

Body Tubes and Synaesthesia

Tubos corporales y sinestesia

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Abstract

Flows through tubular forms in the body, material culture and the natural environment play a key role in the thought of the indigenous peoples of Northwest Amazonia. Using examples from daily life, mythology and ritual, this paper examines the tube as an abstract concept that unites physiology, psychology and productive processes with wider sociological and cosmological issues. The material, visual and acoustic manifestations of tubular flow (“hair”) also raise the issues of synaesthesia and fractal notions of totalisation/detotalisation. With tubes as tantamount to life itself, ritual attention is focused on regulating bodily and other apertures to ensure balanced, tempered flow. The paper concludes by suggesting that the cultural elaboration of tubes and synaesthesia in Northwest Amazonia may relate to the lineal, exogamic features of social structure characteristic of the region.

Keywords: tubes; synaesthesia; hair; Yuruparí; Northwest Amazonia.

Resumen

Los flujos a través de formas tubulares en el cuerpo, en la cultura material y en el medio natural juegan un papel clave en el pensamiento de los pueblos indígenas del noroeste amazónico. Usando ejemplos de la vida cotidiana, la mitología y el ritual, este artículo examina el tubo como un concepto abstracto que une fisiología, psicología y procesos productivos con aspectos sociológicos y cosmológicos más amplios. Las manifestaciones materiales, visuales y acústicas del flujo tubular (“cabello”) también

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plantean los asuntos de sinestesia y nociones fractales de totalización/destotalización. Siendo los tubos equivalentes a la vida misma, la atención ritual se enfoca en regular las aperturas corporales y de otros tipos para asegurar un flujo balanceado y bien temperado. El artículo concluye sugiriendo que la elaboración cultural de tubos y sinestesia en el noroeste amazónico puede estar relacionada con los rasgos lineales exogámicos de la estructura social característica de la región.

Palabras clave: tubos; sinestesia; cabello; Yuruparí; noroeste amazónico.

Resumo

Os fluxos através de formas tubulares no corpo, na cultura material e no meio natural ocupam um papel chave no pensamento dos povos indígenas do noroeste amazônico. Usando exemplos da vida cotidiana, a mitologia e o ritual, este artigo examina o tubo como um conceito abstrato que une fisiologia, psicologia e processos produtivos com aspectos sociológicos e cosmológicos mais amplos. As manifestações materiais, visuais e acústicas de fluxo tubular (“cabelo”) também levantam questões de sinestesia e noções fractais de totalização/destotalização. Sendo os tubos equivalentes à própria vida, a atenção ritual se foca em regular as aberturas corporais e de outros tipos para assegurar um fluxo equilibrado e bem temperado. O artigo conclui sugerindo que a elaboração cultural dos tubos e sinestesia no noroeste amazônico pode estar relacionada com os traços lineares exogâmicos da estrutura social característica da região.

Palavras-chave: tubos; sinestesia; cabelo; Juruparí; noroeste amazônico.

Part 1 Tubes

Introduction

A transverse section through the abdominal cavity illustrates the general plan of the body as a tube (the digestive tract and its derivatives) within a tube (the body wall)
(Frandsen, Wilke & Fails 2009: 15).

Tubes are both form and movement, life
(Bergson 1911: 135).

That people see, hear, taste, smell, cry, breathe, eat, fart, shit, pee, and make love through various holes and apertures in their bodies; that the foetus feeds, excretes, get its blood through one tube and is then born through another; and that the human body itself is a tube containing other tubes, are all obvious truisms that need no repetition. However these tubes, apertures and physiological processes become more interesting when the tube as a concept becomes a tool for thought and action in daily life, ritual and mythology and when systematic thinking with tubes receives particular cultural elaboration. In the West, this kind of thinking is most obvious in two contexts: on the one hand, in slang expressions for bodily apertures and their processes and in behavioural metaphors that are based upon them—“uptight”, “verbal diarrhoea”, “tight-arsed” etc.—and, on the other hand, in Freudian psychology where tubes and apertures figure prominently as part of

a theory of psychosexual development. Here, different stages of development are associated with mouth, anus, and genitals with rigid or disordered personality types characterised by behaviour associated analogically with excessive openness or closure of mouth and anus. Aside from these examples, I am not aware that tubes have provided an especially fertile ground for reflection in Western culture.

The opposite is the case in the indigenous Americas where one is immediately struck by the cultural elaboration of oratory, cannibalism, wind instruments, cigars, blowpipes, anal plugs, body piercing, and metaphorical elaboration on menstruation and insect metamorphosis, all of which speak of a particular interest in tubes and their apertures. Here tubes are uniquely “good(s) to think with”.¹

Systematic analysis of indigenous lowland South American tubes and orifices begins with Duvernay-Bolens’ (1967) early analysis of the Upper Rio Negro Yuruparí myth and Rivière’s (1969) pioneering essay on Guianese blowpipes and hair tubes. Both papers were inspired by Lévi-Strauss’ *Mythologiques* where tubes figure implicitly in his discussions of container/contained relations (1973) and the fugue of the five senses (1970); they emerge in full light in his study of myths about pots and female potters and their associations with birds and animals that exemplify oral/anal continence/incontinence (1988). More recently there has been a fresh resurgence of interest in this theme in the works of Wright (2015) and Hill (2009a) on Baniwa cosmology, ritual, and shamanism, Karadimas (2008) on the figuration of insect metamorphosis and predatory wasp behaviour in Yuruparí myth and ritual, Chaumeil (2001) on Yagua blowpipes and shamanism, Erikson (2011) on Matis blowpipes, palm trees and ancestors, Hill & Chaumeil (2011) on ritual wind instruments, and Russell & Rahman (2015) on tobacco use.

Noting that thinking with tubes is particularly associated with peoples who also make use of the blowpipe, Lévi-Strauss writes:

A moral philosophy pre-occupied with certain immoderate uses of the digestive tube—positively or negatively, above or below—coincides in its area of distribution with that of the blowpipe which is also a hollow tube, one technologically linked with the digestive tube since the dart that is expelled by breath from the mouth gives rise to meat that will be taken in through the mouth before being expelled in the form of excrement. (1984: 11—my trans.; see also 1988: 159)

Lévi-Strauss’ main concern is myth not ritual and he is wary of taking on the mythology of the Rio Negro region as it bears the hallmarks of a self-reflective, priestly philosophical tradition.² Nonetheless, rather than blowpipes, my top candidates for a material correlate of his moral philosophy would be the Yuruparí flutes and trumpets of the Upper Rio Negro peoples

who combine these aerophones with several other “wind instruments”—not just blowpipes but also cigars and snuffing tubes. These peoples’ practical, ritual and mythological focus on wind tubes goes in tandem with a parallel emphasis on the theme throughout their culture: the symbolic elaboration of the maloca and its assimilation to the human body; an unusual degree of reliance upon tubular equipment in hunting, fishing and in the processing and consumption of food and “drugs”; the use of yagé, a vine likened to an umbilical cord and to the marrow inside bone-like Yuruparí flutes that also opens up the body tube by inducing vomiting and diarrhoea; a particular affinity with palm trees, especially paxiuba (*Socratea exorrhiza*), blowpipe (*Iriatella setigera*) and peach (*Bactris gasipaes*) palms; patrilineal organisation associated with ideas of durability, hardness, ancestry and lineal flow; and the mythological-ritual theme of extra-uterine male birth, seemingly as an “antidote” to exogamy. My argument will be that all these various phenomena are all aspects of one and the same conceptual system that I shall call the *tube*.

Although rarely recognised as such, the *tube* has a long history in the Upper Rio Negro ethnographic literature. Thus, in connection with her analysis of the congruence between processes occurring in the human body, house and cosmos, C. Hugh-Jones writes that the body may be imagined “as a vessel with special orifices through which foods, excreta, smells, sounds, breath, and visual images should all go in or out in a controlled manner” (1979: 119).

It is also a prominent theme of my own (1979) analysis of Yuruparí ritual and mythology and crops up in several more recent publications. In one I wrote:

Fish, snakes, birds, palm trees, and human bodies are all tubes. Human bodies are made up of further tubes, the arm and leg bones, gut, penis and vagina. Life is sometimes imagined as a passage through a tube and what tubes produce is human life or “soul” (*üsü*) in all its manifestations, not just semen or children, but also hair, breath, speech, song, and music, goods, ornaments and paints, the beautiful, chromatic creations of men and women that flow from their tubes. The prototypes of all such tubes are Yuruparí, a “penis” that produces wind, sound and colours as “semen” just as palms produce coloured fruit and feather-like leaves. (2013: 83)

In a similar vein, with reference to Cubeo religion, Goldman talks of six linear, dynamic tubular protoforms—tree, woodwind, bark-cloth mask, anaconda, fish, and ornamented human body—that serve as elementary models of a living structure. For Cubeo, the prime interest in the tube as model is as a passage for sound, itself a manifestation of soul substance or elementary power. Here the anaconda figures as an anatomical tube with devouring and vomiting capacity and generative functions with fish figuring alongside anacondas as sound-producing tubes and as sources of human songs and dances.³ Goldman concludes that “the human body possesses in memory

and through ritual transfer the sum of tubular capacities perhaps most fully expressed in the idea of the maloca as the body of the anaconda and of a man” and conjectures “that the fluency of Cubeo (men) with woodwinds depends on their own tubular structure” (2004: 376-7).

Finally, tubes figure quite frequently in various publications by Hill (1993, 2009a, 2009b, 2011a, 2011b) and Wright (2009, 2013, 2015) on the Baniwa.

Rather than repeating these earlier discussions—I take them as read—I want to concentrate on matters that have received less attention and to anchor the issue of tubes back into the realm of everyday experience and common knowledge of the natural and social worlds where I feel it ultimately belongs. This relates to what I see as three basic limitations to the way myself and others have dealt with tubes so far. The first is a tendency to restrict the relevant field of enquiry by focus on a relatively narrow range of object-clusters: pots and blowpipes (Lévi-Strauss 1988); wind instruments, bones and snuffing tubes (Hill & Wright cited above); wind instruments (Hill & Chaumeil 2015); smoking and snuffing apparatus (Russell & Rahman 2015); the maloca and feather box (Hugh-Jones 1995; 2015); or canoes, beer troughs and slit gongs (Hugh-Jones in press). This leaves out a number of other equally relevant tubular objects and also can tend to push discussion more in the direction of these objects rather than on concepts. Note too that whilst Rivière’s idea of tubes as energy transformers is frequently quoted in some of these discussions, this is typically with reference to blowpipes or cigars. Rivière’s hair tubes and the significance of his contrast between the upward pointing blowpipe and downward pointing hair tube seems to have disappeared from view. Ornamented hair tubes, the hair they contain and the relation between the top and bottom halves of the body will all come back into sight—and earshot—below.

My argument is that, *alongside many others*, the objects mentioned above amount to different expressions of the *tube*. Rivière’s energy transformers and Lévi-Strauss’ moral philosophy of the digestive tube only deal with some parts of this concept. Wright comes closest when writes:

One form particularly important for the idea of connections among all levels of the cosmos is the *tube*, which has been examined by previous scholars (Hugh-Jones, 1989; Hill, 2009) as characteristic of Northwest Amazon cosmologies. It has not been shown, however, how a single *form* such as the *tube* is a vehicle for several kinds of knowledge and power that are critical to life-giving and life-taking processes in the universe: healing, sorcery, chanting, initiation, and dance rites. (2013: 151)

Wright’s *tube* and my *tube* point in the same direction. However, whilst all are clearly relevant, I have reservations about phrasing the issue in terms of

religion, cosmology, shamanism, etc. for this tends to divert attention away from the everyday behaviour and equipment that are an essential component of this concept. For me the *tube* is equally natural history, technology, anatomy, physiology, sociology and psychology.

The second limitation is that while tubes are—only too obviously—about sex, psychosexual development, fertility, fecundity, etc., they are much more than just this. This point is well made by Lévi-Strauss in his critique of Freud's analysis of myths and dreams. Freud assumed that while the symbols in dreams were limitless, they all had a single referent—sexuality. Lévi-Strauss (1988: 193-4) notes that meaning in myth is not transferred from term to term but from code to code, i.e. from one category or class of terms to another and that one should not assume that, by its very nature, one of these classes or categories is to be taken literally whilst the other is figurative because a metaphor always works both ways—“like a two-way street” (1988: 194). To put this simply, one can as much talk about the seasons in terms of sex as of sex in terms of the seasons.

Lévi-Strauss rightly criticises Freudian psychoanalysis for reducing everything down to sex—and much the same problem dogs Reichel-Dolmatoff's writings on the Tukanoans—but his own work also misses the full implications of his insights by reducing them “up” to a cross-continental exploration of structural transformations between myths, an exercise that comes at the cost of ethnographic depth. Between the extremes of Freud's sex and Lévi-Strauss' transformations there is an extensive middle ground where a moral philosophy of the digestive tract is but one part of a wider philosophy that weaves together an indigenous understanding of human anatomy, physiology, psychology and perception with wider reflection on the human activities and capacities, social arrangements, the cultural, natural and physical environment, animals and plants and the workings of the cosmos. This philosophy is better brought to light by intensive exploration of a single ethnographic case.

This philosophy involves *all* of the many tubes and orifices that can be found in the body, in human artefacts and in the world outside. It is certainly a system of education about how tubes work and how they should be used and controlled but it is more than this. It also concerns the way individuals present themselves and their products to others and how these others judge them. In its Upper Rio Negro form, this philosophy also appears to be intimately linked to a particular understanding of social formations and social processes. Seeger, da Matta and Viveiros de Castro tell us that, in Amazonia, “indigenous socio-logics is based on physio-logics” (1979: 13). Part of my argument will be that Upper Rio Negro socio-logics and the physio-logic of the *tube* are one and the same.

The third limitation is that, with few exceptions (Beaudet 2011 stands out here), instead of widening out the field of enquiry to embrace the general relation between sound and vision or music and colour, the prohibition on women seeing ritual wind instruments tends to divert attention from this wider issue to the narrower issue of seeing vs. hearing flutes.

For the time being, I shall concentrate on Upper Rio Negro ethnography and leave most points of comparison implicit. But even here I must introduce a caveat: in taking on tubes one runs the risk of either taking on too little or trying to deal with “life, the universe and everything” (Adams 1982). In the Upper Rio Negro context, the symbolic ramifications and convoluted cross-referencing between various tubes, flows and senses are so dense and complex as to merit a whole book. This is experimental work in progress and I cannot take on everything at once.

General issues; specific details

I shall deal first with tubes in purely formal terms and then with some ethnographic details relating to the body, artefacts and materials, animals, birds, fish, insects, trees and the landscape. This preliminary analysis is intended partly to anchor the *tube* back into the everyday world of human experience and productive activities; partly to demonstrate the extraordinary density and richness of Upper Rio Negro tube thinking; and partly to supply information that will aid an informed reading of the mythology that follows.

Regarding “tube myths”, Lévi-Strauss (1988: 162-3) first sets out the following formula. The hero’s body may: (1) enter a containing tube; (2) produce a tube that it previously contains; or (3) be a tube into which something enters or from which something comes out. He adds that from being outside at the start, the tube becomes inside, and the state of the hero’s body of the hero moves from contained to container. This does not exhaust the set—we will meet other possibilities below.

Referring to natural tubes, the mouth, nose, ears, vagina or anus, Lévi-Strauss then observes that these can be anterior/posterior and above/below; each may be closed/open and, when open, can absorb or eject. These permutations leave much out. Lévi-Strauss correctly observes that objects such as blowpipes or tobacco pipes, animals such as sloths and howler monkeys, and bodily states such as oral greed and anal incontinence are merely “empirical realisations of an underlying formal structure” (1988: 163). But a specific focus on natural tubes is an artificial restriction that would seem to run counter to the structuralist principle of defining an object of study by seeking out in advance a full range of permutations of a set of relations. For tubes in general, a more complete set of permutations (examples in parentheses) might

run as follows: a tube can be open at both ends (gut, house, flute, blowpipe, cigar); permanently constricted/closed at one end (womb, throat, tipití, fish trap, pot, mask); permanently constricted/closed at both ends (canoe, beer trough, slit-gong). The behavioural characteristics of animals and specialist crafts of humans may also suggest openness (howler monkey, jaguar, dancer,) or closure (sloth, tapir, potter). Open tubes typically permit linear flow: this may be normally unidirectional (blowpipe, hair tube, gut, river *en gross*); normally reversible (breathing, river back-currents); or temporarily reversed (vomiting, spitting). A tube's sides may be solid (coca mortar, palm trunk, bone); or porous (tipití, basket, gut). A virtual/potential tube's sides may be softer than its interior (bark); harder than its interior (bones, palm trunks); or of uniform density (barkless sections of trees). A solid cylinder/rod/pillar may be a tube by association (rattle lance as vertebral column/umbilical cord; house post as person/flute).

From the above we can also conclude that containers such as houses, compartments, boxes, pots, gourds, baskets, canoes, troughs, rivers, caves and sunbeams all fall within the category *tube*.⁴ The notes that follow are intended to flesh-out this extension of the field.

1. Body

Anyone who skins and butchers hunted animals or fish knows that the basic body-form of all higher animals is that of a tube that contains another tube, the body wall containing the gut. Further tubes and apertures include the ears, eyes, nose and mouth, trachea, vagina, penis, the veins and arteries, the female breast, the vertebral column and many of the bones. Peeled back from the body and legs, the skin of an animal makes one or more tubes. In the Upper Rio Negro, the joints between bones are thought of as further bodily apertures alongside the umbilicus and fontanel. Exit/entry through the apertures of the joints of adults is regulated by the application of black paint (see below and Hugh-Jones 2013) whilst splashing water on the head and blowing spell-charged tobacco smoke on the fontanel and umbilicus are designed to calm small infants, close up their leaky and excessively open bodies and prevent intrusion by dangerous spirit-forces (see also Rahman 2015). The umbilicus connects a person's body to the rivers and sources of origin in the East and serves as a two-way channel, outwards to link people with their ancestors and inwards for the transfer of personal names and the characteristics that are linked with them. These characteristics range from skill in hunting and fishing, immunity from snakebite, special craft skills such as pottery of weaving through to beauty and physical attractiveness. These links between umbilicus, river, name and ancestor explain why the stories of the travels of the Tukanoans' anaconda-ancestors form the basis of spells to confer personal names.

The fontanel aperture appears to persist into adult life as the linear hair parting and circular whorl of the crown. The flow of women's hair from this upper exit point is linked to the flow of blood below. Barasana women are said to menstruate when they see their hair fall in front of their eyes and also said to be singeing the fur from the body of a sloth. As sloths are exemplars of oral and anal closure, singeing their fur should produce a state of openness in the person that does this.⁵ Finally, body hair, perspiration and odours bear witness to further small holes piercing the entire surface of the body.

Inside body-tubes, processes of respiration, digestion, and gestation take place accompanied by in or out movement of air, hair, snot, spittle, vomit, tears, milk, semen, urine, faeces, blood, infants, afterbirth, sound, light, food, drink, snuff, smoke, odours, penises, enemas, suppositories, parasites and thoughts. This is one reason why, in their fabrication of persons, indigenous Amazonians are not content with what is already there but instead create their own versions of the body, making yet more perforations in the lips, septum, nostrils, cheeks, ear-lobes, tongue, penis and skin; inserting feathers, canes, shell, bone, beads, disks, plugs, and pendants in the holes; extracting hair, teeth, and blood; and closing down existing apertures with plugs, paint, cigar smoke and with various ritual precautions and injunctions.

From the above, we can also conclude that the anatomy and physiology of the body, at once a tube and many tubes, serves to exemplify two key ideas: (1) an entity may be at once single and multiple; (2) the processes and products of life are to be understood as flows.

2. Materials, artefacts

In addition to living in tubular houses that are identified with both body and universe, Upper Rio Negro peoples make use of an astonishing array of tubular equipment associated with hunting and fishing; with the processing and consumption of manioc products, tobacco, coca and yagé; with transport and storage; with music making and body ornamentation; and with ritual and shamanism. As noted above, most previous treatments of tubes have dealt only with a restricted sample. In the pages that follow, I shall introduce a number of other tubular objects that have been left to one side. In addition, whilst much has already been written about clay, palm wood, bone and tobacco, a number of other materials are also relevant. Here I focus on hair, bark-cloth and basketry cane.

Hair

Together with air, fur, feathers and down, all of them *hoa*⁶, kapok, palm leaves and palm leaf fibre all belong to a set and concept indicated below as *hair*. All are light and airy and, like tobacco smoke, they make the flow

of breath and wind visible; when shamans blow tobacco-smoke they also make breath and wind audible by blowing loudly; wind also makes palm leaves rustle. The materialisation of breath also appears in the kapok that acts as a flight and piston for blowpipe darts and in the term *buya bikü*, “mature kapok”, that applies to the feather ornaments that accompany and give substance to song. In shamanic spells, analogies are also drawn between the flow of hair from the top of the head and the fountain of leaves that appear to spout forth from the trunk of a palm tree and between this visible flow and the flow of sound from a flute. Hair thus lends chromatic substance and sound to breath and wind. The following excerpt from a story about the origin of night and menstruation (Fulop: 2009[1956]: 341) illustrates all this: a man blew tobacco smoke and opened the doors of night, causing a strong wind to blow. The wind caused the unopened (but soon to be ripe and red) bunch of fruit on a paxiuba palm to split open with a loud report. This sound then split open the vaginas of two young girls, causing them to menstruate.

At the rear of the dancer’s headdress, an open tube of jaguar bone made more open by a filling of jaguar fur (figure 1) is attached to the banana rib support that today stands in for the long pigtailed bound with monkey fur string that dancers once sported (figure 2). Here we have two Upper Rio Negro hair tubes: the bone is a “fur tube” and the pigtail is termed *hoa hoti*, “hollow spiral cone for hair”, *hoti* being a classifier that also applies to cigars, bark trumpets and to bark-wrapped blowpipes. From this double (bone/fur) hair tube hang hanks of sloth fur (“closed”) and howler monkey fur (“open”), the ensemble constituting a well- downward flow of *hair*—vitality or energy—that is balanced and tempered by opposed animal characteristics.



Figure 1. Tubes of jaguar bone containing jaguar fur. Photograph by the author.

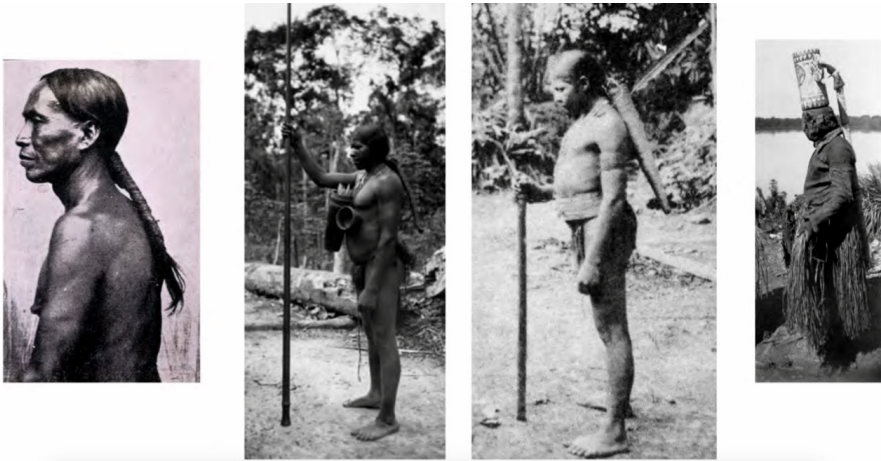


Figure 2. Tukanoan hair tubes. From Koch-Grünberg (1967[1909] vol. 1: 328; vol. 2: 291, 297, 309).

By analogy between the top and bottom halves of the body, the flow of breath, hair and red and yellow ornaments from the male head is a flow of yellowish semen from the penis as the flow of black hair from the female head is a flow of red blood from the vagina. Semen is blood in another form and both come from bone marrow. This red-black blood/yellow semen contrast also explains why men use the process of tapirage to produce the brilliant yellow feathers used to make the frontal crowns (figure 3) that are the quintessence of body-ornament.⁷ The term *maha hoa*, “macaw hair” applies generically to all ornaments. For reasons such as these, the vibrating leaf vane that causes flutes to sound—its voice and soul—is identified with a hawk feather; ornaments are a prime manifestation of names, souls, breath and vitality (*tisü*); and shamans use spells to insert down (*wito*) into the ears of babies to make them hear, respond to advice and learn. To make them become dancers (*baya*), some infants are given a special dancer’s name and a complete set of ornaments is inserted into their ears as a special dose of this down. Like the marrow inside a bone, the dancer is now considered to be inside a flute sharing in its life and substance, a relationship of container/contained that also applies to the dancer who is contained by his ornaments. The term *hoa* that applies to hair and ornaments also applies to any container or bag including the scrotum (*waheri hoa*), the stomach and womb (*güda hoa*) and any carrying bag (*waso hoa*). Presumably this is because the head and genitals are enclosed by hair and ornaments; because string made from human hair, animal fur and palm fibre (“hair”—see above) is used to make ornaments; and because palm fibre was once used to make bags (figure 4). Hair belongs to the domain of weaving and textiles (see also Hugh-Jones in press).

In sum, the concrete referents of *hair* all point towards the realm of soul, vitality, energy, potency, generative capacity, etc.



Figure 3. Yellow feathers on frontal crown showing traces of red staining. Photograph by the author.



Figure 4. Bag made from tucum palm fibre. From Koch-Grünberg (1967[1909] vol. 2: 288).

Bark Cloth

Both brown and white bark cloth are used. The bark on a section of wood is first beaten with a mallet then pulled back over its wooden core like a snake shedding its skin. White bark cloth was used to make the penis pouch traditionally worn by men, a bark bag-tube that contains the penis-tube—as a hair-bag contains the male and female genitals—tubes within tubes. The same material is used to make the painted bark-cloth aprons (figure 5) suspended from the waist over the genitals during dancing, a hyper-form of the penis-pouch just mentioned.

Brown bark cloth is used to make the tubular bag-like sieve that is pounded against the interior wall of a huge cannon-like cecropia-wood tube (figure 6) to separate edible coca powder (flesh of Coca Anaconda) from inedible coca leaf stalks (his bones). This tube-within-tube is the analogue of the tipití, a basketry tube of bark (skin of Manioc Stick Anaconda—see below) that separates the liquid and starchy components (blood, flesh) of manioc from fibre (bones).⁸ The same material is used to make entire masks amongst the Arawakan and Witoto groups to the south of the Tukanoans and the tubular sleeves of Cubeo mourning masks. The Arawakan-Witoto pairing of bag-like masks with aerophones gives way to one of feather ornaments paired with aerophones amongst the majority of Tukanoans but conserves the same container/contained, skin/bone relation.



Figure 5. Dancers wearing bark cloth aprons. Photograph by Brian Moser.



Figure 6. Coca sieving tube: front (above), rear (below). Photographs by the author.

Basketry cane

Epidermis stripped from aroumá (*Ischnosiphon* spp.) canes is used to make basketry, much of it patterned, and also fish traps. Amongst the Baniwa, the Anaconda is the Owner of basketry cane and designs—his patterned skin. For the Tukanoans, basketry and designs derive from Yagé (see below), a transformation of Yuruparí whose own porous, basketry-like skin emits both sound and *hair*—pattern and colour. The legs of dancers are also painted with designs in black paint that reproduce the weaving pattern of the tipití.

In sum, *hair*, bark-cloth and basketry are parts of a set embracing coloured/patterned ornaments, textiles and weaving (broadly understood) and are all forms of skin or clothing.⁹ These skins contain flesh/blood as flesh and blood contain bones and bones contain marrow/seed/blood—tubes within tubes. More abstractly, *hair* is flow, fibre, colour, and pattern.

I draw attention to these other tubes and materials for several reasons, firstly to complement Lévi-Strauss' discussions of container-contained relations. Secondly because part of the sense of the tubes such as blowpipes, flutes or cigars already considered in the literature lies in their relation to their neglected counterparts. Thirdly because crafted objects and crafts—and here I include music, dance, song and oratory—are products or fruits that flow from tubular bodies and their appendages—the similarity between the word *rika* “arm” and *rikaa* “fruit” is suggestive here.

Lévi-Strauss' (1988) musings on the analogical relationships between craft specialisation and psychological traits, his boisterous butchers, chatty barbers, and jealous potters—touches on one aspect of this. The fact that the Upper Rio Negro region is noted for craft specialisation between exogamic groups (pottery, basketry, stools etc.) and between male siblings (chanters, dancers, shamans) merits further investigation here. But I would stress that the relation between body, craft and character is as much indexical as metaphorical for what people produce, the stuff externalised from their tubes, is assessed by others as a direct index of their strength, skill, knowledge, ability, beauty, reputation, fame, leadership, etc.

3. Animals

In the Upper Rio Negro context I would add the following to Lévi-Strauss' (1988) exploration of animals, tubes and apertures:

Birds. The nightjars that figure so prominently in Lévi-Strauss' (1988) discussion of tubes figure hardly at all in Upper Rio Negro myth and ritual. But coloured, singing birds figure prominently as Yuruparí instruments in another guise (see also Synaesthesia below).

Fish. Most fish possess a swim bladder (*buhua*, “blowpipe”—see Appendix 1), many are overtly tubular in form and a number of them—notably aracú (*Leporinus* sp.) and surubim (*Pseudoplatystoma* sp.)—make loud noises when spawning. Fish also figure prominently in myth and ritual as the counterparts of birds, as standing in a relation of unborn spirit (fish) to spirit after death (bird—see Hugh-Jones in press) and as Yuruparí instruments in another guise. I return to birds and fish in my discussion of synaesthesia below.

Snakes. Much has already been written about anacondas in the Upper Rio Negro context. The elongated form, bright colours, patterned bodies, shed skins and poison of snakes link them to blowpipes, birds, Yuruparí instruments, and yagé (see below). Other information concerning anacondas integrated into Upper Rio Negro mythology includes their production of a loud hissing/guttural roar when threatened/angered, their headfirst swallowing of prey—like childbirth in reverse; the smelly belches/farts they emit when digesting; the tangled, bloody mass they regurgitate if disturbed; and the black shit and white, semi-solid chunks of urea, substances identified with pottery clay and white paint, that they excrete.

Insects. Analogies between blowpipes, wasps and poison darts appear frequently in Upper Rio Negro mythology but the Witoto and Arawakan models of extra-uterine reproduction based on analogies with the metamorphosis of Lepidoptera and apparently male (actually female) wasps who inseminate their caterpillar or spider prey appear to be much less evident amongst most Tukanoan groups.¹⁰ For Tukanoans, opossums and Surinam toads (*Pipa pipa*), two animals that carry their young in exterior pouches or tubes, and the act of vomiting fulfil the same function.



Figure 7. Aerial roots of paxiuba palms: a. stilt roots looking like penises; b. stilt root looking like a penis emerging from a vulva. Photographs by the author.

4. Trees

Paxiuba palm. Although already much discussed, three points are worth emphasising about this palm. Firstly, its leaves and stilt roots, or head and genitals (see below) give it an appearance of symmetry between top and bottom. Secondly, its apparent androgyny: the emerging stilt roots look like penises (hence its common names of “pico de negro” and “man palm”, figure 7a) but also look like a penis/clitoris emerging from a vulva (figure 7b)—androgyny and Yuruparí go together (see below). If tubes of paxiuba and blowpipe palm wood are used to make Yuruparí instruments and blowpipes, strips of these same palm woods are used to make the woven screens that serve to make fish traps and seclusion compartments for girls at menarche and boys at initiation, shielding them from view. Like basketry fish traps, these screens belong to the domain of weaving and skin discussed above.

Below I shall show that the figure of Yuruparí who swallows initiate boys is all of anaconda, paxiuba palm, tipití and fish trap. His name in Geral alludes to this fact: *Yuru-* is “mouth” and *-parí* = “paxiuba screen, fish trap”. This suggests that the initiates inside his belly/seclusion compartments are all of an anaconda’s meal, edible palm-weevil grubs (*Rhynchophorus palmarum*) in the pith of a palm trunk, manioc mash in a tipití, and fish in a fish trap. Fish traps also figure as the spread-eagled legs, open vagina and enclosing womb of a “female” deity and avatar of Yuruparí’s mother (Calderon 2011)—I will return to the theme of androgyny below.

*Cecropia/Pourouma Trees.*¹¹ For brevity I use the following table shows why cecropia trees (*wakubii*) and paxiuba palms make a natural pair:

| Paxiuba | Cecropia/Pourouma |
|---|---|
| Grow in forest. | Grow in abandoned swiddens. |
| Inedible fruits. | Edible fruit called “fat/grease” (<i>iíye</i>) whose semen-like juice fertilizes Yuruparí’s mother. |
| Pith hosts larvae. | Internodes host ants. |
| Hard black wood with soft pith. | Soft white wood with central tube. |
| Material for flutes, trumpets. | Material for thumping tubes and coca-sieving tubes, both making loud booming sounds. |
| Paxiuba aerophones emblematic of intra-clan, agnatic rituals. | Cecropia stamping tubes emblematic of inter-clan affinal exchange rituals. |

Table 1. Paxiuba Palms and Cecropia Trees Compared. Elaborated by the author.

On a larger scale, this contrast is also that between the Owner of Cultivated Food Plants and Yuruparí, the Owner of Forest Fruit (see myths below).

5. Landscape

Rivers. The classifier *-ya*, *-sa* groups together rivers, snakes and caterpillars.¹² The hard bottom and banks vs. liquid middle of rivers, their role as a conduit, and their mythological origins in all of felled hollow trees, tobacco smoke, moulted snakeskins, and birth-blood makes them tubes.

Rapids and Caves. Many Upper Rio Negro rapids have holes and caves in their rocks and several have names of holes (Geral *-cuara*: *Arara-cuara*, “macaw hole”, *Tapuru-cuara*, “Caterpillar Hole”, *Pira-cuara*, “Fish Hole”, etc.). Rapids are joints between bones, doors of malocas, transformation houses, and points of access between the earth and underworld or present and past. In this sense they are the apertures of river-tubes.

Mountains. Mountains (~*giita yukii*, “stone tree” or *bota*, “pillar, post”) are malocas, the homes of animal souls, and also house posts, themselves both men and Yuruparí flutes, that support the roof-sky.

Sunbeams. Sunbeams (~*buhihu buhua*, “sun’s blowpipe”) are tube-like umbilical connections and modes of access between sky, earth and underworld, a quality they share with paxiuba palms, tall trees, tubular gourd stands and rattle lances.

It should be clear from these explanatory notes that all of human life, from individual capacities and personality to grand cosmology, is encompassed in the relations between whole body-tubes, in the relation between the body and in its tubular parts, and in the apertures and flows through these tubes. The figure known as Kuwai-Yuruparí condenses into one body this tubular encompassment of life (for brevity, I refer to him below as Yuruparí). The rituals and mythology associated with him are all about explaining, controlling and perpetuating life. They do all this through two principles that work together. The first is a dense web of analogy between the tubes and orifices of the top and bottom halves of the body, between the tubes of the male and female body, and between the human body-tubes and tubes out there in the world—artefacts, birds, animals, fish, snakes, trees, palms and landscape features. The second principle figures as a play of fractal self-similarity that can be expressed as a relation between one and many, container and contained, totalisation and detotalisation, continuity and discontinuity or abstract *tube* and concrete tubes.

Before showing briefly how these principles inform the workings of ritual and relate to the general issue of production, I now turn to some well-known Upper Rio Negro stories about creation, Yuruparí, the origin of cultivated plants and the women’s theft of Yuruparí flutes. My stripped-down, tube-biased, selective summaries draw on my own knowledge and on published sources but are not intended to provide a representative account of any particular version. Their sole purpose is to give some idea of what lies behind

the stories and to show how the principles just mentioned appear in myth. Clarificatory clues and prompts are indicated by bold square brackets and variants by a slash. Armed with these clues and what has been said above, I invite readers to play “find-the-tube” for themselves—I trust that the stories speak for themselves.

M1. Creation

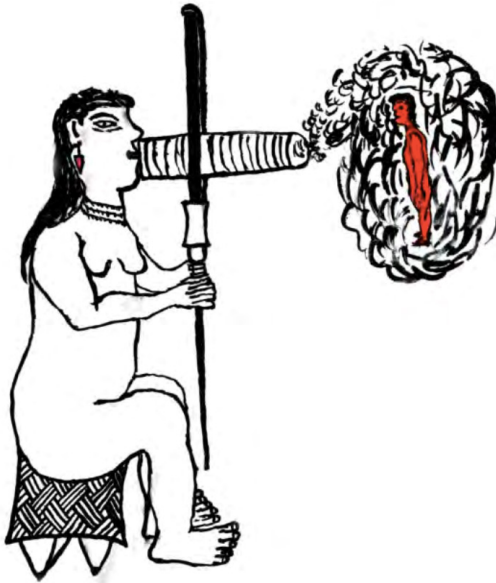
a. *Tukanoan*

Before people became distinguished from objects and men from women, the bodies of deities were all the same with a stool for hips; a gourd for heart, lungs and womb; a gourd holder as body and legs; a rattle lance as vertebral column, etc. An androgynous “female” deity, in a compartment made of feathers, fertilized a gourd of coca/sweet caimo or uvilla¹³ juice with smoke blown from a cigar held in a cigar holder (figures 8a and 8b). [Cigars = penis/fish in several stories. Cigars have the same conical, spiral construction (*hoti*) as bark trumpets and blowpipes with spiral bark binding]. Cigar smoke and coca created five deities with bodies as five maloca/compartments within the universe/maloca. One of these deities [a container of ornaments/feather box] vomited up ornament-birds that entered an Anaconda-Canoe as ornament-fish and travelled up the Milk River, an umbilical tube/yagé vine that connects past with present and ancestors with descendants. The Anaconda-Canoe created the river up which it swam, shedding it as it moved [as snakes shed their skins or a penis sheds its foreskin. *Hedo~rudire*, “to moult, shed skin” is cognate with *hedore*, to “turn inside out, expose the glans” and with *raka-hedo*, the feather box that reveals its interior at dances—see Hugh-Jones 2016]. The canoe stopped at many transformation houses [doors; joints between bones] before stopping at the centre of the earth where human beings first emerged from the egg-like ornaments and then emerged through a hole in the Ipanoré rapid [both a birth passage and a manioc sieve—see Hugh-Jones 2016] to become the ancestors of all human groups. [Like a tree with branches, the Anaconda-Canoe is one/many on different scales. On the one hand, the origin of the Rio Negro/Milk River, its major affluents, their sub-affluents etc.; on the other hand, the ancestor of all humanity; of all Tukanoans; of any one Tukanoan group; and (potentially) of any clan or male sibling-group. A clan is a composite, tubular entity made up of persons, houses, tubular flutes and ornaments].

b. *Arawakan*

Three Universe People come into being inside a finger bone in a river. A grandmother caught the bone in a net, now as three shrimp-persons. She hid these beings under a gourd where they became three crickets. These three cricket-children first became two kinds of woodpecker-youths and then a

single adult. [Note the scaling-up from three to one. Shrimps and crickets hide in hollow logs; woodpeckers make hollow trees and nest in them].



a.



b.

Figure 8a. Luiz Lana: Creation from cigar—note the red (blood) colour of the new-born infant. From Umusi Pārökumu & Törämü Kēhíri (1995: 67).

Figure 8b. Tukano man smoking cigar in holder. From Koch-Grünberg (1967[1909] vol. 1: 281).

M2. Yuruparí

A “female” deity was inseminated through her mouth/umbilicus by a cigar/caimo fruit juice/coca by a man/men identified as bone. Lacking a vagina, she was opened by a cigar-holder/palm log/large mouthed, tubular jacundá fish [Barasana ~*búha buhua*, “ascending blowpipe”] and gave birth to a child with jaguar fangs, incessant thirst and loud, thunderous cries. From holes in his body came all the music of Upper Rio Negro ritual: flutes, trumpets, panpipes, whistles, songs, chants and incantations. Each part of his body corresponded to (a) a named wind instrument (see the image of flutes and trumpets corresponding to parts of body of Yuruparí in Wright 2015: 142) and (b) the animals, birds and fish of the forest. The sounds opened up the universe. Thick hair covered his body like a monkey/sloth (see figure 13

below). [Yuruparí is both howler monkey (open) and sloth (closed); fur from these animals was used in Yuruparí masks. His fur was also fibre from palm leaves used in making string. With a porous body leaking sound /fur/palm fibre, Yuruparí is like a tipití (~*hido-bü*, “anaconda-closed tube”) that leaks manioc juice (~*yuka*) a term cognate with ~*yukaa*, “palm fibre”].

Yuruparí is a synthesis of animals and plants with a particular connection to palms/trees, their wood/his bones [wood = *hea*; compare *hee*, “Yuruparí”] and their fruit/his flesh [*hee rika*, “Yuruparí fruit”]. The outputs of the skin and bodies of Yuruparí /animals/palms as their behaviour, coloured fur and body markings, coloured fruits and sounds are all indices of their fertility, growth and vitality. [Yuruparí is also a noise-producing, brightly patterned anaconda/boa associated with the colours of birds].

Yuruparí’s mother’s birth blood gave rise to the reddish-black [Blood-like] rivers of the region, an opening/expansion of scale of the universe. She did not see her child who was taken by the men and given to a sloth foster-mother. Yuruparí sucked her dry then ripped off her breast. [Sloths exemplify oral/anal continence; we may suppose that this sloth mother’s closure tempers Yuruparí’s noisy, leaky, greedy openness]. Yuruparí was sent to live first in the forest and then up in the sky with his father, the Sun.

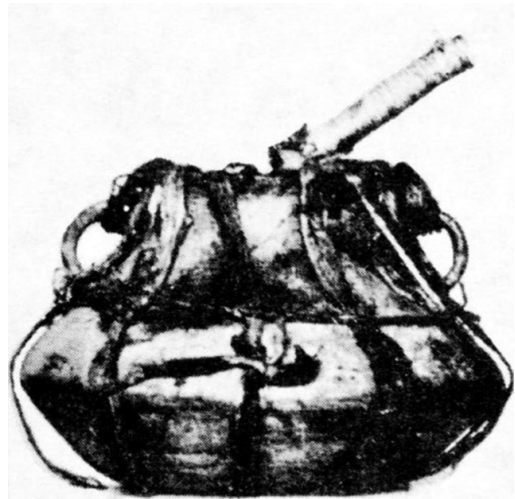
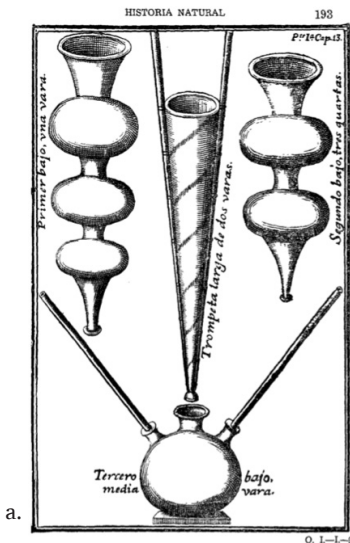


Figure 9. Pot-and-tube Yuruparí instruments. a. from Gumilla (1963[1741]): 165; b. from Koch-Grünberg (1967[1909]) vol. 1: 135.



Figure 10. Baniwa ceramic pot-person. Author's collection.

Later Yuruparí returned to earth, appearing to four boys making music with wasps tethered on strings inside a large beer pot likened to Yuruparí's potbelly. [One variety of Yuruparí-instrument is made from two tubes blown into a pot (figure 9); pots are tubes/persons (figure 10)]. Yuruparí told the boys that the real Yuruparí was he himself and that to know real Yuruparí music they should first undergo the containment and continence of initiation—seclusion, fasting and not seeing/being seen by women. He showed himself and his music to them and the sound of his body expanded the world from micro- to macro-scale. Sending the women out of sight, the boys' father put the boys in a seclusion compartment where they stayed for many months, fasting and learning to make the baskets on which their future wives would depend for their manioc work.

Later Yuruparí appeared again, telling the boys that they could now eat raw forest fruit but should not eat meat, fish or anything roasted. To temper their hunger, he offered them japurá (*Erisma japura*) fruit to smell. Appearing, now in the guise of a potbellied woolly monkey [Lagothrix sp.; Sp. *barrigudo*, “big belly”], Yuruparí tempted the initiates by throwing down uacú pods (*Monopterix uacu*) from a tree. [Bitter/inedible when raw, roasted uacú seeds are edible and give off a smell similar to the cheesy-sexual smell of the edible purée made from fermented japurá seeds (*badi*, “japurá” also “semen”). Japurá and uacú are the subject of ribald comments. This temptation by fruit suggests a foretaste of the initiates’ need to control their developing sexuality]. Unable to resist, three of the boys roasted and ate the seeds as the youngest looked on; their lack of self-control caused a furious Yuruparí to revert to his former, hyper-open, state. Thunderous noise and copious saliva, the origin of vines, poured from his mouth, floods of tears/rain poured from his eyes causing the waters to rise. [Initiation coincides with the onset of the rainy season]. He became/his mouth or anus opened up to become the entrance of a cave/hollow log into which the errant initiates ran for shelter. While younger, wise one returned home to report what had happened, Yuruparí flew up to the sky. [From Yuruparí/the universe as a single, all-encompassing tube, we now have fractal tubes-within-tubes: initiates within Yuruparí; seclusion compartment within maloca; maloca within universe].

With the period for seclusion now over, the father sent a wasp/bird messenger to Yuruparí telling him to return to earth to release the initiates. Initially refusing, Yuruparí then succumbed when offered his favourite food of insect larvae or his favourite beer/a beer variety he had not previously sampled. Arriving as a fully ornamented dancer, Yuruparí vomited up the initiates as three bloody, foul-smelling masses into three manioc sieves/as bones into a compartment. [As tipitís “vomit” manioc pulp into flat baskets and as anacondas regurgitate their prey]. Telling the people that he had killed their boys because they had disobeyed him, Yuruparí then warned the men that, should they wish to kill him in revenge, they could only do so with fire. The men then built a fire and pushed him in.

Yuruparí’s spirit ascended to the sky and his body and ornaments [also trees and leaves] caught fire in a universal conflagration [burning swidden]. From his ashes a paxiuba palm sprang straight up to the sky, a vertical umbilical cord/*axis mundi* allowing shamans and dead souls to pass between underworld, earth and heaven. [Analogues include the rattle-lance, the Sun’s tubular vertebral column uniting the layers of the universe and the Milk River, a horizontal umbilical cord uniting West with East]. The universe then shrank back to its former scale of a single maloca.

Aided by a squirrel, the Universe people cut sections of the palm as flutes and trumpets that they distributed in sets, Yuruparí’s bones, to each human group. [The sectioning and distribution of the Yuruparí palm brings about a detotalisation/differentiation of all that Yuruparí’s body encompasses: of

humans, birds, animals, fish, trees and plants and their diverse appearances/sounds; of animate bodies from artefacts; of the different varieties of music, song, dance, and ornamentation owned by different Upper Rio Negro groups. [Compare the detotalisation of the Anaconda-Canoe above and of Yagé below]. Tapir threatened to use his loud trumpet to stop women from giving birth/eat up all future human beings; Howler Monkey, initially with a small, feeble whistle, tricked Tapir into swapping instruments. Howler monkeys today use their loud voices to assist life processes while tapirs, with feeble whistling noise and fastidious shitting habits, threaten to ingest new-born babies into their retentive anuses, a birth in reverse. [Tapirs are *soori ~basa*, “ingesters”].



Figure 11. Side-blown/side-emitting instruments used during ceremonial exchange: pot trumpet (left); stamping tube (right). Author's collection.

Encompassing undifferentiated sound, colour, appearance, gender and living entities, Yuruparí also encompasses life-giving/life-destroying powers, persons and substances—shamans and sorcerers; food and poison. Yuruparí's burned fur/hair became the fur of the Black Sloth and Douroucoulí Monkey, the Owners of Sickness. Poison and sorcery, curare and fish-poison vines sprang from his ashes and his soul gave rise to sickness in the form of spirit-darts. [In his negative aspect, Yuruparí is like a blowpipe: he blows darts with *hair* (ie kapok) at one end and poison at the other].

Yuruparí's mother first lacked a vagina but later became sexually voracious. Her pubic hairs were poison vines, and snakes, spiders, and scorpions and other poisonous creatures lived in her vagina. In this guise she was responsible for creating sickness and biting flies.

M3. Cultivated plants

The Owner of Cultivated Plants produced an abundance of food. [Compare Yuruparí, Owner of Forest Fruits, who imposed a rigorous fast]. Telling the people not to look, he used a magic cord to fell trees and plant a swidden; they disobeyed and did look so agriculture is now hard work. Dressed in full dance ornaments and holding a rattle lance, he had himself burned to death along with the trees of a newly felled swidden; his spirit escaped when he was shot from inside a hollow cecropia tree that exploded in the heat. His burned body gave rise to all cultivated plants and his skull gave rise to coca and snuff gourds. His belly gave rise to the beer trough and other parts of his body gave rise to the *japurutú* flutes made from blowpipe palm, to surubim trumpets made from basketry and blowpipe palm, to side-opening cecropia wood stamping tubes, to side-blown pottery trumpets (*uriro*) (figure 11) and to a set of songs and dances that are all essential components of affinal ceremonial exchange rituals. [In sum: the contrast between Yuruparí and the Owner of Cultivated Plants is like that between paxiuba palm vs. blowpipe palm, manioc and cecropia; between open, end-blown flutes/trumpets vs. part-closed side-blown/side-emitting instruments; between initiation vs. ceremonial exchange; and between patriliney vs. affinity].

M4. Women steal the Yuruparí flutes

Following an initiation rite, a sister heard her father telling her brother to get up early to bathe, vomit and wash his penis [coded references to playing flutes]. The son remained in his hammock asleep but his sister went to the port and found a flute. She tried in vain to play it with her vagina. A jadundá fish (see above) indicated that she should use her mouth by signalling to her with his own wide mouth. With new powers, she and her fellow women stole all the flutes and the ornaments too and, with all necessary equipment now assembled, they staged a Yuruparí ritual. [By doing this the women re-

totalise the body of the Yuruparí-child that had been stolen from them]. As the instruments sounded again, the scale of the universe expanded anew, this time to the scale we know today.

The men tried to take back the flutes but the women repelled them, using the flutes like blowpipes to shoot darts at the men, the start of a full-scale war between men and women. Having lost their flutes, the men took up the women's previous work of manioc cultivation and processing. [Suggesting an equivalence between manioc tubers and flutes with manioc tubers as the children of women (see C. Hugh-Jones 1979) and flutes as the Yuruparí child and initiate boys, the children of men].

The men plotted to take back their instruments by making two kinds of aerophones, a flute of blowpipe-palm and a piston whistle made from a vine created from a falling thread of spittle from one of their mouths. [Compare the vines created from Yuruparí's drool above. Piston whistles are made by removing the woody interiors from sections of vine and then re-inserting the wood as sliding pistons in the bark tube casings. A blowpipe-palm flute (*sawiro*) and chorus of piston whistles (*rika-bii*) distinguish special Yuruparí rites focused on gathered animate foods (frogs, caterpillars, palm grubs, etc) instead of tree fruits. Baniwa associate piston whistles (Ban. *molitu*) with a frog of the same name]. The men hid in a fish trap playing the piston whistles and then aimed the sound of the blowpipe-palm flutes at the women's vaginas. The explosive sound penetrated their vaginas causing them to menstruate as the men took back their flutes. Like girls are at menarche today, the women were put into seclusion where they learned to make pots [closed tubes]. Having already hidden flutes in their vaginas, two of the sisters fled, one to the East to become the Mother of Cloth and Manufactured Goods, the other to the West to become the Mother of Feather Ornaments. [On cloth and ornaments as transformations of one another see Hugh-Jones in press]. These two sisters are avatars of the twin mothers of Yagé and Yuruparí that we shall meet below.

The well-tempered aperture

The acts of creation described above either involve forest fruits and take place in agnatic, intra-clan Yuruparí rituals that also involve the initiation of young boys or they involve cultivated plants, especially manioc and beer, and take place in inter-clan, affinal *dabukurí* exchanges that may also celebrate the end of a girl's first seclusion at menarche.

The stories present an initial state where there is no sex. Deities are gendered but have identical bodies with no genitals and create other beings through their mouths. Insemination is by tobacco smoke from penis-like cigars, or semen-like viscous caimo fruit juice, gestation takes place in stomachs and gourds, and birth is by vomiting and regurgitation. All of these

processes focus upon the top half of the body by analogy with the generative processes that today focus on the bottom half.¹⁴

Like deities in myth, newborn children are initially as if sexless and genderless. Soon after they are born, children receive a name from the clan's stock of names. The clan is at once one body—its named ancestor, the assembled set of his bones/flutes and trumpets—and also many bodies—the clan's component members, names and instruments. The name the child receives, a name that is also the name of an ancestor and of many other clan members past and present, shares this dual quality. The name, and much of the shamanism that accompanies it, speaks of the child's future capacities and character. With the name comes the child's growth and strength, what gendered activities it must do as a girl or boy, and what it might become as a talented individual—an expert potter, garter-maker, gardener and craftswomen, or the chosen woman who sings to accompany the men's dances in the case of a girl, or a skilled hunter, a much-admired dancer or a much respected shaman in the case of a boy.

The name is fetched from a transformation house downriver and its journey to the child repeats the journey of the Anaconda-Canoe. This Anaconda-Canoe travels up a tubular river against the current, the West-to-East, top-to bottom flow of the universe/house/body. The Anaconda then detotalises itself by vomiting out its cargo of people who, like a baby, emerge through a vagina-like hole in the rocks. It is only too easy to read between the lines—but it would also be a mistake to reduce all this to bodily functions.

A child is born from a woman whose body, in giving birth, is in its maximum state of openness. Her child, an extension of her body, a tube previously within her tube and attached to her by a tube, shares in her state of openness—children are super-leaky and prone to lose both body fluids and souls. To close them up, shamans blow tobacco on their fontanels and their mothers splash water on their heads and bodies and paint these bodies to make them invisible to the penetrating eyes and bodies of spirits. But if this closing were to be done to excess the child would not eat properly or grow, not learn to speak, not heed its parent's advice, and not begin to work, to make things or to dance. A balance needs to be struck.

For both sexes, puberty and its associated rituals and restrictions is a process of sexing and further gendering—the opening up of orifices and the tempering of whatever flows in and out of them. All people who undergo any voluntary or involuntary contact with spirits or ancestors risk wasting away (*wisiose*), a condition of excessive openness where vomiting, diarrhoea and sweating can drain away the victim's strength and vitality till they die. This tubular, vertical linear draining fits with wider ideas about the make up of the individual body and its fractal, contained relation to the wider body of the clan, a peculiarly Upper Rio Negro version of the lateral, transformative instability involving

predation by animals or spirits and metamorphosis into one of their kind reported for other parts of Amazonia (see for e.g. Vilaça 2011: 247). This lateral transformation plays a relatively minor role in Upper Rio Negro mythology and, unlike wasting away, is rarely mentioned in daily life.

Openness is risky but it is also a necessary part of attaining adulthood. And this is not just because adults have sex and reproduce. Adults must be open because they must see, hear and talk to be competent at all. They must also be open because all the manual, verbal, musical and shamanic skills that make up their personalities and reputation and on which they depend for making objects to use, to give to their spouse or to exchange with others, require them to be open. But, as the Yuruparí story indicates, excessive, uncontrolled openness is dangerous, destructive and poisonous. To control, channel and direct this potentially dangerous opening, attention is focused on the entries and exits of the body: by seclusion—enclosure in a tube; by hair cutting—a regulation of flow; by a regime of verbal counselling—through the ears; by verbal spells—too secret to say out loud, these are blown into food then eaten and incorporated via the mouth; by a strict bodily discipline—not looking at the sun or at people and avoiding their gaze; and by a strict diet that avoids any sign of openness or excess—no hunted (pierced) animals, animals or fish with evident blood, or any food that gives off the smell of roasted fat when cooked.

In theory, young girls start menstruating when they are opened by a visit from the Moon but as marriage happens very young, visits from their husbands also help. A number of factors such as their physiology, the fact that both menstruation and childbirth appear to *happen to* them, their talkativeness, their attractiveness and men's desire for, and fear of, their bodies, appear to suggest that women are, by their nature, open. Reflecting male anxiety and desire for control, Yuruparí stories describe the “perfect” women as one who does not pry, does not reveal secrets, and is not sexually promiscuous. Prying would compromise male ritual; revealing secrets could damage a woman's husband's power and reputation, and revealing the secrets of her husband's clan would be an attack on its collective vitality; and sexual freedom causes problems.

By contrast, young men must be opened. In the past, and to some extent still today, young Tukanóan boys had their ear lobes pierced for the insertion of tubular cane plugs. In a Makuna myth (Trupp 1977: 31), Adyawa, a deity who is at once one and many and also Yuruparí in another guise, first creates our hair whorl/parting (= hole in head—see above) with a patterned ear-tube then expands the space of the world with his breath as he hums loudly and rotates the same tube. The association between hair, hair parting, fontanel, ear-piercing and bleeding (which piercing causes) would suggest that this piercing is the male, upper-body equivalent of female, lower-body menstruation and another facet of the male menstruation that many have associated with initiation and Yuruparí instruments. With his earplugs in place, a young man is ready for impregnation with music and ritual knowledge passed to him by senior men via his ears.

This attention to flow from the upper apertures of the upper body is reinforced by the initiate's obligation to rise before dawn to vomit water at the river, sometimes accompanied by flutes who vomit water over his head (see Hugh-Jones 1979)—and note that it was because a son failed to rise early and vomit that his sisters got hold of the flutes and began to menstruate. Upper-body flow is also reinforced by the fact that, following initiation, young men begin to chant, sing and wear ornaments on their heads as an extension of *hair* (see above). A woman *can* see, and should admire, the coloured feathers on a man's, head but she should *not* see his flutes, penis, or their products; likewise a man *can* see a woman's head hair but he should *not* see her pubic hair or vagina or the blood and infants that emerge from there. Finally when adult men chant, they speak through a hand closed to form a tubular fist held over their mouth, directing their speech and breath and tempering the openness of their body.

This general opening of the initiate's head and upper body contrasts with a more balanced approach to his lower half. When he is shown the flutes for the first time, they are blown over his penis and he is also beaten with whips (*heta waso*, "tocandira ant whip") that mark and pierce his skin. At the same time, his body is covered from neck down with a uniform coating of black skin dye (*wee*) with no colour, no design and no sound (see below). This closes the skin and the entry/exit points at the joints and renders those painted in this way invisible to spirits. In later life during rituals, an adult man's joints are still painted uniform black but the areas between his joints are now painted with black designs replicating the weaving of a tipití—in the image of the tipití-like Yuruparí, the man's skin is now patterned and porous.

During the extended periods of seclusion that follow menarche and initiation, adult women teach girls to make (stopped up, impervious) pots as elder men teach boys to make (porous) baskets. Advice flows into these novice's ears as their crafts begin to flow from their hands. Girls are also taught to make beer, its chewed starch substrate flowing from their mouths as the finished product will later flow as vomit from the mouths of men.¹⁵ When their seclusion is over, girls present their pots and boys their baskets to cross-sex ritual partners (~*heyeri* m., ~*heyerio* f.) that prefigure their future spouses. Further up the scale, the Baniwa once exchanged their exquisite painted pottery alongside gifts of beer during dabukurí rites (Journet 1995: 262-3)—my guess would be that this pottery was exchanged against basketry as today fish is still exchanged for meat, and feather ornaments (*hair*) exchanged for tubular bamboo and cecropia stamping tubes (bones) in rituals of ceremonial exchange between affinal groups. Between these collective tubular clan-bodies, a back and forth flow of tubular goods runs in tandem with a flow of sisters and daughters.

The seclusion, dieting and other restrictions that accompany this initial period of training add up to a carefully oriented, controlled semi-closure of selected orifices and a moderation of flows through them. To a greater or lesser extent, much the same moderation and control also accompanies the learning and execution of any craft or productive activity. This applies as much to the making of artefacts as it does to hunting, fish, chanting, singing and dancing or to the processes involved in the procreation and the fabrication of whole persons—infants, children and adolescents. Lévi-Strauss (1988) may well be right to highlight the analogical contradiction between making pots (closed tubes) and menstruation (open tube) but the same seclusion, dieting and other restrictions apply with equal force when men make baskets (porous tubes) and, even more so when they make feather ornaments, an activity compared to menstruation. They also apply in respect to so many other productive activities that the common denominator involved cannot be any simple analogical relation between personal condition and product. It must lie rather in the idea of production itself and in the fact that products are indices of flow (see also Oliveira 2015: 356). As I have said elsewhere (Hugh-Jones: 2009: 49), making is also self-making and training is simultaneously physiological, psychological, technical, intellectual, moral and spiritual—and cosmological too.

In the above I have made several allusions to the pairing of sound and colour—the sound of blown tobacco smoke, the loud roaring, hissing noises of brightly-patterned anacondas and boas, etc.—a linkage that is also very evident in the sound that emerges from Yuruparí’s skin accompanied by a growth of *hair* that covers his body. I now turn to a detailed examination of this issue.

Part 2: Synaesthesia

Perceptual experiences are mostly multimodal. As perceivers we do not usually recognise them as such. We think of the experiences we are having as visual or auditory or tactile, not realising that they often arise from the fusion of different sensory inputs
(Smith 2013: 212).

Introduction

The term synaesthesia describes “a neurological phenomenon in which stimulation of one sensory or cognitive pathway leads to automatic, involuntary experiences in a second sensory or cognitive pathway” (Synesthesia 2016). Strictly defined synaesthesia appears to be relatively uncommon but, more loosely, it is an everyday experience. The brain combines information from

different sensory inputs; we talk of “chromatic scales”, “noisesome smells” and “colourful speech and music”; we take for granted the interplay between speech, facial expression and gesture in conversation; and throughout the world ritual, theatre, cinema and other artistic productions explore and elaborate upon synaesthesia broadly understood.

This broad sense of synaesthesia is so obvious that it risks devaluing the term itself. However, in the present context, it is relevant in three interlinked ways. Firstly, anthropological discussions need to pay special attention to the interplay of different senses when it comes to rituals that involve musical instruments that women must hear but not see—and to the other rituals that involve visible, coloured ornaments that are the direct counterparts of the sounds of these invisible instruments. Secondly, as Lévi-Strauss and many others have shown, coding via the different senses is a dominant theme of lowland South American mythology and a major preoccupation of Amerindian philosophy, cosmology and artistic expression.

Implicit in the Yuruparí story is an indigenous theory of the relation between hearing and seeing or sound and light. The Story of Yagé presented below makes this loud and clear. It suggests that sound and light, or music and colour, are not simply analogues or transformations of each other but actually manifestations of the same stuff—concretely blood and *hair*; more abstractly capacity, energy and vitality. An allied point is that this theory is directly linked with the recurrent experiences of synaesthesia that men undergo when they drink yagé in the context of large collective ritual gatherings, gatherings that appear to be explicitly orchestrated to produce these experiences.

The fact that women are forbidden to *see* ritual aerophones but allowed, indeed required, to *hear* them, has led to discussion about the relation between seeing and hearing in Amerindian thought, a topic that also arises in relation to the treatment or fabrication of the body (see Seeger 1975; Turner 1980) and to the more general role of light and sound in indigenous cosmogony and cosmology (see for e.g. Classen 1991). Discussion of this topic is often marked by tension between two contrary tendencies. On the one hand, a tendency to *oppose* seeing to hearing that is reinforced by accounts of particular mythological or ritual processes that is said to privilege one or other sense¹⁶ or by claims that whole cosmologies or cultures give priority to one or other sense—here the West is inexorably visual (see for e.g. Classen 1991; de Menezes Bastos 2011: 82). On the other hand, the same or a different author may qualify such contrasts by emphasising transformation, continuity or synaesthesia between these senses (again Classen 1991).

A full discussion of these issues is beyond the scope of this paper but, before looking at indigenous definitions, I want first to use some Upper Rio Negro data to try to disentangle various different strands—experience and perception, common substance, analogy and metaphor, etc. involved in the

relation between seeing and hearing.

To begin with, whilst we may talk of different senses in isolation, experience and perception usually involve two or more senses at once. The interplay between hearing and seeing is very clear in the evidentials or cognitive modalities that are a characteristic feature of Tukanoan languages. These verbal suffixes mark off indirect knowledge from direct knowledge and, within the latter, mark off spatially or temporarily remote perception (“It could be/could have been a toucan”—too far away/long ago to be sure) from strong indication but out of sight (“It sounds like a toucan”—can’t see it) and certainty (“It is a toucan”—I can see it).

These verbal labels certainly do indicate that, at this linguistic level, seeing provides the most reliable evidence. But neither this, nor fragments of cosmogonic narrative taken out of context, provide grounds for asserting that any Tukanoan group privileges seeing over hearing or light over sound in any general sense. The issue is not one of relative priority or importance but rather of how the two senses are understood to work together in various contexts. To illustrate this, I turn first to a consideration of some of the dense links between birds, fish, flutes and dancing.



Figure 12. Ornaments made of egret breeding plumage. Photograph by the author.

For Upper Rio Negro peoples, birds and fish are prime exemplars of how sound and colour combine. Their coloured, patterned bodies, sounds, body parts and behaviour provide the materials and models for much of human ornamentation, song, dance and ritual. On the other hand, in order to ensure wellbeing and fertility, a major concern of these rituals is to integrate the annual round and life cycle with various astronomical, seasonal and ecological cycles. Alongside flowering and fruiting trees, calling frogs and the nuptial flights of ants and termites, it is the reproductive behaviour of birds and fish that most exemplifies these cycles, making them the foci of tube rituals.

Birds are the prototypes of all aerophones, especially those used in connection with initiation and female puberty. These instruments are ~*bidia*, “birds”—and “pets”. ~*Bidi-* is also the root of ~*bidire*, “to gather together”, a verb presumably modelled on the flocking behaviour of birds. At Yuruparí rituals, this gathering together involves various collections—of human beings, of wind instruments, of ancestors and of the dismembered body parts of a deity—these are all both wholes and parts of a single, larger whole.

Yuruparí flutes are typically, though not exclusively, named after different species of birds and identified with them. Collectively they were originally coloured birds in a cage that only took on avian form when discovered by the women (Fulop 2009[1956]: 107). Similarly *kahi* ~*bidia*, “yagé birds” are snail-shell ocarinas and small cane flutes played at dances. With their engraved designs and feather ornaments, Yuruparí flutes are musical *and* visual instruments and the players’ formal movements are named after the displays of birds. Note too that the sound-producing trachea (*buhua*, also “tube, flute, blowpipe”) of birds are especially visible when they are butchered for the pot.

Many Amazonian birds have brightly coloured feathers or attractive songs—the two are typically inversely related. Birds like manakins and the cock-of-the-rock engage in lekking behaviour where males vie to outdo each other in competitive displays of song and dance. This is not unlike Tukanoan dance festivals where visitors bring gifts of fish and meat, pots and baskets in ceremonial exchange, dancing in front of their hosts to underscore their own prowess and the magnificence of their offering whilst younger men with panpipes dance in a boisterous group vying with one another to attract the best female partners. More generally, bird songs, display and flight of are explicit prototypes for Tukanoan dance festivals: dancing is compared to flying; a number of dance-songs relate to myths about birds; and dance choreography is linked to the song, flight and mating displays of birds.

The link between sound and vision, song and dance is also material. Dance ornaments are mainly made from coloured feathers but also incorporate animal fur, bones and teeth. Called “macaw feathers” these ornaments are the *hair* discussed above. Dance ornaments share the association between Yuruparí instruments and menstruation, generically because menstruation

and bird moulting are considered to be two versions of the same process and specifically because egrets moult after producing a spectacular breeding plumage that goes together with the special vocalisations, movements, and flight routines that are their dances. Tukanoans use white egret plumes to make panaches (*uga*) that are a key component of the standard set of dance ornaments worn on the head (figure 12). These panaches have a woven, straw-coloured string base with dark bands made (ideally) from hair shorn from the heads of young girls at menarche.

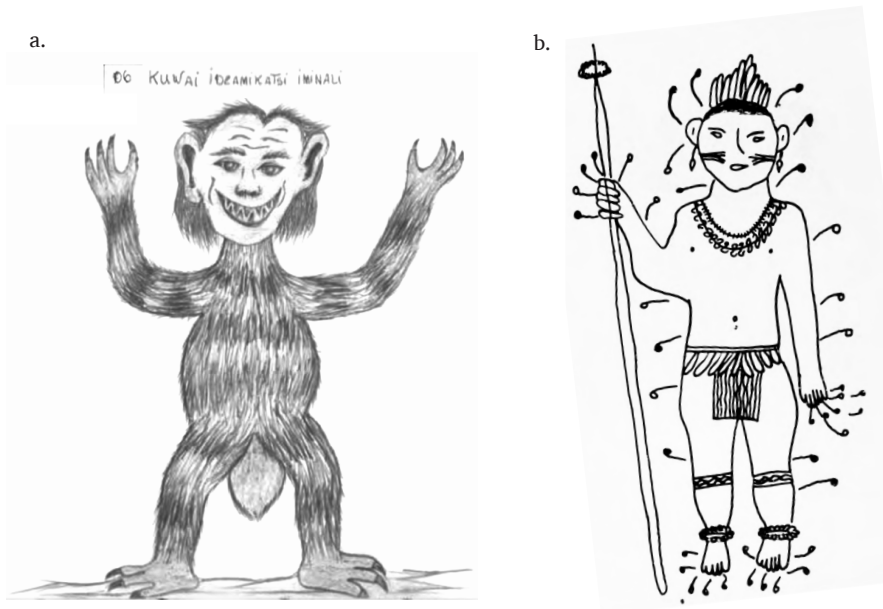


Figure 13. a. Thiago Aguilar: Yuruparí as Jaguar-Sloth (from Wright 2015: 129). b. Feliciano Lana: Yuruparí as dancer (from Umusī Pārökumu & Tōrāmü Kēhīri 1995: 235).

Egret plumes have specific connotations of the white clouds and egret constellations that accompany the rainy season—an annual menstruation—but they also exemplify the more general link between *hair* and a series of analogous, temporally-marked seasonal or periodic states of transformation, rejuvenation and periodicity indicated by the term, *~gabo* (f.)/*~gabü* (m.). The term applies to all of moulting birds, skin-shedding snakes and insects, animals in oestrous, menstruating women, and boys undergoing initiation rituals, states that share in common a detachment of skin, blood or hair from the body. At puberty both sexes have their hair shorn and both are painted with black skin dye whose slow disappearance marks a change of skin. In addition, women are said to menstruate when the hair they normally keep bound at the back of the head falls in front of their eyes - just as men are said

to menstruate when they see the sounds of hirsute flutes.¹⁷ In effect, when they see *hair*, both sexes see menstrual blood for, as Karadimas observes “Hair is the visible aspect/part of an invisible blood or the exteriorisation of an internal blood, an *extruda* of the body and the person” (2010: 25).¹⁸ In NW Amazonia playing raucous wind instruments triggers a male menarche and a young man’s first serious use of feather ornaments; further south, when a Tikuna girl reaches menarche and her pubic hair appears, her head hair is pulled out by force to the sound of these same instruments (Goulard 2010).

The connection between birds and flutes suggests equivalence, in the mode of moderation, between birdsong, melodious flute music and feather ornaments, the latter a form of male soul-stuff or semen. The fact that the body of Yuruparí, a tube wide open from top to bottom, exudes sound from every pore, is covered in long hair and, by inference, emits noisome smells as well, suggests a further equivalence, this time in the mode of excess, between loud noise, body hair and flowing red blood, the female counterpart of semen or, more succinctly, between din and stench (Lévi-Strauss 1973: 361ff).¹⁹ This contrast between moderation and excess is well illustrated by two drawings of Yuruparí. The former by Thiago Aguilar, a Baniwa apprentice shaman (figure 13a) shows Yuruparí as a fanged monster with sloth-like hands and feet and a body covered in hair. The latter, by Desana artist Luiz Lana shows him as a dancer with curlicues of sound emerging from his body (figure 13b).

In sum, seeing and hearing, sound and colour are inextricably linked in both the human and avian worlds. Birds are colour, sound and movement just as ritual aerophones are birds, as rituals involve all of music, song, dance and the visual display of paint and ornaments, or as the word *basa* means instrumental music, song and dance.

Much of the above also applies to fish that are, in various ways, the counterparts of birds. Birds in the sky and fish in water are symmetrical in their opposition to human beings on earth. As night follows day, the dark, watery underworld appears as the dark sky above as the bright sky disappears below. As the seasons change from rains to summer, wheeling, dancing, flocks of migrating birds come to feed and breed then disappear back to where they came from. As the rains begin and the waters rise, vast shoals of aracú fish swim upriver from the East to spawn in the flooded forests. In their bright breeding colours, these fish swirl back and forth making loud, low, rumbling noises. Their black and red colours are the black and red body paints that humans use, their noise and movements are their dances, and the rains are their beer.

No wonder then that the two designs painted on the legs and bodies of dancers are named “fish” and “macaw”, that fish become birds and birds become fish (figure 14), and that the human life cycle is modelled upon a

cyclical alternation between fish and birds. In the Tukanoans' myth of origin, humans start as birds then and swim upriver as fish-ornaments inside an Anaconda-Canoe. As adults, they spend their time on earth as bird-like beings in a round of ornamented song and dance, then end their days buried along with their ornaments to return downstream to begin the cycle anew.



Figure 14. Juvencio Cardoso (Baniwa): Migrating birds become fish. Photograph by Instituto Socioambiental, Brasil.

Like birds, fish are intimately connected with the flutes and trumpets that are directly identified with them—stored underwater these instruments are fish and anacondas in rivers—or worms in the gut: tubes within tubes. Bony fish have an internal tubular swim bladder and fish like jacundá and sorubim catfish are tubular in form. Jacundá used their big mouths to tell women how to play the flutes they stole and it was a jacundá that pierced the vagina of

Poronominaré's sister Amarú, allowing her to give birth to Yuruparí (Hugh-Jones 2016). Sorubim catfish, with broad mouths and striking black-on-white designs (body paint) are the trumpets the Baniwa use in their ceremonial exchanges of food. The sound of the trumpets imitates the sound of spawning fish; their dances are named after aracú species and, overall, they mediate an analogy between the spawning of fish and human reproduction, song and dance (Hill 2011a; Journet 2011).²⁰

Finally, as feathers link birds to flutes, so these trumpets are materially related to fish, on the male side because their mouth-pieces are made from palms that are also used to make fish traps and blowpipes and, on the female side, because their resonators are made from the aromá cane used to make the tubular tipiti's and flat basketry sieves that women use to process fish-like manioc tubers.²¹ In indigenous eyes, birds, fish and flutes are effectively one and the same and, like human beings, they are all creatures of inseparable colour, movement and sound. Despite all this, discussions of ritual aerophones typically focus on the contrast between men seeing and hearing the instruments while women can only hear them. In most cases, the discussions make little of the visual dimensions of the instruments themselves. Beaudet (2011: 376) is the sole author in the Hill & Chaumeil (2011) volume to draw explicit attention to the non-sonorous (visual, motor, verbal, or olfactory) dimensions of Amerindian music and to the non-visual, non-motor elements (sonorous, verbal, olfactory) of choreographic systems. He also suggests that women not seeing see flutes should be set in the wider context of what men and women do and do not do in their daily lives: men play aerophones but do not grate manioc; women make beer and sing songs but do not play aerophones (Beaudet 2011: 374).

We can take these suggestions further in the light of my discussion above for women do not wear feather ornaments either. The only exception is the Xinguano Yamurikuma ritual where women wearing men's paint and ornaments occupy the ritual centre of the village to sing songs that are verbal counterparts of men's flute music (Cruz Mello 2011) This is a ritual enactment of the situation described in the myth of the theft of the flutes: when women took possession of flutes and ornaments, men took up female tasks and begin to menstruate. Quoting Viveiros de Castro, Prinz (2011: 289) suggests that men's flute music and women's song and dance both serve to "activate the powers of a different body". The power activated by men's flutes has its parallel in women's birth and menstrual blood that is signalled by flowing hair. Given that men's ornaments also signal menstruation and periodicity and are also this *hair*, one might conclude that, in giving birth, women's bodies already "play flutes" and "wear ornaments" and that, Yamarikuma aside, for women to wear feather ornaments would be to pile *hair* upon *hair* leading to a state of dangerous excess.

The blood of birth-giving lies at the heart of the Story of Yagé, a story that is, in effect, a concise statement of the Upper Rio Negro theory of synaesthesia. Let us see how.



Figure 15. The dancing spatial play of Upper Rio Negro basketry design. Author's collection.

The Story of Yagé

When you take yagé you experience vivid sensations of sounds, objects, colours, patterns, smells and bodily movements that all run together, each sensation triggering others. This effect is reinforced by your surroundings. In NW Amazonia, you typically consume yagé as one of a group of dancers, each dressed in brilliantly coloured, sound-producing ornaments, sweet-smelling herbs, and ankle rattles, who sing, dance, chant and play musical instruments in unison as a co-ordinated team or single body, an instantiation of the Anaconda-Canoe. You are also surrounded by other people who are dancing or chanting in other groups, talking and joking with peals of stereotyped ritual laughter or playing various solo flutes, bone whistles, snail-shell and deer-skull ocarinas, tortoise shell resonators and panpipes as the assembled company work themselves up into a special state of ritual euphoria. As

Beaudet observes, simultaneous sound production is a characteristic feature of lowland S. American music—in the Upper Rio Negro this bringing together of different sound sources would be an example of totalisation.

All this is further reinforced, on the one hand, by the dynamic visual and auditory effects of dancers moving past ones eyes and ears and dancing round the flickering flame of resin burning on a post, casting shadows on the walls of the maloca. On the other hand, up to 48 hours of sleep deprivation and hunger combined with large doses of coca powder, cigar smoke, tobacco snuff and alcoholic manioc beer serve to increase the effect still further. Finally on the morning after, as sleepy men recount their recent yagé visions during a collective coca picking session, the knowledgeable shaman-*kumus* among them supply learned mythological commentaries, imposing cosmological order on sensory overload and pre-structuring the visions to be experienced at the next dance.

Dancing is a highly specialised craft and the singing, moving decorated body of the dancer, dancing in a line of other dancers all dressed and singing in unison as parts of a single body, is the prime aesthetic artefact of this world, a hyper-form moving between different scales of space and time like Yuruparí. Ornament, song and movement are parts of a single aesthetic device that works to amplify the bodily and spatial presence of the dancers and amplify the space in which they dance. They dance round the four central posts of the maloca, back and forth and in and out of sight and earshot, tracing the meandering zigzag patterns of basketry (figure 15) with their feet.

This increase in scale has several dimensions. At one, cosmic extreme, the dancer incarnates the figure of Yuruparí and the expansion in scale is the cosmic opening up of the world that is vividly portrayed in stories about Yuruparí, about the women's theft of his instruments, and about the origin of night (Hugh-Jones 2015). Right at the other extreme, each dancer is also a named individual whose skills can fuel a growing reputation and sphere of influence that will make him a figure of fame and lasting renown across several generations. In between these extremes are all the issues to do with kinship, economics and politics that are bound up in Upper Rio Negro ritual.

Condensation of senses and expansion of scale is also encapsulated in the body and person of Yagé. Yagé is Yuruparí in another guise, the former more on the side of colour and light, the latter more on the side of sound. In some stories, Yagé and Yuruparí figure as twins, the children of two sisters vomited up by one/two Thunder brothers (twins again); in others he is twinned with Yuruparí and coloured birds (= flutes). His story is also a transformation of another story about the Mother of Snakes for, like Yuruparí, snakes are noted for their colour, design and poison and both shed their skins.

Yagé and Yuruparí are differentiated by their mothers' difference in age and by the different "paternity" of fertilizing substances—caimo juice vs. coca; cigar-smoke vs. coca; or ochre vs. red carayurú paint. In other versions of the story, one sister resists ingesting the substance whilst the other succumbs—which is why virtuous, perfect women now manage to control their orifices and the others do not. With no breasts or vaginas the mothers of Yagé and Yuruparí were like men, who, in those days gave birth by vomiting and carried their young on their bodies like opossums or Surinam toads (see for example Nahuri & Kümarõ 2006: 141). To give birth the women had first to be cut open (see Yuruparí's mother above); the men were told that they should not see the resulting cut in the women's bodies and that death would be the inexorable correlate of this new form of childbirth.

Yagé's birth took place during a Yuruparí rite in *Dia wii*, the most important transformation house on the Ancestral Anaconda's journey upstream. Prior to the birth, a shaman painted the mother's body with red paint and prepared sieves decorated with white duck down and mats woven with different designs. The mother gave birth on, and simultaneously to these designs whilst her birth pains, trembling, heat, sweating, and delirium were all transmitted to the men as the effects of yagé. Today shamans invoke the names of these designs to guide men's yagé experience and to diminish the pains of women's labour.

The blood of the birth that flooded the house was yagé, the effects of yagé, and also the overwhelming sounds, colours and visions typical of Tukanoan ritual. The baby's umbilical cord became Bead Anaconda (today a red, yellow and black coral snake) and all other coloured snakes; the placenta became the ceremonial shield (*weki gasero*, "tapir skin") woven from vine that is paired with the rattle lance (bone); the blood and cord also become special varieties of yagé. [Compare Yuruparí's blood that became hallucinogenic parica snuff].

Under the effects of yagé an extended process of differentiation began. The animal-ancestor spirits at the rite decorated themselves with different ornaments and paint, began to sing the different dance songs that are named after yagé,²² played different musical instruments, and some of them even began to eat their tails—which is why animals such as tapirs, pacas, agoutis and uakarí monkeys lack tails today. At the same time, a deity used the pointed end of a cigar holder to turn some of the shamans into women.

As soon as he was born the baby began to cry loudly, his cries causing more visual hallucinations. His body was a bundle of yagé vines. The soft outer cortex of the vine, the part used to prepare the drink, was his flesh whilst the expendable woody interior was his bones. [This container (soft cortex)/contained (hard wood) relation is inverted in the relation between yagé vines and Yuruparí flutes: yagé vines are the soft contained marrow of the flutes as hard containing bones—tubes within tubes]. Taken from his mother, the

arms, legs, fingers and toes of this Yagé baby were then distributed to the ancestors of each Upper Rio Negro group as the different yagé vines they own and use today.

This detotalisation and distribution of the child's body encapsulates and precipitated a further chain of differentiation and a general shift from continuity to discontinuity or micro to macro. As yagé was distributed, life became different from death as night from day; animals became different from humans and different from each other; men became different from women; the undifferentiated senses in Yagé's cries and his mother's blood separated out as hearing and vision; song became different from design; human language became different from the music of spirit ancestors; then human languages became different from each other; and with this difference in language, the ancestor-brothers in the Anaconda-Canoe, the sons of the same anaconda father, now began to address each other as "brother-in-law" so sex, affinity, marriage, exogamy and ceremonial exchange could all begin.

Bound up in this story of detotalisation and expansion of undifferentiated space, time and sensation into a fully chromatic world, is an abstract theory of relations—between sound and light, seeing and hearing, sight and speech, colour and music, feathers and flutes. Read backwards, back to the state of totalisation, this is a theory of synaesthesia, a theory that is apparent in the following statement: "*Instead of* visions of different colours, he caused different languages to appear, the languages we speak today" (Diakuru & Kisibi 1996: 172—my trans. and emph.). The implication is that vision and language, colour and music, appearance and speech are ultimately the same.

People in the Upper Rio Negro speak, see and hear on a daily basis. At the same time their various outputs or "crafts", their speech, appearance and the various things they make or produce are open for auditory or visual appraisal by others. Working backwards from this everyday here-and-now, the dancer—with rattles on his legs, maraca or stamping tube in hand, dressed in ornaments of feather, teeth and bone, and dancing in a line of fellow dancers all dressed and singing as he does—is well on his way towards totalisation. Yet further back along this path to unity is the man playing a Yuruparí flute for there is now not much difference between him and the instrument he plays. Carrying or wearing bunches of palm and other tree fruit, wearing ornaments whose waving feather plumes are assimilated to palm leaves and dressed in these very same leaves, he is well on his way to embodying a palm tree. As an extension of this man's own throat and breath, his flute meets him in the middle. The flute is ornamented and painted like its player and, like him it too is fed coca, beer and snuff through its sound-hole mouth. As the man blows, the flute takes up his song, the same song that once leaked from the body of Yuruparí along with copious *hair*, the feather ornaments on the flute-player's head.

The player of a Yuruparí flute is a fractal figure, simultaneously a part of Yuruparí's body and Yuruparí himself. He is both a tube and *tube*. He is the descendant of an ancestor whose name he bears and the future ancestor of those of his own descendants who will bear his name. When they are assembled together, the men of the clan become the clan as the single body of their ancestor. When their instruments are assembled together, these become the single body of Yuruparí. Theirs is a double process of remembering and re-remembering, recalling their origins as they reassemble parts or members into a single whole.

Conclusion – on a sociological note

From all the above we can conclude that what I have been calling *tube* is the same as Yuruparí. But this conclusion must be treated with caution for Yuruparí in his guises as person, palm, bone, and wind instrument are merely particular, tangible signs or indices of the abstract idea or concept of *tube*. This has no particular meaning. It is a tool that organises all of life and a tool to reflect on this totality. The stories I have summarised also serve to guide this reflection but there can be no correct interpretation—either by indigenous intellectuals or outsider anthropologists—only points of view that recast one myth in terms of another or one body of ethnographic information in the terms of another. Furthermore, as I have stressed above, there are no grounds for interpreting the *tube* in any particular register or on any particular scale. To explain my argument, have had recourse to a discussion of mythology and ritual because that is where the idea appears most clearly and where it is most obviously put into practice. But we should not imagine that this idea is any more about cosmology, religion or shamanism than it is about sex, agriculture or social structure—it concerns them all. This range of possible reference and interpretation is illustrated by my initial quotations, the one from three veterinary surgeons, the other from a philosopher. Similarly, because I have been concerned to comment on discussions of ritual wind instruments that highlight the issue of seeing and hearing, I have talked of synaesthesia. But what I have called synaesthesia could equally be androgyny or an absence of affinity or otherness—to call it consanguinity would prejudice the issue.

This leads me to a final sociological observation. The manner of thinking that I have tried to outline above is part and parcel of a particular form of society found in the Upper Rio Negro—so much so that I would say that this *tube* mythology or *tube* thinking and this social form are one and the same. One facet of this is Lévi-Strauss' intuition that this mythology of tubes is also the mythology of a sophisticated and self-reflective priestly society. The mythology is also what he called clan mythology, mythology that justifies rank order and hierarchy and where ideology interferes with the free play of mythic thought. It is also patrilineal clan mythology, structurally because it is all about the fractal self-replication that characterises the clan as a house (see Hugh-Jones 1995),

and politically because particular versions of the mythology I have discussed, the spells that derive from this mythology, and the objects the mythology talks of are prestige goods, closely guarded secret knowledge and precious ritual wealth that make up the soul and vitality of the clan.

The story of Yagé makes clear that the difference implied by exogamy is part and parcel of differences in gender, language and clan. But exogamy and gender present a problem, namely that once they come into existence, instead of a tube, a man or a clan being able to produce further tubes from its own autonomous interior, such tubes have now lost their self-contained autonomy. Each man or clan depends on affinal Others to reproduce—each tube must be contained within and pass through, the tube of an alien Other; the story of the theft of Yuruparí instruments tells us that it is Women, as enemies, who represent these Others in their pure form. The process of sexual reproduction and the flows of blood and infants from the lower part of the body is the obvious model for this enchainment of affinal tubes with women's bodies as its principle sign—you must pass through our women as we must pass through yours. The self-replicating, androgynous, tubular deities who vomit their offspring up from their mouths are the antithesis of sexual reproduction. But rather than arguing that all this has any single cause or meaning—war of the sexes, male insecurity, fear of loosing clan secrets, etc.—I would end by saying that, for me, the idea of *tube* is form not content—you can use it to interpret all kinds of things in all kinds of ways.

Notes

Acknowledgments: I acknowledge inspiration from Beaudet 2011; Belaunde 2006; Chaumeil (2001); Erikson (2001); Goldman (2004); Hill (1993; 2009b; 2011b); C. Hugh-Jones (1979); Karadimas (2008; 2010); Lévi-Strauss (1988); Martinez (2009); Oliveira (2015); Rahman (2015); and Wright (2009; 2013; 2015). I thank Brian Moser for permission to reprint figure 5, Robin Wright for permission to reprint figure 13a, Luiz Lana for permission to reprint figures 8a and 13b, and Instituto Sociambiental (Brasil) for figure 14. Figures 2, 4, 8b, 9b are from Koch-Grünberg (1967[1909]) and figure 9a from Gumilla. (1963[1741]) All other figures are mine

¹ The only comparable case would be parts of Papua New Guinea, notably the Sepik region, where there is a complex of wind instruments, containers and other themes similar to the one I discuss here. See Schaeffer (2006); also Gillison (1993).

² See Lévi-Strauss (1973: 271-2). This may explain why, in his 1988 work, Lévi-Strauss makes no mention of Duvernay-Bolens (1967), a paper that outlines, in ethnographic form, some of the theoretical ideas he develops.

³ Goldman admits ignorance about anacondas as sound producers. Having kept them in my house, I can affirm that, when angered, anacondas produce a thunderous roaring-hissing noise.

⁴ The nominal classifiers of Eastern Tukanoan languages that group things on the basis of shape provide some independent linguistic grounds for opening out the relevant field of enquiry. For a Barasana example see Appendix 1.

⁵ See Karadimas (2010) on the more general association between flowing hair and menstrual blood.

⁶ All indigenous terms are in Barasana unless otherwise indicated. The sign ~ indicates nasalisation so that ~*basa* reads as “masa”, ~*hido* as “hino”, ~*aya* as “anya”, etc.

⁷ Secretions from *Phyllomedusa bicolor* frogs are put in the feather follicles of domesticated scarlet macaws (*Ara macao*). The regrown wing coverts are relatively free from the red and bluish stains in the feathers of untreated birds.

⁸ On manioc and coca processing as a separation of flesh from bone see C. Hugh-Jones (1979).

⁹ On feather ornaments and cloth/clothing see also S. Hugh-Jones (in press).

¹⁰ On these analogies see Karadimas (2008).

¹¹ Though they belong to different genera, cecropia and pourouma are grouped together as *wakibü*. Whilst recognising important differences between the two (eg. edible Pourouma fruit/inedible cecropia, etc.), here I follow the indigenous classification.

¹² For examples see Appendix 1.

¹³ Caimo = *Pouteria caimitio*; uvilla = *Pourouma cecropiifolia*.

¹⁴ Behind the well-known Tukanoan Anaconda-Canoe story is parallel set of analogies involving beer making: insemination by chewing and spitting out manioc pulp, gestation in canoe-like beer troughs (tubes); vomiting beer, etc. See Hugh-Jones (in press).

¹⁵ On starch chewing and the flow of manioc beer that begins at menarche see also Butt-Colson 1957. Note the parallel between the scorpions that are tattooed next to an Akawaio girl’s mouth and those that inhabit the vagina of Yuruparí’s mother in her later life.

¹⁶ Hill (2009: 121): “Both ritual and mythic transformations privilege sound production and auditory perception over sight and vision”.

¹⁷ In addition to their ornamentation (hair), the mouthpieces of the flutes are associated with pubic hair, the vagina and menstrual blood (see also Basso 1985: 304-5 and compare Gillison 1993: 266-7, 291). Note here Rivière’s (1969: 155) suggestion of “an opposition between virile activity associated with the constrained hair of men and passivity and laziness associated with women’s hair”. In nw Amazonia, laziness, inactivity and sitting still are more or less synonymous with menstruation.

¹⁸ On flutes and menstruation see Hugh-Jones (1979); Basso (1985: 304-5).

¹⁹ Note too the two-sided character of Yuruparí and his mother, both of them creator-

sources of poison on the side of excess.

²⁰ It is tempting to suggest that wide-mouthed trumpets make good the small mouths of aracú (“boca-chica”), opening up their bodies for maximum fecundity.

²¹ On manioc tubers as fish, see Hugh-Jones (2001).

²² Tuk. *kaapi-wayá*, “Caapi/yagé-adjunct” (Ramirez 1997).

Appendix 1. Barasana Nominal Classifiers Relating to Shape

- **a, -ga, -ka**: “hollow object”: canoe (~*kubua*), river (*riaga*), wasp nest (*utika*), compartment (*soa*—see below).
- **bota**: “post”: house post (*wü bota*), mountain (~*güta bota*, “stone post”), Yuruparí flute (*hee bota*).
- buhua**: “longer, thinner, open tube”: blowpipe (*buhua*), Jacundá fish (~*büha buhua*, “ascending tube”), fish swim bladder (*wai buhua*), sun-beam (~*buhihu buhua*), Yuruparí flute (*hee buhua*).
- bü**: “closed cylinder”: basket (*hibü*), bird nest (~*bidi hibü*), cacurí fish trap (*arubü*), cecropia tree (*wakübü*), coca sieving tube (*kahi hariabü*), piston whistle (*rika bü*), tipití (~*hidobü*, “anaconda tube”).
- gasero**: “skin, covering”: bark (*yukü gasero*), finger nail (~*abo gasero*), sky (~*übüa gasero*), body skin (*rühü gasero*), shield (*wekü gasero*).
- hoa**: “bag shaped”: bark-cloth bag, woven fibre shoulder bag (*waso hoa*), coca-sieving bag (*kahi haria hoa*), hair, fur, feathers, bag (*hoa*), womb, stomach (*güda hoa*), scrotum (*waheri hoa*). See also houses, compartments (*soa*) made of feathers (*hoa*) in myth and note the sound shift between h and s in neighbouring languages. This would suggest *hoa/soa* as cognates.
- hoti**: “rolled-up, spiralled cylinder”: cigar (~*búdo hoti*), hair bound with fur string (*hoa hoti*), dance ornaments attached to hair pigtail (~*ubaria hotia*), Yuruparí trumpet (*hotiri*).
- rahe**: “short squat open/closed tube”: hollow, hour-glass shaped pot stand (*ri rahe*), cylindrical tin, (~*kobe rahe*).
- raka**: “box”, feather-box (*raka, raka hedo*).
- rü, – tü, -sotü**: “pot, pot-like”: pot (*sotü*).
- soa**: “compartment, room, seclusion chamber” (*soa; so-*, to cause to enter plus *-a* hollow – see above; note also *soa/hoa* as cognates above).
- sudi**: “removable skin”: bark cloth mask (*sudi*), clothing: moulted snake or caterpillar skin (~*aya sudi, ~iya sudi*), shoe (*gübo sudi*).

-toti: “shorter wider, open tube”: body cavity (*rihü toti*), hollow log, slit gong (*yukü toti*).

-ya, -sa: “flowing form”: caterpillar (~*iya*), red body paint (~*güda~ya*, “flow from interior” ie blood), river (*waiya*, “fish river”), snake (~*aya*), cashew tree caterpillar (~*sodasa*), large river, confluence (*hasa*), winding river (*ria bedorisa*).

Appendix 2. Sound iconicity and family resemblance

Buhua, the Barasana term for “blowpipe” suggests an iconic relation between the blown-through-pursed-lips articulation of the word and blowing a dart through a blowpipe. Furthermore the word itself suggests composition from three morphemes *bu-hu-a* that together would make up an appropriate description the object: *bu-*, “to come out”, *hu-*, “penetrate, and *-a* “hollow object”. In line with this clue, the material below explores possible examples of a wider iconicity between articulation and semantic referent. This speculative exercise produces a set of terms whose apparent family resemblance fits the themes of my essay.

o, go (articulation: lips rounded, open):

oo-, “to pierce”, *goo*, “flower”, *goo-*, “to clear”, *gohe*, “hole”, ~*gode*, “urine”, *godo*, “empty space”, *gooco*, “saliva”, *goti-*, “to say, tell”, ~*goa*, bone.

gü (articulation: lips pulled back, closed):

güda, “shit”, *güda ~baa*, “gut, linear bottom of river or canoe”, *güdabiase*, “tightness”, *güda bidi-*, “be frustrated”, *güda bidio-*, “to constrict”, *güda ~bisi*, “intestine”, *güda hoa*, “womb, stomach (“interior bag”)", *güda hubea*, “inside, interior”, *güda hubero*, “heart wood of tree”, *güda siare*, “to gut an animal”, *güda~ya*, “red paint” (interior flow, see above), *güda ~ya-*, “to be pregnant”.

bu, bü, hu, u, yu (articulation: lips rounded constricted – as in blowing/sucking):

bu: *buhua*, “blowpipe” (see above), *buu-*, “to extract, make come out”, *büsa-*, “to wear ornament”, *büsü-* “to emit sound, speak”, *busi-/busu-/or büsü-* (dialect variations), “to emit light”, *budi-*, “to come out of /from”, *wekü ~budi*, “semi-tubular tapir bone coca scoop”, ~*buu-*, “to place with opening downwards (canoe, basket, pot etc)”, ~*buyo-*, “to vomit”, ~*büdi-*, “to go upstream”, ~*büdo*, “tobacco”.

hu: *huu-*, “to push in, penetrate”, *hudi-*, “to step on sharp object; pierce towards self”, *huti-*, “to blow – pierce away from self”, *hubea*, “interior (*huu- bea*, without penetration?)”.

u: *udi-*, “to smoke a cigar – suck towards self”, ~*uhu-*, “to suck”, *utia*, “wasps” (piercer-stingers), *uga*, “white egret plume ornament (rain, clouds)”, *ugü*, “howler monkey”, *uriro*, “pottery trumpet”.

yu: *yuu-*, “to swallow”, *yuha-*, “to go downstream”, *yuyu-* “to run, flow – of liquid”.

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