song, should be so effective in producing change in

the material world, as both *anent* and *icaros* are believed to do.

Given the fact that human consciousness is so notoriously difficult to measure, it may not be possible to reconcile the Western Amazonian belief in plant agency and interspecies communication with a Western scientific point of view. However, I would like to provide a new way of looking at the subject, using emerging research about the nature of plant communication as a starting point.

## **Plant agency**

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Scientific studies have shown that plants do communicate with each other, recognize self and kin, and alter their growth form or physiology appropriately so as to ensure the greatest chance of success for themselves and their genetic relatives (Murphy & Dudley, 2009) or to defend themselves from predators (Karban & Shiojiri, 2009). Plants are capable of altering their environment, and influencing the behavior of both predators and allies, through the creation and release of secondary phytochemical compounds (Buhner, 2002). These secondary compounds, the products of the sophisticated processes of phytochemistry, are what generate the medicinal, toxic, and hallucinatory effects of plant medicines.

Emerging research such as this paints a new scientific picture of plants as agentic beings, perhaps even endowed with a form of consciousness, ideas which would have previously been unimaginable, at least to the scientifically minded. Nevertheless, the question remains how to characterize plant-human interaction beyond the human manipulation of a plant's phytochemical services. A growing body of linguistic theory known as biosemiosis, and in particular the branches known as phytosemiosis and ecosemiosis, provide new ways of thinking about these relationships that more fully incorporate the indigenous understanding of plant agency and plant-human communication.

Biosemiosis represents the attempts by linguists to integrate new findings in biological sciences, such as those referenced above, with Peircian notions of signification, interpretation and meaning (Brier, 2006). The field has its origin in a paper (Anderson et al, 1984) that posits the semiotic threshold at the boundary of life (Kull, 2000), meaning that all living beings and communities of beings, from unicellular organisms to human societies, possess or engage in semiotic processes. The field has been further subdivided to reflect domain-specific analyses such as zoosemiotics, phytosemiotics and ecosemiotics. While ecosemiotics concerns itself with the human relationship to plants, phytosemiotics interrogates the semiotic flows inherent in the physiological processes of the plant kingdom. Kalevi Kull, a pioneer

of this field, emphasizes that phytosemiotics does not include “the semiotics of botanical research, neither the existence of plants as signs in human communicative systems (the latter would still be a part of ecosemiotics...), neither we will argue for any psychic phenomena in plants... Our subject is confined to the question of the existence of (primitive) sign processes in plants” (Kull, 2000: 328).

At first glance it may seem that our discussion here would more appropriately fall into the realm of ecosemiotics, or the communicative relationship between humans and plants. Indeed, an excellent article by Alf Hornborg discusses ecosemiotics in the context of the indigenous ecocosmologies and historical ecology of the Amazon Basin (Hornborg, 2001). In characterizing ecosemiotics, Hornborg writes, “Ecosemiotics thus does not merely provide a vantage-point for understanding [Amazonian indigenous] cosmologies in theoretical terms, but actually also for *validating* them” (Hornborg, 2001: 125, emphasis his). However, as a study of the flows of human sign systems as they relate to ecology, ecosemiotics de-centers phytosemiotic processes, and it is with plant agency that we are here concerned.

In the techniques of shamanic apprenticeship, on the other hand, phytosemiosis takes center stage. The theory of phytosemiosis posits that plant-based forms of communication operate on an indexical level (Kull, 2000). Index is one of three types of signs, along with icon and symbol, that Charles Peirce (1894) outlines in his seminal paper, “What Is a Sign?”. Icons, he writes, act on the basis of likeness (as a map is iconic of a landform); indexical signs or indices indicate something by virtue of physical connection (where there’s smoke, there’s fire); and symbols are disconnected from their referent, associated with their object only through habit or usage (the classic example being the written word). Unlike symbol, icons and indices may both be non-linguistic, but index has the added quality of direct experiential connection. (Peirce, 1894; Rubenstein, 2012) Thus, index remains the one semiotic realm that creates a space for both direct experience and extra-linguistic signification.

The ethnographic literature, in turn, paints a picture of shamanic apprenticeship as a process of inserting oneself into the phytosemiotic processes through the direct experience and interpretation of non-linguistic, phytochemical cues. Jauregui (2011) and Beyer (2009) both depict the apprenticeship process as a form of experiential learning in which the initiate’s body and mind are purified and sensitized to the effects of secondary phytochemical compounds. By the very nature of their action upon the body, plants are able to indicate important information about their healing properties, and perhaps even the state of their own health and that of the local biosphere. The apprentice’s job is to learn to interpret these signals through their effects upon the body and mind.

When the phytochemical cues under study include psychoactive substances or have been potentiated by psychoactive substances, dietary regimen and isolation in the jungle, it stands to reason that the messages thereby engendered may take a variety of interesting forms that both include and surpass corporeal sensations, forms such as visual or auditory hallucinations or ethnomedical insight. In the process of interpretation and reproduction, the initiate organizes and codifies these signals into culture-specific mimetic responses, in this case, *icaros*. In other words, a particular plant might produce a unique auditory effect in the apprentice. The apprentice then interprets this sound as the *icaro* of that plant, and strives to reproduce this sound through song. In this way, the shaman is able to reverse-engineer, so to speak, that same phytochemical cue through the reproduction of its characteristic sound, or its *icaro* – and the singing of the *icaro*, in turn, constitutes the reproduction of the plant spirit itself. Not only does this model explain various aspects of the ethnographic literature, but it also fits well with Brabec de Mori's assertion that the spirits are sonic beings (Brabec de Mori, 2013).

A recognition of the hallucinatory quality of this phytosemiotic process does not invalidate the information or techniques that emerge from it. Similarly, the engagement of human subjectivity and cultural parameters does not privilege human agency over that of the plants, nor does it relegate the product of their interaction to the sphere of the human imagination. To the contrary, what we are seeing is a process whereby the non-human material world manifests itself in human cultural forms, in a way that grants full agency to both parties. Seen in this way, the *icaros* become a flowering of the symbiosis between plant and human.

## **Interspecies communication**

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Anthropology has long been criticized for its failure to characterize human interdependence with nature in a way that refrains from idealizing or essentializing indigenous peoples, or portraying them as passive objects of environmental determinism. Conversely, modern industrialized culture fails to recognize our interdependence altogether, with drastic results for all species. The model of interspecies communication discussed in this paper has a profound potential for shifting human cultural discourse to a more eco-centric one that recognizes the importance of non-human agency and the possibility for a mutually beneficial relationship between humans and the rest of nature. The renowned anthropologist Gerardo Reichel-Dolmatoff recognized the ecological implications of such a discourse:

Plants and animals tell the visionary how they want to be treated and protected so they can better

serve him; how they suffer from carelessness, overhunting, the cutting down of trees, the abuse of fish-poisons, the destructiveness of firearms. Seen from this perspective we must admit that a *Banisteriopsis* trance, manipulated by shamans, is a lesson in ecology, in the sense that it gives nature a chance to voice its complaints and demands in unmistakable terms (Reichel-Dolmatoff 1996: 166-8).

Similarly, the modern literature on psychedelic studies is full of reports of an increased awareness of nature, and some writers consider the phenomenology of the psychedelic experience to be eminently suited to fostering an ethos of communication with and empathy for non-human nature (Krippner & Luke, 2009). On the other hand, what Reichel-Dolmatoff knew, and what is important for us to remember, is that the phytochemical message of the plant, in and of itself, does not modify human behavior. Instead, it is the skillful interpretation, reproduction and application of that message that solves a problem, cures an illness or creates change in the material world. This, in fact, is the lesson of the *icaros*, and it behooves us, in our journey forward, to listen carefully to their song.

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