

## **Metamorphosis: a comparative analysis of ayahuasca healing in Amazonia and Australia<sup>1</sup>**

A. K. Gearin

PhD candidate, Anthropology

University of Queensland, Brisbane Australia

Little by little the shadows took on shape and form and the silhouettes got details. In the sky they saw the yajé [ayahuasca] entering an immense flower. It got fecundated and transformed into the sun. And from there came the people of the sun with their distinct music played on flutes and tambors. Each melody transformed into a distinct colour... the symphony of colour and the music awakened the comprehension of people, creating intelligence and language.

~Kamsa and Inga myth (Ramírez and Castaño cited in Shannon 2002)

This paper begins by exploring central dimensions to the practice of ayahuasca shamanism in the Amazon concentrating on the question of cosmological metamorphosis and reports of shamans becoming jaguars, plants, birds or various other beings of the cosmos. Practices of healing and notions of Amerindian health take precedence in this opening analysis. This is followed by an introduction to the practice of ayahuasca healing in Australian society based on fieldwork undertaken in 2011 and 2012. Preliminary contrasts between Amazonian and Australian traditions are explored and the paper finishes with some reflections on the nature of cosmological metamorphosis and synaesthesia. The paper does not attempt to create a kind of grand or total comparison between the use of ayahuasca in Amazonia and Australia—I am doubtful whether such a thing is even possible—but it aims at elucidating some of the radically different worlds and ways in which ayahuasca is involved in practices of healing.

---

<sup>1</sup> Paper delivered at conference Psychedelic Science 2013, Oakland, CA, April 18<sup>th</sup>-23<sup>rd</sup>. For correspondence email: [a.gearin@uq.edu.au](mailto:a.gearin@uq.edu.au)

## Ayahuasca and indigenous Amazonia

The plants used to make the psychoactive brew ayahuasca are native to the Amazon basin and have been used by indigenous peoples there for at least a few hundred years, perhaps much longer (Luna 2000, Brabec 2011, Beyer 2012). The traditional use of ayahuasca is concentrated most in the Upper and Western Amazonian regions of Peru, Colombia, Ecuador, and Brazil by such people as the Runa, Shipibo, Tukano, Shuar, Matsigenka and according to some estimates around 60 indigenous peoples in total (Luna & White 2000). The brew plays a role in various aspects of indigenous life including health, warfare, hunting, prophecy, and political arbitration.

Over the last two hundred years ayahuasca use and practice has been involved in a complex and somewhat violent intersection between indigenous Amazonian peoples and European colonial movements—particularly with the expansion of the rubber tapping industry that began in the 1850s (Wright and Hill 1986, Taussig 1987, Gow 1994). More recently, the *vegetalismo* context of ayahuasca use in and around urban centres such as Iquitos and Pucallpa is attracting large numbers of Westerners or ‘shamanic tourists’ and forging a rapidly growing network of connections between Amazonian life and various post-industrial countries (Winkelman 2006, Beyer 2009, Fotiou 2010). While there are not clear boundaries between the use of ayahuasca in *vegetalismo* contexts and its use in indigenous contexts, the use of ayahuasca in Australia embodies important links to *vegetalismo* traditions (including in regards to shamanic training and notions of authenticity) and as a result this paper focuses on key examples of indigenous uses of ayahuasca in an attempt to juxtapose and comprehend certain distinct qualities of ayahuasca use in the Amazon and Australia. In addition, given the cultural proximity and interrelations between ayahuasca ritual specialists in Australia to specialists in Europe and North America, this analysis of ayahuasca in Australia provides perspectives on the larger ayahuasca milieu of Western societies contra the Amazon.

There is great diversity among indigenous cultures of the Amazon and around one-third of the world’s linguistic diversity is found in this region (Hill 2013). Indigenous Amazonians are generally understood to be imbedded to varying degrees in different

animistic worldviews that may be characterized by a conflation of the notions of society and nature under various generalized rubrics of sociality or personhood. For instance, in indigenous Amazonian communities certain animals, plants, and meteorological phenomena may be understood and related to *as* persons, such as jaguar-persons, tree-persons, rock-persons or sky-persons (Descola 1992, Århem 1996, Viveiros de Castro 1998). Furthermore, in contrast to the pervasive Western perspective that each individual human has a kind of fixed soul or personalized character, individuals in Amazonian cultures are said to exist in a kind of ‘cosmological economy of souls’ (Viveiros de Castro 1998) in which human-persons may become various beings of the cosmos such as anaconda-persons or tree-persons in a *transaction* or process of cosmological transformation (Riveire 1994, Vilaca 2005, Praet 2009).

This way of relating to the world involves many aspects of Amazonian life including health, hunting, warfare, politics, and acts of prophecy. However, these distinct categories (health, hunting, politics etc.) are not always so distinct in Amazonian cultures. Disease and illness, including colds, infertility, and diarrhea are at times understood to indigenous Amazonians as being the result of preying attacks from various spirit-beings such as jaguar-spirits and anaconda-spirits or also as the result of attacks from malevolent shamans or assault sorcerers (Riveire 1994, Viveiros de Castro 1998, Whitehead and Wright 2004, Vilaca 2005, Praet 2009, Londono Sulkin 2010). Furthermore, anti-social behaviour such as anger, envy, and jealousy may also be understood as resulting from preying or attacking spirits, both human and nonhuman spirits *who* may abduct the person’s soul causing anti-social behaviour and sickness. Such a process of cosmological metamorphosis is also central to the deliberate practice of Amazonian shamanism. The notion that shamans may intentionally transform into different beings—such as jaguars, birds, or river dolphins—in order to conduct healing, sorcery, manipulation of weather and resources, and prophecy, has been widely documented as existing not only across Amazonia but also in the Andes and the Pacific coast (Langdon 1975, Hugh-Jones 1974, Rouse 1978, Riviere 1994, Vivieros de Castro 1998, Praet 2009). Furthermore, this dual power of spirits and shamans to both heal and harm creates what has been

labeled the ‘moral ambiguity complex’ of Amazonian shamanism (Whitehead and Wright 2004).

Indigenous ayahuasca practices—including practices of healing—are embedded in these larger Amazonian ways of relating to and understanding the world. For example, Bernd Brabec (2012) focusing on the role of music in Shipibo culture, describes an ayahuasca healing rite where, through singing, the healer transforms himself into an anaconda in order to perceive the ill-causing anaconda spirit that is making a patient sick. The healer identifies himself with the illness—that is, the anaconda spirit—in order to gain control of it so that he may banish it and return the patient’s soul to her body thus restoring health. In parallel, Graham Townsley (1993) describes a Yaminahua ayahuasca healing ritual that involves a shaman embodying a variety of animal and nature spirits, or *yoshi* in Yaminahua, including anaconda-yoshi, jaguar-yoshi and solar or sun-yoshi, through weaving incredibly complex metaphorical songs that are directed toward the final intention of healing a patient; a woman who was still bleeding several days after giving birth. These are just two examples but as noted earlier this notion of cosmological transformation appears across shamanic traditions of South America, including among non-ayahuasca traditions.

The different morphologies or cosmological bodies—such as human, jaguar, anaconda, sun—are often discussed by indigenous Amazonian’s as being like ‘clothing’, ‘skin’, ‘bark’, or different types of layers which can be taken off, shed, discarded, or placed on and embodied, layers which may also relate to social, ecological, and moral relations (Reichel-Dolmatoff 1971, Hugh-Jones 1974, Rouse 1978, Viveiros de Castro 1998, Londono Sulkin 2010) and health as the two examples above indicate. These cosmological ‘layers’ are not limited to natural phenomena but indigenous Amazonians also at times refer to various modern artifacts such as out-board motors, radios, shot-guns, and mobile phones as being spirits or as each having a certain spirit quality (Chaumeil 1992, Townsley 1993, Brabec 2012). I’ll return to this issue below. Cosmological metamorphosis is not the only way in which indigenous ayahuasca shamans heal—for example, other albeit related practices include blowing and sucking out spiritual illnesses from patients—however this notion of transformation is a central trope of Amazonian shamanism.

## Ayahuasca in Australian society

Similar to many creation myths around the world the genesis or emergence of ayahuasca in Australia began with a culturally significant being descending from the sky. This being was, of course, the psychedelic philosopher and spokesperson Terrence McKenna flying in from Hawaii in 1997 with a collection of ayahuasca cuttings, the first to touch Australian soil (or so the legend goes).

There is no strong anthropological evidence on the use of psychedelics by Aboriginal Australians aside from the wide use of the tobacco-like psychoactive Pituri (Watson 1983). However, Australia is home to many ayahuasca admixture-analogue *Acacia*<sup>2</sup> or wattle trees scattered across the continent and it is these plants that Australian ayahuasca groups often use, sometimes with *Peganum harmala* yet mostly with the ayahuasca vine *Banisteriopsis caapi* most of which is being grown in Australia. Sometimes members of the Australian ayahuasca community refer to the preparation of *B. caapi* and native Australian wattles as an ‘Aussiwaska’ brew, referring to the hybrid nature of the tradition.

Ayahuasca in Australia is largely used by middle-class Australians who often associate their practice to indigenous traditions of the Amazon and therefore may be understood as a kind of *folk Amazonian shamanism* practice. The culture of ayahuasca use in Australia displays many similarities to aspects of the Western shamanic tourism boom currently happening on the edge of the Amazon (Winkleman 2006, Razam 2009, Foutio 2010) and to the recent emergence of ayahuasca movements in Europe and North America (Tupper 2009, Hanegraaff 2011, Harris & Gurel 2012).

My research data on ayahuasca culture in Australia was collected over the last two years and consists of participating in 29 ayahuasca ceremonies with 7 different

---

<sup>2</sup> While they are typically understood as DMT (N,N-Dimethyltryptamine) plants, several of these *Acacias* also contain other psychoactive chemicals such as NMT, 5-Meo-DMT, bufotenin, and in some cases  $\beta$ -carbolines (see *Garden of Eden* by Snu Voogelbreinde) thus categorizing them as simply DMT plants is somewhat misleading. In terms of categorization, using the genus *Acacia* appears to be a more simple and accurate grouping.

shamans, or facilitators as they are called in Australia, along with 35 unstructured interviews and 80 in-depth qualitative online questionnaires. While there are Santo Daime and União do Vegetal nodes (Brazilian ayahuasca religions) in Australia, my research has focused on the neo-shamanic ayahuasca networks that include perhaps around 4000 members. This population is difficult to measure and the figure is based on email-list numbers but it does not account for the DIY (do-it-yourself) movement that involves people growing their own plants or buying the raw materials from international vendors on the Internet. Ayahuasca is a legally ambiguous substance in Australia. While certain chemicals in the brew are illegal to possess (DMT is a schedule #1 drug) there has been one court case in which an Australian ayahuasca shaman challenged this successfully—a topic too large for this paper.<sup>3</sup>

Ayahuasca tends to be understood by Australians *as* a female spirit being, often called ‘the mother’ or ‘la madre’. Other dominant terms for ayahuasca in Australia include ‘the medicine’ or simply ‘medicine’ as a noun—implying a perception of the central role of ayahuasca in health. In contrast to indigenous Amazonian traditions, Australian ayahuasca ritual specialists typically do not conduct individual healing on people but ‘hold space for ayahuasca’ to do the healing. While patients in the Amazon do not always drink ayahuasca, in Australia everyone present in the ritual drinks. Two night retreats cost between \$320 and \$550 and participants express disappointment if ‘the brew was not strong enough’ indicating that a central motive for attending an ayahuasca ceremony in Australia is the induction of alternate states of consciousness.

The ayahuasca groups in Australia embody various forms of religious or spiritual pluralism often with links to Eastern religions, Western esotericism, and different indigenous traditions made in ritual music, philosophy, and social discourse. Rituals typically consist of a circle of around 10 to 20 people or in some cases up to 70 people. Wearing white clothing is usual and the lighting in the space is dimmed or candle lit. After drinking the brew people lay down or sit-up with eyes closed and begin to experience ‘visions’ and ‘journey internally’ guided by music played by ayahuasca facilitators or in some cases the music and surrounding space are

---

<sup>3</sup> The court case was held in Lismore local court, NSW, October 2005 (Jefferys 2005). Although the charged was released, the case did not set any precedent in terms of the legalization of ayahuasca in Australia and the substance still remains in a legally ambiguous domain.

transcended or obsolete as the participant experiences complete ‘sensory override’ (Luhrmann 2011) or extreme ‘visions’. The ritual music varies and includes folk guitar ballads and locally written ayahuasca ‘medicine songs’, north Indian *bhajans*, psychedelic electronica, indigenous Amazonian *icaros*, and in some case rock-and-roll. The ceremony typically finishes after about seven hours. The morning following the ceremony involves a formalized ‘sharing round’ where participants discuss their ayahuasca experiences and themes related therein.

In the Australian ayahuasca community the reasons or motivations for drinking ayahuasca may generally be associated with a variety of themes related to healing and wellbeing. The expressions of such motivations are often inseparable to sentiments of religious or spiritual beliefs. In terms of motivations, the other main theme was that of seeking knowledge or wisdom. However, the lines between healing and wisdom here are blurred as the gaining of knowledge through ayahuasca revelations is regularly associated with the gaining of a kind of spiritual health. The reported types of illness or malaise people are seeking to heal are, most commonly, a complex of issues related to stress, anxiety, and depression, however people may also seek ayahuasca healing for muscular-skeletal conditions, stigmatism and problems related to eye-sight, different types of cancer, and various other maladies.

Sickness and malaise is often understood by members of the Australian ayahuasca community as resulting from a disconnection of the person from nature and the cosmos—a disconnection that embodies, in the extreme, the apotheosis of cosmic alienation or cosmic individualism. Participants report that ayahuasca works to heal this malaise by helping to reconnect them to the world and this sense of reconnection is a central theme of people’s ayahuasca experiences which are often described as blissful moments of unity with the world. Closely associated to these experiences of re-connection are processes of spiritual purification. Illness tends to be recognised as ‘energetic blocks’ in the body of which ayahuasca helps to remove sometimes through violent processes of expulsion, vomiting, sweating, and purging. This process is understood as a means of being spiritually cleansed and of subsequently being reconnected to the world and cosmic life force embedded therein. As one informant explained, ‘the medicine connects me more deeply to myself, the planet and the grid

of life' (informant 1). Australia's most culturally significant ayahuasca shaman who was fundamental in spearheading the movement stated, 'The main illness I've been working with, specifically, is the split in the Western psyche, the individual, between themselves and nature' (informant 2). Connected to this notion is a more generalized perception of the sanctity of nature. The Australian ayahuasca community is characterized by a strong environmentalist ethos that is often expanded to sacred or religious postulates with references to nature and the earth as 'the Great Mother Gaia' *who* must be 'respected and not polluted and destroyed' (informant 3). This ethos exemplifies a form of 'nature worship' and thus links Australian ayahuasca culture to types of contemporary Paganism (Hume 1997), non-entheogenic neoshamanism (Stuckrad 2002) and eighteenth and nineteenth century European romanticism (Stuckrad 2002, Dunlap 2004). Values of organic as opposed to synthetic substances, spring water as opposed to 'city water', and other notions of the divide between nature and society are included in the sacred environmentalist ethos of ayahuasca culture in Australia—another topic too large for this paper.

In terms of the phenomenology of ayahuasca rituals in Australia, people are having a variety of different experiences that I have broken down into three categories. (1) Most people most of the time describe fluctuations in bodily feeling, internal pressure, along with perceiving geometric forms and an acute sense of hearing and other sensory modulations while associating this to being surrounded by a kind of sentient nature—often spoken about as the spirit of ayahuasca, 'la madre ayahuasca'. (2) The next dominant experience is one in which people hear messages spoken to them giving them advice and divine council. (3) And finally, a smaller proportion, though still significant in numbers, describe ecstatic flight, union or 'oneness' with all existence, and complex multisensory 'dream-like' conscious encounters with worlds and entities or beings accompanied by synaesthetic interactions with these places and beings.

While the notion of cosmological metamorphosis is central to Amazonian traditions—shamans becoming jaguars etc.—this type of thing is very rare in Australian ayahuasca circles where interactions with spirit entities are usually characterized by a separation and interaction between the human and the spirit being and not by an



immersion with or embodiment of the spirit being. For example, a male informant aged forty-five who had drunk ayahuasca twenty eight times explains:

I have only encountered Ayahuasca as a woman. She said I could call her Lady Ayahuasca instead of Mother. She appears to me as always beautiful, sensual, attractive and between the ages of thirty and forty-five, it's hard to tell. Her face is always covered to some degree, a mask, hair etc. Her voice sounds as if a pitch shifted snake could speak English with a feminine Spanish/French accent and tone (informant 4).

Ritual specialists or ceremony facilitators in Australia do not claim to engage in process of cosmological metamorphosis characteristic of Amazonian shamanism. Furthermore, from more than one hundred and fifty reports of ayahuasca experiences collected in Australia only a few accounts emerged that approximate something similar to the indigenous Amazonian examples of cosmological metamorphosis noted earlier. For example, an Australian woman reflecting on her first time drinking ayahuasca, shortly after the experience states:

The entities were liquid like mercury, coloured silver, and they were really tall, like 10 feet, some small, all with typical oval faces, no mouth, with massive eyes that had no pupils but were literally like galaxies, massive galaxies... When the alien entered me it was like she was perfectly designed to fit into my skeleton structure and then I realized that she is a part of me and she is actually love (informant 5).

Another person describes being chased by a wolf spirit that ends up trapping him and devouring him to the point of him merging with and becoming the wolf. He described gaining a general sense of increased will power in his life as a result of 'integrating the shadow wolf aspect of my personality' (informant 6). In parallel, experiential journalist Rak Razam notes a similar example of cosmological transformation expressed by a North American 'ayahuasca seeker' in north Peru who describes an experience of morphing into another human:

James had a vision of me, drinking ayahuasca too. But it wasn't just a seeing, it was more of a becoming... James' spirit merged with mine, he became me, he says, taking on my mannerisms and personality, "I felt like I was interfacing with this Rak' persona" (2009 p.86)

While reports of transcorporality are rare in Australian ayahuasca circles, this small portion of examples indicates a kind of acultural phenomenological potential of ayahuasca.

### **Synaesthesia and cosmological metamorphosis**

Through investigating the notion of synaesthesia the paper now turns to explore some thoughts on the nature of cosmological metamorphosis. Synaesthesia is a common trope of psychedelic experiences, not just of ayahuasca but also LSD, psilocybe mushrooms, mescaline cactus, and various other psychoactives. It is typically characterized by a kind of union of different senses in which people might, for instance, see sound, smell colour or feel visions in a tactile sense. In general, approximately 1-4% of people worldwide experience types of synaesthesia *naturally* or without the aid of psychoactive substances (Simner *et al* 2006). Some common examples include days of the week having a certain colour and also taste or smell being experienced as different colours. Furthermore, some studies suggest that artists are seven times more likely to be *naturally* synaesthetic (Rothen & Meir 2010) indicating a link between certain types of creative tasks and synaesthesia. Differences have been noted between psychedelic or drug-induced synaesthesia and *natural* synaesthesia with the former characterized as more ‘intense and dynamic as well as flexible’ in terms of intersensory communication and sensory experience (Sinke *et al* 2012). The possibility of changes in ‘body image’ and proprioception are reserved only to drug-induced types of synaesthesia (Hintzen and Passie 2010, Sinke *et al* 2012) and this evidence provides important dimensions to the understanding of cosmological metamorphosis described in ayahuasca shamanism.

Indigenous ayahuasca shamans reportedly embody various types of synaesthesia while conducting rituals. Claims of singing ‘fragrant songs’ or ‘patterned songs’ are not uncommon in the ayahuasca complex of South America (Reichel-Dolmatoff 1978, Gebhart-Sayer 1985, Classen 1990, Townsley 1993, Beyer 2009, Brabec 2012) and, as this paper argues, psychoactive induced changes in perceptions of ‘body image’ indicate central aspects of the ‘metamorphic’ quality of Amerindian shamanism.

There have been interesting developments in consciousness studies in recent years that suggest that synaesthesia is not simply a kind of union of the senses but that it involves an intimate relationship between sensory experience and semantic functioning or processes of meaning making (Nikolic 2009, Mroczko et al 2008, Dixon et al 2000, Simner & Ward 2006). For example, neurophysiologist Danko Nikolic (2009) found that when *natural* synaesthetes, who see, for instance, the Latin letter “A” as red, are introduced to the letter “A” in a related language, once the link is made between the symbols, the newly learnt letter quickly turns to red thus indicating a relationship between mental or semantic processes and sensory experience. In response to these types of findings, Nikolic (2009) has challenged the reductive notion that synaesthesia is simply ‘sensory communication’ and pioneered the concept of ‘ideasthesia’ to highlight the role of semantic functioning or *meaning* in synaesthetic experience.

This idea of ideasthesia, or of a dynamic relationship between semantic functioning and sensory experience, offers some in-roads to novel understandings of the notion of cosmological metamorphosis often reported in Amazonian shamanism. When various Yaminahua shamans were asked ‘how do you contact different spirits or Yoshi?’—including not just Yoshi of animals and plants but also Yoshi of artifacts like radios and motors—the shamans replied, ‘when we first saw these things we examined them carefully, asked ourselves what their Yoshi were like, and then found their song’ (Townesley 1993). The spirit of outboard motors, for example, is thought to be good for curing headaches given that the sound of the motor resembles the throb of the headache (ibid). Furthermore, jaguars are often known as fierce and powerful beings only accessed by powerful shamans, and other creatures such as turtles or certain insects that make ludic noises are at times associated to jokes and humor (Reichel-Dolmatoff 1975, Rouse 1978, Londono Sulkin 2010).

Reichel-Dolmatoff suggested that spirits reflect kinds of ‘qualities of existence’ (1971:125). Various other anthropologists have echoed and developed this notion arguing that Amazonian spirits, as different ‘garments, skins, or barks’, reflect different moods, ‘transient states’ (Rouse 1978:119) or ‘bundles of affects’ (Viveiros

de Castro 1998) that are associated to beings such as jaguars, anacondas, rivers and at times even radios and shot-guns. This association of different beings of the cosmos to different qualities of existence that may be known through semantic and sensual disclosure—‘when we first saw these things we examined them closely to discover their Yoshi’—and that may be embodied through ritual procedures of deliberate cosmological metamorphosis, or a shift in corporality, seems to imply a logical extension of the notion of ideasthesia put forward by Nikolic (2009).

Amazonian shamans are distinguished by their ability to ‘see nonhumans as they [nonhumans] see themselves’ (Viveiros de Castro 2004:468) and to negotiate with these nonhuman persons. The dominant way in which Amazonian shamans occasion this ability is by ingesting psychoactive plants such as tobacco, *toé* (*brugmansia*), and ayahuasca and related snuffs, and also to some degree through forms of sensory deprivation, sensory manipulation, sleep deprivation, and physical pain. The ability of cosmological metamorphosis allows shamans to perceive the world from the point of view of other forms of personhood—jaguar personhood, anaconda personhood—and is characterized by a shift in *perception* where ‘under the effects of the hallucinogenic drug... shamans are capable not only of seeing the spirits, but of seeing like the spirits’ (Viveiros de Castro 2007:162). Furthermore, vision or sight is a dominant sensory mode in Amazonian cultures and is often understood as the ‘model of perception and knowledge’ including in the acquisition of knowledge from extra-sensory or ‘visionary’ domains of consciousness (Mentore 1993, Townsley 1993, Reichel-Dolmatoff 1975, Alexiades 1999, Rodd 2003, Viveiros de Castro 2007). Given the common reports that psychedelic experiences occasion synaesthesia, and given the accounts of cosmic metamorphosis frequently reported in Amazonian shamanism, along with the conflation of ‘knowing’ and ‘seeing’ in the encounter between shamans and spirits, it appears that the notion of ideasthesia approximates or points to a far more complex understanding of sensory experience, semantic association, and transcorporality found in the practice of Amerindian shamanism.

While examples of cosmological metamorphosis are rare in the context of ayahuasca practice in Australia, the few examples outlined above indicate potential sites of intercultural, cross-cultural or acultural analysis in terms of the ways in which sensory

experience and knowledge are disclosed in Amazonian and Australian ayahuasca practices. Finally, in response to the question asked in anthropological circles, ‘do Amazonian shamans really turn into jaguars?’, it seems probable that the answer is yes. They *really do* turn into jaguars in a similar way that synaesthetes really do experience sounds as colours. The reported embodiment of ‘other beings of the cosmos’ by Amazonian ayahuasca shamans appears to refer to deliberate and advanced forms of synaesthesia that peak in types of cosmological metamorphoses that give shamans the ability to shift corporality or ‘body image’ and become a variety of dominant ‘qualities of existence’—that are semantically and sensually associated to animals, plants, radios, and other spirit beings—in order to negotiate spiritual alliances and undertake various shamanic activities including those related to issues of health and the restoration of wellbeing.

## Bibliography

Alexiades, M. 1999 *Ethnobotany of the Ese Eja: Plants, health, and change in an Amazonian society*. PhD thesis, City University of New York

Århem, K. 1996, 'The Cosmic Food Web: Human-nature relatedness in the Northwest Amazon'. in Descola & Pálsson (ed.) *Nature and Society: Anthropological Perspectives*. Routledge, London

Beyer, Steve 2009, *Singing to the Plants: A guide to Mestizo shamanism in the Upper Amazon*. University of New Mexico, Albuquerque

Beyer, Steve 2012, 'On the origins of ayahuasca'. Accessed on Internet site: <http://www.singingtotheplants.com/2012/04/on-origins-of-ayahuasca/> accessed April 2013

Brabec de Mori, Bernd 2012, 'About magical singing, sonic perspectives, ambient multinaturals, and the conscious experience'. *Indiana*. Vol. 29

Brabec de Mori, Bernd 2011, 'Tracing hallucinations: Contributing to a critical ethnohistory of ayahuasca usage in the Peruvian Amazon'. In B. C. Labate & H. Jungaberle (Eds.), *The Internationalization of Ayahuasca* (pp. 23-47). Zürich: Lit Verlag.

Chaumeil, Jean-Pierre 1992, 'Varieties of Amazonian shamanism'. *Diogenes*. Vol. 158 p.101

Classen, C. 1990 'Sweet colors, fragrant songs: sensory models of the Andes and the Amazon' *American Ethnologist*. Vol. 17 no. 4

Descola, P. 1992, 'Societies of nature and the nature of society'. in Kuper, A. (ed.) *Conceptualising society*. Routledge, London

Dixon M.J., Smilek D., Cudahy C., Merikle P.M. 2000, 'Five plus two equals yellow'. in *Nature*, Vol. 406, pp. 365.

Dunlap, T. 2004, *Faith in nature: environmentalism as religious quest*. Washington University Press, Washington

Fotiou, E. 2010, *Form medicine men to day trippers: shamanic tourism in Iquitos Peru*. PhD dissertation. University of Wisconsin, Madison

Gebhart-Sayer, Angelika 1985, 'The Geometric Designs of the Shipibo-Conibo in Ritual Context' *Journal of Latin-American Lore* 11(2): 143–175

Gow, Peter 1994, 'River People: shamanism and history in western Amazonia' in Thomas and Humphrey (ed.) *Shamanism, history and the state*. University of Michigan. Michigan

Hanegraaff, W. 2011, 'Ayahuasca groups and networks in the Netherlands: A challenge to the study of religion'. In Labate & Jungaberle (ed.) *The Internationalization of Ayahuasca*. Zurich: Duetsche Nationalbibliothek

Harris R, Gurel L 2012, 'A study of ayahuasca use in North America' *Journal of Psychoactive Drugs*. Vol. 44(3)

Hintzen, A. and Passie, T. 2010 *The pharmacology of LSD: a critical review*. Oxford University Press, Oxford

Hill, Jonathon 2013, 'Conversion as rupture, conversion as preservation: exploring the paucity of syncretistic religion in indigenous Amazonian' *paper delivered at Biennial SAR (AAA) conference*, Pasadena, California

Hume, Lynne 1997, *Witchcraft and Paganism in Australia*. Melbourne: Melbourne University Press.

- Hugh-Jones, S. 1974, *Male initiation and cosmology among the Barasana Indians of the Vaupes Area of Colombia*. PhD thesis. University of Cambridge
- Langdon, T. 1975, *Food restrictions in the medical system of the Barasana and Taiwona Indians of the Colombian Northwest Amazon*. Unpublished PhD thesis, Tulane University
- Londono Sulkin, C. 2012, *People of Substance; An ethnography of morality in the Colombian Amazon*. University of Toronto Press, Toronto
- Luhrmann, T. M. 2011 'Hallucinations and Sensory Overrides'. *Annual Review of Anthropology*. Vol. 40 p.71
- Luna, Eduardo Luis & White, Steven 2000, *Ayahwasca reader: Encounters with the Amazon's Sacred Vine*. Synergic Press, New Mexico
- Mentore, G. 1993, 'Tempering the social self: body adornment, vital substance, and knowledge among the Waiwai'. *Journal of Archeology and Anthropology*. Vol. 9
- Mroczko A., Metzinger T., Singer W., Nikolic D. 2008, 'Immediate transfer of synaesthetic concurrents to novel inducers', in *The 4<sup>th</sup> Annual General Meeting and Conference of the UK Synaesthesia Association*, Department of Psychology, University of Edinburgh, March 29- 30
- Nikolic, D. 2009, 'Is synaesthesia actually ideasthesia? An inquiry into the nature of the phenomenon' *Proceedings of the Third International Congress on Synaesthesia, Science & Art*, Granada, Spain, April 26-29, 2009
- Praet, I. 2009, 'Shamanism and ritual in South America: an inquiry into Amerindian shape-shifting'. *Journal of the Royal Anthropological Institute*. Vol. 15 pp.737-754
- Razam, R. 2009 *Aya: a shamanic odyssey*. Icaro publishing
- Reichel-Dolmatoff, G. 1971, *Amazonian Cosmos: The Sexual and Religious Symbolism of the Tukano Indians*. University of Chicago Press, Chicago
- 1975 *The Shaman and the Jaguar: A Study of Narcotic Drugs Among the Indians of Colombia*. Temple University Press
- 1978, 'Drug-induced Optical Sensations and their Relationship to Applied Art'. in R-D (1997) *Rainforest Shamans*. Themis Books, London
- Riviere, P. 1994, 'WYSINWYG in Amazonia'. *Journal of the Anthropological Society of Oxford*. Vol. 25
- Rodd, Robin 2004, 'Märipa: To know everything The experience of power and knowledge derived from the integrative mode of consciousness'. *Anthropology of Consciousness*. Vol. 14 (2)
- Rothen, R. & Meir, B. 2010, 'Higher prevalence of synaesthesia in art students'. *Perception*. Vol. 39 (5) 718-20
- Rouse, Roger 1978, 'Talking about shamans'. *Journal of the Anthropological Society of Oxford*. Vol. 9 (2)
- Shannon, Benny 2002 *The Antipodes of the Mind*. Oxford University Press, Oxford
- Simner, j., Mulvennaô, C., Sagiv N., Tsakanikos, E., Witherby S., Fraser, C., Scott, K., Ward, J. 2006 'Synaesthesia: The prevalence of atypical cross-modal Experiences'. *Perception*. Vol. 35 p1024

Simner, J. Ward, j. 2006, 'Synaesthesia: The taste of words on the tip of the tongue'. *Nature* Vol. 444, 438

Sinke, C. Halern j., Zedler M., Neufeld J., Emrich H. Passie T., 2012 'Genuine and drug-induced synaesthesia: a comparison'. *Consciousness and Cognition*. Vol. 21. (3)

Stuckrad, Kocku von 2002 'Reenchanting nature: Modern Western shamanism and nineteenth-century thought'. *Journal of the American Academy of Religion*. Vol. 70 no. 4

Taussig, M. 1987, *Shamanism, Colonialism, and the Wild Man: A Study of Terror and Healing*. University of Chicago Press, Chicago

Townsend, G. 1993, 'Song Paths: The Way and Means of Yaminahua Shamanic Knowledge'. *L'Homme*. Vol. 33 pp.449-468

Tupper, Kenneth 2009, 'Ayahuasca Healing Beyond the Amazon: The globalization of a traditional indigenous entheogenic practice'. *Global Networks: A Journal of Transnational Affairs*. Vol. 9. No. 1, pp117-136

Watson, Pamela 1983 *This precious foliage: a study of the Aboriginal psychoactive drug Pituri*. University of Sydney, Sydney

Whitehead, N. & Wright, R. (ed.) 2004, *In Darkness and Secrecy: The anthropology of assault sorcery and witchcraft in Amazonia*. Duke University Press, London

Winkleman, M. 2006, 'Drug Tourism or Spiritual Healing: Ayahuasca seekers in Amazonia'. *Journal of Psychoactive Drugs*. Vol. 37 (2)

Vilaca, A. 2005, 'Chronically Unstable Bodies: Reflections on Amazonian Corporalities'. *Journal of the Royal Anthropological Institute*. Vol. 11 (3) pp.445-64

Viveiros de Castro, E. 1998, 'Cosmological Deixis and Amerindian Perspectivism'. *Journal of the Royal Anthropological Institute*. Vol. 4 (3) pp.469-488

----- 2004, 'Exchanging perspectives: The Transformation of Objects into Subjects in Amerindian Ontologies'. *Common Knowledge*. Vol. 10 (3) pp.463-484

----- 2007 'The Crystal Forest: Notes on the Ontology of Amazonian Spirits'. *Inner Asia*. Vol. 9. pp.153-172

Wright, R & Hill, J. 1986, 'History, ritual, and myth: Nineteenth century millenarian movements in the northwest Amazon'. *Ethnohistory*. Vol. 33 (1)