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A Diet of Fat Connecting Humans and Nonhumans (in the Bolivian Foothills between the Andes and Amazonia)

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“This miraculous energy-substance and this alone is the Imperishable; the name and forms of the deities who everywhere embody, dispense, and represent it come and go”

Joseph Campbell (2008 [1949]: 155)

Abstract

This paper considers the sacrificial tables ritually offered to nonhuman entities in the Bolivian Piedmont. Ethnographic data demonstrate a locally-held conception of the circulation of substances between the body and the cosmos. This article focuses on fat, a quintessential human substance and nourishment to nonhuman entities. Both etiology and therapy depend on the alchemical circulation of this fat, as part of a wider system in which physiology and cosmology are connected. The healer's knowledge of human anatomy and nonhuman dietary preferences allow him to diagnose cases of nonhuman predation of humans (in this case of human fat); while healing depends on negotiation with these nonhumans through culinary offering.

Introduction

The region of Apolo is located on the western slopes of the Bolivian Andes. Indigenous Leco and *campesinos*, both Apoleños,¹ live beneath the Kallawayá region and before the Northern Amazonian lowland. The Apoleños speak the same Quechua dialect found throughout the Kallawayá region and share many institutions with other Andean groups, as well as economic activities, which primarily consist of breeding cattle and farming coca.

The relevance of a hydraulic model of circulation, which describes the circulation and transformation of fluids, but not their equilibrium, as described by several anthropologists (Bastien for the Kallawayá 1985: 603; 1987: 1117, Arnold 1987, Urton 1981, Silverblatt 1981, Earls and Silverblatt 1976: 302-306, see Figure 1 below) is presently challenged. I argue that the Apoleños logic reveals a circulation of substances from the body to the cosmos and *vice versa*. Animal fat and coca are food-substances transferred daily through human actions, with rituals being a major tool to circulate those substances. Although Apoleños do not describe the flow of substances in a circuit between bodies and cosmos, they do describe fat as part of less tangible life forces. I show that the circulation of substances is the key to a physio-cosmological system where the human body may be understood as a component of a wider system where physiology and cosmology are connected and bound by the dynamic of substances.² Humans are active agents in the circulation of substances, putting them in motion through ritual, which can be perceived as a motor or generator for the physio-cosmological system. This has been described by Carlos Londoño-Sulkin in the following way: “practices concerning corporeal elements, such as eating, drinking (...) create, maintain, transform, manipulate, and end relationships with each other” (2012: 24). This is also true of relationships with nonhumans, animals, plants and entities

(Viveiros de Castro 1998, Whitehead 2002, Rival 2005, Wright 2013 and Carneiro de Carvalho, this issue, among other examples).

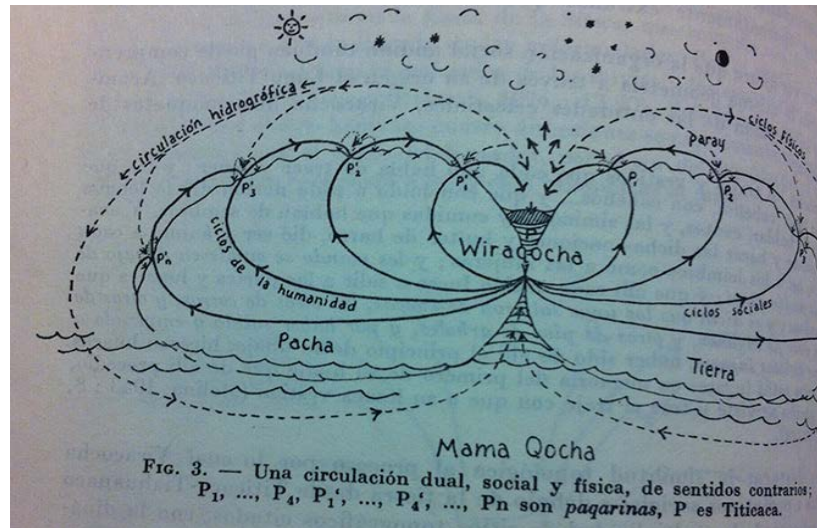


Figure 1: A dual but counter circulation of social and physical elements. (Taken from: Earls and Silverblatt 1976: 306)

Immaterial and Material Components of the Andean Human Being

On the Andean Piedmont as in the Andes, two terms invoke the immaterial components of the human being: *ánimu* and *alma*. Xavier Ricard Lanata differentiates between the two: the *ánimu* is the essence of the living and the *alma* is the essence of the dead (2007: 88). Indeed, *ánimu* connotes the ontological and *alma* the eschatological. The loss of the *ánimu* provokes a pathology known as *susto*, which can be cured; whereas, the loss of the *alma* means irreversible death. Thus, there are two stages; the loss of vitality and the loss of life: a human body without *ánimu* will eventually die, and thus transform into *alma*. The two terms *ánimu* and *alma* have Latin etymologies, but they juxtapose a Christian and an Andean conception mixing ontology and eschatology. Philologically, the Andean concept of *camac* subsumes both categories of *ánimu* and *alma* and enlightens their blend since its semantic field refers to breath, vital force, and the heart or core receptacle of vital energy (Taylor 1974-76). The immaterial component which enlivens human life is conceived in some ethnographies as a shadow, an air flow or a double, etc. (La Riva González 2005, Ricard Lanata 2007: 77-90, Charlier Zeinedinne 2011: 161-167).

There are indeed two gaps or hiatuses between the biological and social birth and death. Through nutritive substances and during ritual practices, human beings participate actively in the growth of this vital force which animates the individual and illustrates the gap between social and biological life. The social birth takes place approximately three years after the biological birth and social death occurs three years after biological death. Thus, there is symmetry between biological life/social life and biological death/social death.



Figure 2. Altars for the dead: black for adults and white for young dead infants (*angelitos*).

The social birth takes place after the fortification of the child's body: the closure of the fontanel is concomitant, as it is said, with the faculty to speak. This "hole" in the skull particularly exposes children to danger because it is through this that pathogenic nonhuman entities can penetrate (Ferrié, in press). After early childhood, which always entails greater rates of mortality, the ritual of the first hair cut or *rutuchi*, marks the social birth of the child, when a name is given to the child by his godfathers. This ritual, which is practiced on the same day as the baptism, brings the child from the impersonal category of *wama* (baby) to that of a social individual with a name. From then on, if death occurs, there will be a different funeral treatment which distinguishes these two categories of children. Young infants (*wamas*) who have died are called small angels, or *angelitos*. The family in mourning builds white altars for them, in contrast to the black altars that are built for older children and adults (see fig. 2). If the baby dies before its *rutuchi*, the infant will go directly to heaven; whereas, those who have had their first haircut would pass through purgatory. Thus, this ritual has consequences on eschatology and participates in the making of the vital force, the immaterial substances *ánimu* and *alma*.

Tangible Substances: Foods for Humans and for the Fabrication of the Deceased

The body's different fluids circulate and contribute to the growing being - fat, blood, water, body fluids and air – are the tangible substances related to human's vital force. They must be fed by physical sustenance (real food). A meat diet is given to children after weaning, to strengthen the blood and to increase fat, which is perceived as proof of the vital force, a common observation among many Amazonian groups including Xié dwellers that make this connection between vital force and fat (see Rahman, this issue).

Two facts illustrate this. First, the practitioner healer is a specialist in reincorporating missing substances. Second, after the biological death, the vital force of the deceased is still "hot"³ and the task of the surviving family is the "making of the ancestral" and the fabrication of a non-pathogenic ancestor (see fig. 3).

After death, the period between the biological death and the "definitive funeral"⁴ is a three year process which ends on the third All Saints' Day. In this period, they welcome and bury the *almas* eight times.⁵ These repeated funerals are a passage from individual to collective commemoration (Cf. Ferrié). Since at first, rituals are a function of the date of death and then, of the collective All Saints' Day when each household is to receive *almas*.

The making of the ancestral requires the ending of the commemorative funeral and their social death. It is a process of desocialization during which the surviving family members must reject the deceased (*alma kacharpaya*). During the first burial, all the belongings of the deceased have to be removed from the house, by someone with no kin relationship, and then burned. At each of the eight subsequent funerals, every sign of the deceased's visit is removed: the decorated altar is taken to the cemetery on each occasion and finally, is abandoned.

In the Highlands, the reception of the dead during All Saints' Day is similar to that celebrated in the Piedmont region of Apolo. In 2006, following the protocols of a son within this patrilineal system of kinship, my friend Martín organized the return of his father's *alma* in the Uyuni's patrilocal residence. While talking about his father's funeral, Martín told me that, "during All Saints' Day, the prayers, the altar, the *t'anta wamas* (ritual breads), and the favorite foods his late father liked - fruits, coca - nothing should be missing. For the guests, cane alcohol, *chicha* (corn beer), wines and cocktails must not be lacking".⁶



Figure 3. Fabrication of the dead (Ferrié).

Prayers summon the deceased and offerings of food are given to their *alma*. The living eat for the *almas*: food, coca and tobacco play a role in the “transformation from the living into the dead” as much as tobacco and rum for the Chachi (Praet 2005:137). But the *alma* drink and eat in their own way: the living pour a dish of food on smoldering embers to feed the *alma* because the smoky fumes, with their condensed flavor, is how *alma* absorb their food. The *alma* eats through *sami*: “the life force [which] can be transmitted from one living thing to another” (Catherine Allen 1988:207, who also compared *sami* to the concept of *mana*) (Figure 4).



Figure 4. Feeding the dead with fat: lunch through *sami* (Ferrié).

During the series of funerals human and nonhuman beings eat together. Surplus and abundance make the success of the banquet, because the general satisfaction of the living reflects that of the dead hosts. Essentially, they are all sharing in the same banquet. “Force-feeding, force-drinking and force-chewing”⁷ is the appropriate conceptual metaphor to describe the ceremony (Allen 1982). The Kallawayas, near Apolo, used to sacrifice a llama (*Auchenia lama* L.) during their funerals.⁸ The llama, valued for their high fat content, was killed and used to prepare a soup that was eaten by the living guests before the rest of the animal, including the bones, would be buried with the human corpse (Oblitas Poblete 1978).

During the growth of the individual, everything is intended to increase and retain the vital force in the body. Gaining fat reinforces the process, but infancy and old age always present dangers regarding the loss of substance by either natural (Robin Azevedo 2008: 54) or spiritual causes, such as being taken by nonhuman entities. Once dead, the living do everything they can to deprive the recently deceased person’s body of substance while feeding their *alma*. This feeding of the *alma*, by way of a fat diet, helps them on their eschatological journey and is meant to prevent them from coming back to haunt the living. This is a real problem as the *Condenado* (literally the Condemned) pose a danger to the living, which is discussed below.

A Healthy Body Full of Food *versus* Emptiness

The notion of health among Apoleños focuses on the capacity of humans to store good substances and prevent pathogenic ones from penetrating the body. A healthy body is full and sealed with food, as opposed to an empty stomach which emphasizes vacancy in the body. Porosity is also an issue. By way of example Alina, a healer from Apolo, describes the porosity of the body in terms of the salty drops that appear on a person’s skin, which conversely explain the form of healing by placing animal and plant fat cataplasms on the skin (*emplasto*)⁹ to seep in. In the Andes, Charlier Zeinedinne also noticed that skin can absorb “foods” such as “fat or blood” (2011:127). These openings are also a means by which the pathogenic substances can enter and there are ways to prevent this from occurring. For example, on the Bolivian Piedmont it is said that, “one must fill himself, by eating food or coca to seal the body”¹⁰ (Ferrié 2014:41). The image of a filled and sealed bag, proposed by Charlier Zeinedinne, is a good metaphor to express the “wholeness and the closure” of the body retaining its vital force (2013).

To go out with an empty stomach would expose oneself to predation by nonhuman entities such as the *Kuichi* (Rainbow), in Apolo, which penetrate into the individual and

makes them swell. An empty stomach, like the openings of the physical body, exposes individuals to nonhuman entities which can penetrate, including polluted wind or *wayra* (literally winds in Quechua) that cause *mal de aire*. When crossing a river, wading in past the waist is dangerous as the *W'aka* can penetrate the body through the vagina or anus. Having open wounds or menstruation can also increase the risk. When the openings of the body are sealed with nutriment and coca, these dangers are prevented.

Fat is thus the nourishing foodstuff which functions to strengthen and seal vital force in the body. This can be also perceived as a protective coating which acts as a barrier that isolates and reduces porosity, such as that commonly seen in a cross-section of a slaughtered animal. Fat is a vital principle that protects the vital organs and blood, the thicker the barrier, the stronger the body. Disease (as an escape of vital force), weakness (*debilidad*) and thinness are associated with problems of porosity. It must be noted that aesthetically, a fat person is not considered big and unattractive; on the contrary, fatness connotes good health.

The Fat in All its Forms

Wira (or *vira*) is the Quechua transitive verb meaning oiling, greasing, fattening. The lexical field of the noun include derived alimentary substances from animal fat (bacon, lard to be fried, lard oils, butters,¹¹ etc.), and plants. *Wira* is also an ethnobotanical taxon that qualifies certain plants as fat.¹² *Wira wira*, used in Apolo as a “hot”¹³ medicinal plant is a Kallawaya botanical genus which regroups various Linnaean plant taxonomy’s genus:¹⁴ *Achyrocline* (7 species); *Gnaphalium* (3 species) and *Calceolium* (Girault 1984:91; 469-472).

Wira kboa or *wira q'uwa* (*Senecio mathewsii* WEDD) is an herbaceous shrub of the *altiplano* which grows around 4.000 meters high. This plant is ritually important because it constitutes the base layer of the offering tables in Apolo, like in the Andes or among the Kallawaya, it has a pleasant fragrance released in the smoke during cremation ceremonies (Girault 1984:487 for the plant description and 1984: 556; 559; 589 for the ritual uses) (figure 5).



Figure 5. *Wira kboa*: a fat based table. (Ferrié)

Wira pacha tika literally “fat of the earth”¹⁵ in Quechua, grows at the altitude of 4.400 meters. Mixed with blood and llama fat, it is used to cure the *susto* caused by the *Pachamama* (Girault 1984: 108). Denise Arnold indicates that in the Andes offerings of fat are made for certain potato varieties (*wira malkachu*), on nights when the moon is full (*jina and urt'a*), to insure their growth (Arnold 1987: 328).¹⁶

It is thus necessary to get rid of the idea of fat being limited to animal origins, as it is also present in vegetables or minerals like salt. The local taxonomies or emic systems of classification consider what is fat or nourishing. In Apolo, numerous plant foods are rich in fat such as corn beer (*chicha*). It is also well-known that in the Andes, coca is considered a nourishing substitute for food: it serves as both food and remedy (Carter & Mamani 1986: 453), “it is like a food”¹⁷ (*ibid*: 450), that gives strength and helps people work harder. In the bilingual Apolo region the Spanish action of eating (*comer*) and chewing (*mascar*) coca are interchangeable and express the *acullicu* Quechua which has nutritive and spiritual values. Coca is both “food and non-food” according to the distinction made by Hugh-Jones (1995: 57).

Fat as a substance, is preventive and curative. To eat and drink fat substances maintains the vital force and prevent diseases. Growth is assured by the daily ingestion of fat, which strengthens the body as much as ritual does.¹⁸ By fattening, we maintain our body mass against the predation of nonhuman entities.¹⁹ There is a nourishing classification of fat for therapeutic use because nonhuman entities can be the cause of disease, so nonhumans are fed preventively. We will see below the typology of fat diets to feed nonhuman entities. The “Earth (*Pachamama*) does not just give for nothing”,²⁰ this is why we feed the potatoes and the *Pachamama*: the “debt of offering” is at stake (Rösing 1994).

The Nonhuman Meal Offering Fat and the Search for Balance

Both animal and plant fat are important for assuring growth, which means all fats have a central place in rituals. On the ritual tables, it is a major substance in assuring that the non-visible entities are propitiated.



Figure 6. Ritual table (*mesa*) activations. (Ferrié)

The paraphernalia of the ritual table (*mesa*) includes different types of food that comprise the diet of nonhuman entities. The plant *wira kboia* covers up *mesas* like a bed of plant “fat” on which we place tiny lead figurines (*chinchis*); small frames of sculpted dough represent wishes or entities (*misterios*); gold and silver paper (*q’uri t’an’a*); white or colored wool; incense; llama fat (*untu*); sweets, honey; *k’intu* of coca which are offering packages (three leaves put face up and splayed out in fan-shaped fashion). The Piedmont, akin to the Kallawayá region where Ina Rösing noted that the “white table”²¹ (*mesas blancas*) would never be presented without coca leaves and llama fat (*untu*), and were always accompanied with prayers (Rösing *et al.* 294).

Llama fat gives life and vitality to the propitiatory offerings for the *Pachamama* or *Achachilas* (Fernández Juárez 2008). During the ritual event humans invite nonhuman entities to eat a meal of offering (Fernández Juárez 1997: 49-54), which they have specifically prepared for them. It is a meal prepared by human beings for nonhuman guests. Through these meals cooked for the entities of the Andean pantheon, the nonhuman entities are appeased. Humans make sure that the propitiatory conciliations occur and that reprisals are avoided.

The llama (*Auchenia lama* L) fat, as we saw, feeds *Pachamama*; however, it is pig (*Sus scropha* L) fat which pleases the devilish master of the mines (Supay or Tio). It is interesting to note that during their eschatological return to earth, the recently deceased (*almas*) are fed with human cuisine (specifically, the preferred meal of their lifetime) for the three years following their death; whereas the ancestors incarnated in the mountain tops are fed with some llama fat (*untu*), which is also the case for some propitiatory entities.

At the other end of propitiatory rituals lies the possibility of predatory pathogenic entities. This is important to point out because etiology invariably involves the attacks of nonhuman entities not satisfied or inadequately fed. For further human protection, “alcohol, tobacco and coca leaves also have a remarkable preventive value to avoid the total separation of the vital soul-force from the body” (Robin Azevedo 2008: 55).

Instead of sacrificed offerings, the nonhumans eat the humans. A common Kallawayan remedy against the “disease of the earth” (*enfermedad de la tierra*) is coca leaves, pig lard, and llama fat (*untu*) without salt (Carter & Mamani 1986: 481).²² This shows that it is necessary to compensate, *a posteriori*, with the corrective *mesa* (ritual table). This is prescribed by a healer, in an offering that should have been made before the person fell ill, but which for one reason or another, was not.

The preventive ritual meals that assure the propitiatory and the corrective ones rectify the errors of the ritual itinerary.²³ In certain cases, both meals are totally in vain because certain nonhuman entities are so “savage” that we cannot cajole them. They are just predators such as the *Kharisiri*²⁴ which take some of your fat or *ánimu* away. To avoid the attack of such pathogenic entities, some people believe that they should carry garlic to fend them off. Others also do not sleep on the bus when traveling from Apolo to the Highlands, as Andrew Canessa reports in the Bolivian Yungas nearby Apolo (2000: 705-6). If the clove of garlic does not work, therapy is the only remaining possibility after the *Kharisiri*'s attack; and only a licensed healer will know how to cure these exceptional pathologies.

Wounds of the Living and Asymmetrical Exchanges: Fat and *Ánimu* Stolen by the *Kharisiri* and the *Condenado*.

The human fat stolen by the *Kharisiri*²⁵ or the *ánimu* taken by the *Condenado* (the Condemned) causes anxiety for people in Apolo. The theft of fat and *ánimu*, both vital substances, causes death to human beings and is not preventable because there is no way to establish symmetrical exchange relations, such as offering tables (*mesas*). These two entities are truly evil and will never be made into ancestral entities which are ambivalent defenders, but dangerous as well.

When the *almas* return as inhibiting hosts, it is necessary to appease and to escort them to the cemetery, so they will intercede in favor of their descendants in the future, rather than staying around and perturbing them. The dead have a remaining vital force that must be channeled until it dries up. It would be dangerous not to do so, since they are also pathogenic and can cause much trouble for the living. However, with the *Condenado*, the making of an ancestor is impossible. Because the *Condenado* have sinned, when they die they never become ancestors, but just a wanderer disturbing the living. Only normal death can be transformed by the living, unlike a “bad death”, which is irreversible. This segregation defines “the ‘right’ and the ‘wrong’ way to be a person,” as shown in Heckenberger’s statement about the ancestors among Xinguano’s Kuikuro (2007: 299). Those who have “bad deaths” due to sin, like incest or parricide, represent a disaster for the family and community because nothing can be done with those dead whose sins outweigh their good fate: they become a ghost that haunts the Apoleños. These ghosts or *Condenados* break the social bond and make the virtuous circle of exchange impossible.

The infamous *Kharisiri* attacks by emptying his victims of their fat. This is a widespread pan-Andean entity and each locality has varying stories to tell about it. This is well documented in the anthropological literature, as well as other categories of literature in the region, including local newspapers. Although the exact details of these characters vary, they are uniformly known as fat snatchers.

The study of Alison Spedding (2005) and the one of Andrew Canessa (2000) detail how the fat snatching creature extracts fat without giving anything back, and is involved in asymmetrical exchange relations because there is no reciprocity. Alison Spedding statistically showed that *Kharisiri*'s victims (*kharisustas*)²⁶ implicate those who break the chain of Andean reciprocity, more than they define an archetypal otherness (stranger, gringo, anthropologist and priest or missionary) traditionally described in the anthropological literature (Spedding 2005).

Absence of reciprocity is opposed to the virtuous ritual exchange of offerings where growth results from a trade in a reciprocal system. *Pachamama* or potatoes for instance are fed with fat and in return they bear fruits (Arnold 1987: 328). However, this virtuous circle of fat is not applicable to the *Pishtaco* (*Kharisiri*), who does not re-inject the fat into the system. The balance is broken because there is no return on investment. We touch economic issues related to covetous desire (*emvidia*): Those who have migrated to cities have become richer, cut themselves from their community, and thus from systems of

exchange and redistribution that are not injected back into local communities. For this reason they are often the victims of attacks or accused to be a *Kharisiri* (Spedding 2005).

Peter Gow points out that the figure of fat snatcher is a complex development of the circulation of the fat in the Andes and the image of *Pishtaco* (*Kharisiri*) feeds sacrificial patterns demonstrated by Taussig and Wachtel (1990). Indeed, many stories are told about the use of human fat, in pan-Andean business, as a lubricant for machines, automobile's engines, and even used by doctors during surgery.

Neither the *Condenado* nor the *Kharisiri* can be fed with preventive offerings; they are just two pathogenic figures who steal and eat human life force (fat and *ánimu*). The relationship with them is sterile; it is based on pure predation, unlike the *Pachamama*, whose relationship is positive yet ambivalent. The daily relationship with *Pachamama* is based on simple individual rituals, like the offering of coca leaves (*ke'intu*).²⁷ The *Pachamama* gives back, as long as the virtuous circle of fertility is respected with preventive offerings. If this is not respected, the *Pachamama* becomes a predator and causes a series of misfortunes, such as drought. Even these bad relationships can be restored with the help of a specialist.²⁸ This is not the case with the *Condenado* or the *Kharisiri*, with whom there are not any ritual relationships. Only with a specialist healer, whose intervention is necessary after the attack, can one be cured.

In cases of misfortunes, when the virtuous circle of exchange is broken, the healer pays back the stolen vital force to the *Condenado* or the *Kharisiri*. It questions the relations between humans and nonhumans: bad congeners and asocial co-citizens. Anyone who does not share and with whom we do not share; who is out there or that we reject.

Coca as a Total Social Plant

Coca is a total social plant.²⁹ It is food and more than food. Coca, like fat, is a substance that nourishes and strengthens the vital force. It is a social plant because it circulates as a gift between humans and as an offering to nonhumans. On the one hand, the plant helps decision making in human assemblies.³⁰ On the other hand, coca is a medium, a performative communication tool with nonhuman entities: we chew coca leaves and smoke tobacco to call and invite them to the ritual table and their specially prepared feast.³¹

But nonhumans in asymmetrical relationships (with the *Condenado* or the *Kharisiri*) are not invited to share in *acullicu* (communal coca chewing), only allies are invited. Human or nonhuman allies might have a different diet, a salt-free diet³² for instance; but they can be invited to share coca leaves and in this way differ from those entities that only eat spines and other disgusting ingredients of black ritual tables (*mesas negras* or *contra-mesas*). When a diagnosis reveals that a patient is affected by evil entities, the evil entities are fed with the *contra mesa*³³ - the diet they prefer. Then, protective entities are served with their meal, which includes coca. Therefore, there are entities with whom coca is shared, and other entities with whom it is not. Allies and potential affines are on one side, while the radical alters are on the other.

The coca leaves reveal a graphic display of knowledgeable signs³⁴ that can be read for the purpose of divination. To a certain extent, this form of divination is similar to the Tukano, where coca is used to obtain a diagnostic (Athias, this issue) or to the Yanasha, where hunters also use the plant to "divine what prey he might expect to catch" (Santos-Granero 2006:67). The coca leaves are also an offering that appeases entities, it is both a preventive and a curative ritual plant.

Before entering to work in the garden, an offering of coca leaves is made to the *Pachamama* to gain positive effects such as a good harvest and to prevent bad luck such as snake bites. A local taboo in the Piedmont betrays the logic behind the inappropriate mixing of substances, like the notion that menstruating women cannot harvest coca because menstrual blood could affect the harvest and spoil coca leaves. Human fluids can have an impact on the coca leaves because it circulates between species; therefore, we can see that both are part of the same system. We could compare, to a certain extent, this impact between species with the blood menstruation odor, which can "weaken or even deprive" Yanasha shamans or hunters (Santos-Granero 2006: 71). This same relation exists among the Aymaras of Inquisivi in the Bolivian Yungas, near Apolo, who think snakes are attracted to menstrual blood and can even suck it from a distance (Spedding 1992:311).³⁵

Circulation and the Traffic of Substances

We have reviewed examples of how substances circulate between plants, animals, and other nonhuman entities due to the porosity of bodies. Blood, fat, air, and water flow into all beings and humans do not escape from this vast hydraulic system. A cloth impregnated with a person's bodily substances is enough for a healer to reach a person and heal them (Ferrié, in press). The leftovers in a plate can be used by a *brujo* (witch/sorcerer)³⁶ to attack a person. This is why, in Apolo, you should not leave anything behind when visiting the house of a non-ally. This was directly indicated to me as a warning by my *comadre*, Alina, when I was cutting a broken nail in the house of a rival shaman and was told to take my clippings with me.

From food to ritual, we focused on tangible and intangible substances (fat and *ánimu*) which constitute the individual vital force, as well as substances playing a role in the transformation from the living into the dead. We mentioned as well that substances are outstanding mediators and trade agents between species (fat and blood like coca leaves) and move in and out of the body. This includes the fact that human fat can be taken by the *Kbarisiri*, which are human predators in a system where animals are a possible substitution. Sick and thin is opposed to fat and healthy; it is a state one enters when the bodies vital forces are extracted by predatory others. Ultimately, this plunges humans into illnesses such as *susto*.³⁷

The healer (*curandero*) is the specialist who knows about communication with non-human entities and can transfer or facilitate substance manipulations. He uses substances as a tool through which to call and feed nonhuman entities. Alchemically, the healer balances the equilibrium of the physio-cosmological system by maintaining the correct substance balance since he/she knows about openings, closings and passages between beings.

To describe this loop with a metaphor, the fat circulates through the cosmos, and the human body follows a fluid dynamic that might be compared to a primordial lake of fat (*Viracocha*).³⁸ This lake is somewhat like a mythical Titicaca, which connects Andean valleys to a vast underground network of connected mountains, where transfigured ancestors on the mountain tops reside and preside over their descendants (Bastien 1985, Urton 1981: 202; Earls and Silverblatt 1976:302-306, Descola 2014).³⁹

Finally, it is worth offering some comparisons to the lowlands. Fernando Santos-Granero wrote that “native Amazonians conceive of persons/bodies as being relationally constituted, permeable, metamorphic, and in permanent flux” (2012:182). This notion of persons/bodies is also applicable to the Andes. Santos-Granero added that “anthropologists assert that the fabrication of persons/bodies is achieved through the intimacy, sharing, and commensality ensured by conviviality, which is conducive to —relations of substance” (ibid.). He continues, arguing that there are other anthropologists who “contend that such fabrication depends on the antagonism, cannibalism, and familiarization typical of generalized predation, which lead to —relations of capture” (2012:182). Capture in the Andes appears in pathogenic forms. Sacrifice and substance offerings work as a counter mechanism that substitutes gifts to nonhumans for the vital forces that they could potentially take away. Thus, gifts given as sacrifice can work as either a preventative or a curative measure.

For the Apoleños, the animal breeders of the Piedmont, fat is the essence of the vital force that must be maintained in the fabrication of the living. Furthermore, food, like rituals, prevents the predators from seizing it. Metaphorically, fat is like the oil of the pump engine in a hydraulic system: a substance which moves between, but also constitutes, human and nonhuman beings. Fat is transferred between animal, plant, human, and non-human entities. The latter include the dead, fed and transformed with sacrificial offerings. We saw that fat is an integral emic substantial taxon that is a communicative tool between permeable bodies and human fat that is preyed on during pathogenic attacks: a predator's diet. In this system, animal fat is a placatory substitute assuring propitiation. There are two types of fat circulation; one is a healthy economical chain with allies, potential affines, and helpful nonhuman entities. The other is pathogenic fat predation, in which alliance is impossible. Thus, predation, alliance, and sacrifice are linked to bodily substances. Moreover, it should be taken into account that a “constitutive alterity”,⁴⁰ to borrow Philippe Erikson's concept, exists in the Andean

Piedmonts (1986: 191, 2007: 237). And differences and similarities within the multi-ethnic “nebula” formed by the Pano groups (Erikson 1993) warrants comparison. What substances are shared and with whom? Which substances are exposed to predation and by whom? These are potentially illuminating questions to ask when tracing relations of alliance and affinity between humans and nonhumans.

Americanists like Lévi-Strauss, Zuidema, or Lathrap, allow us to question continuities and similarities between Andean and Amazonian shamanism (Chaumeil 2013: 115). And perhaps, coca and fat, in the Andes, play a role parallel to that of flutes, clarinets, shamanic songs, and magic darts in the lowlands? On the other hand, the Andean model seems to fit somewhere between the subarctic model of the compensation for predation by way of offerings and the Amazonian model, where reciprocal predation is prevalent (Fausto 2007). The cosmic exchange of substances opens up these questions to further investigation.

Notes

¹ The indigenous Leco resurgence took place in 1997 dividing Apoleños, all *campesinos* before then, into two groups. Apolo is the capital of the actual province of Franz Tamayo (Dept. La Paz), former capital of the Franciscan missions of Apolobamba which evangelized and regrouped numerous local ethnicities. The Apolista were the result of this ethnogenesis (Orbigny 1844). Their descendants are today the Apoleños (Ferrié 2014).

² Andean cosmology schematic model could be conceptualized as a gigantic hydraulic system with a vertical axis and horizontal nodes acting as points of transition. A vertical model where the mountain becomes analogous to the tree of life, has been pointed out in other ethnographic contexts by Denise Arnold (1987).

³ “Heat” is both a category of nosology and pharmacopoeia. As we will see below “fat” is hot and cure cold affections in a system of opposition couple. As far as funeral treatment, the dry bones are cold whereas the wet flesh in decomposition is hot.

⁴ To take Hertz’s term (1907 *apud* Bloch 1993), applied in the case of multiple sepultures, which fits metaphorically with the Andean case.

⁵ 8 days, 1 month, 3 months, 6 months, 1 year after the death and then it switches to the collectively celebrated All Saints’ Days. The accompaniment of the deceased in the cemetery thus takes place 8 times all in all.

⁶ *En Todos Santos las oraciones, la tumba y los complementos como las masitas (t’anta wawas), sus comiditas que en vida les gustaba, las frutas, la coca y otros. Para los invitados no debe faltar copita de aguardiente (alcohol, vino y coctel) acompañado de las masitas que se les retribuye por la oración que elevan para la almita*. Martín, fieldwork notes Uyuni, 2006.

⁷ This concept is convenient for numerous ritual contexts: It is about satisfying the assembly of living parents, relatives, close relations and neighbors, who eat abundantly in the context of death, and more specifically, for the recent deceased who they honor. Food, drink and coca chew are in excess of normal standards. These actions -“force-feeding, force-drinking, force-chewing” (Allen 1982) - aim to satisfy non-human entities, so that they go away calmed and do not remain to harass the living.

⁸ In the Peruvian Highlands of Ausangate, the llama sacrifice still takes place during funerary rituals (Pablo Sendón 2013).

⁹ Louis Girault reported among the Kallawayas the use of llama chest fat for *emplastos* and unguents (1984: 509).

¹⁰ “Hay que llenarse, comer y mascar coca para tapar” (Ferrié 2014:41).

¹¹ See for example the Quechua entry on the website

<http://www.langas.cnrs.fr/temp/index.htm>

¹² As a matter of fact, its leaves as wicks were used to light their lamp using animal fat (Girault 1984:469).

¹³ Wira is a “very hairy, fatty” plant (Girault 1984:68), classified “hot” in the kallawayan pharmacopoeia, used to cure “cold” affections (Oblitas Poblete 1978:55), like flu among Kallawayas and Apoleños. The system of opposition couples linking nosology and pharmacopoeia (see Ferrié in press) would permit us to develop “a Sensory Ecology of Medicinal Plant Therapy” (Shepard 2004) searching its origins in a mix of Andean conceptions with Spanish colonial theories influenced by Galen and Hippocrates’ bodily humors, articulated by the dual oppositions (humid/dry; hot/cold).

- ¹⁴ Kallaway taxonomy presents a “similitude with the Linnaean system” (Girault 1966: 199).
- ¹⁵ Or *sebo de la tierra*; *Gaester sp.* in the Linnaean system (Girault 1984:108).
- ¹⁶ “Potatoes as tubers in the earth are said to be under the control of the moon. They are sown when the moon is waxing so that the maximum sap is below in the earth. The potato plant, like the hydraulic mountain, is seen to have a vertical flow of sap in its stem which gives it energy or force, *fuerzas* in Spanish. The offering of *untu* or llama fat placed in the ground at the sowing and at the harvest is said to generate *parpa* which means marrow in the case of animals, or sap in the case of the potato plant: *untum chaspan parpan chaspan satan*” (Arnold 1987:332).
- ¹⁷ “Es como alimento” Carter & Mamani 1986:450). We could add food and non-food to borrow Hugh-Jones reflexion on the use of coca among the Barasana.
- ¹⁸ Such as the first ritual haircut *rutuchi* and conversely funeral rites decreasing it and canalizing the vital force of the deceased.
- ¹⁹ “To eat in order no to be eaten” as Charlier Zeinedinne noticed too in her fieldwork (2013).
- ²⁰ “La Tierra no da así no más” (Rösing 1994).
- ²¹ Those white ritual tables are very different from the black ones which nourish evil entities (see below).
- ²² See also Girault reporting the use of “*untu sin sal*” for unguent and cataplasm (1984: 509). Salt free diet is discussed below regarding alliances.
- ²³ That is to say the *mesas* badly made or offered, badly burned or received.
- ²⁴ The nonhuman entity *Kharisiri* or *Pishtaco* is portrayed below, see next note.
- ²⁵ *Khariy* is the Quechua verb meaning to operate on. The *Kharisiri* is known under various names: the *Pishtaco* from the verb *pishtay*: to murder; to kill; to behead; to butcher; to slaughter; to skin an animal. Or *Lik'ichiri*, *Sacagrasa* or *Sacacara*, the equivalent Piro of the *Pishtaco* crystallizing people’s fear of the Herzog’s film crew. *Kharisiri* and related figure have been amply studied (Charlier Zeinedinne 2011: 11, Fernandez Juarez 2006, Canessa 2000, Molinié 1997, Kapsoli 1991). The Andean figure of the fat sucker probably comes from the *sacamanteca* reported in the XVI century Spanish folklore (Cristóbal de Molina *apud* Rivera Andía 2006:36).
- ²⁶ The investigation was conducted with 288 victims (2005:43-50).
- ²⁷ It is a very common ritual action. Before entering the garden every morning for instance, there is to pay (*pago*) three coca leaves placed on the same side.
- ²⁸ Of course, the payment (*pago*) a posteriori is always more expensive than the *pago* a priori, but that is the price to pay.
- ²⁹ The use of coca leaves is alimentary, social, medical and spiritual. I distort the concept of Marcel Mauss, because the plant is an active agent everywhere, from morning to night, in all relationships between humans like in those involving nonhuman entities.
- ³⁰ It is through coca chewing that communication takes place: in the garden (*chakra*), we do not talk while working, but during the break while chewing. We do not talk either while eating but after while sharing coca; the *acullico* is a second meal; the digestive one. And decisions are always made with *acullico* (syndical or work meeting; trip planning, wedding organization...).
- ³¹ In the Peruvian lowlands, coca and tobacco are used as well by the Yanesha for shamaning vision of the entities and to communicate with them Santos-Granero (2006: 71).
- ³² The “savages” of the Amazonian North (*ukebu llajta runa*; literally “People from inside who live *adentro* in the wild forest”) have a salt-free diet. In the region of Apolo in the late 1830’, Alcide d’Orbigny reported the story of the “wild girl who did not know the taste of salt” referring to savagery *versus* civilization (1844). They eat like us but differently, and drink a disgusting manioc beer. From a Piedmont’s point of view salt-free food and drink are closely linked to “savagery” among both humans and nonhumans and alliances are made possible because of diet similarities.
- ³³ In Apolo, the *contra mesa*, ritual - literally table to go against - corresponds to the Aymara *mesa negra* - black table - (Fernández Juárez (1997b:188), through which the evil is washed away by feeding the malefic entities with dry and hard ingredients, a sugar-free diet where the black color dominates, starfish; walnuts; porcupine or vegetal thorns, *ñandú* feathers; copal; pure cane alcohol (Ferrié in press).
- ³⁴ Divination reading is very common in coca leaves which display readable signs, like tarot cards, animal viscera or maze seeds (de Véricourt 2000:127).

- ³⁵ “La vibora es atraída por la mujer con menstruación y que chupa nuestra sange, aunque a distancia” (Spedding 1992:311).
- ³⁶ The sorcerer in some occasions is the healer in others.
- ³⁷ We could say that “disease is always considered (...) to be a process of being eaten” (Overing *apud* Fausto 2007:502).
- ³⁸ Even if such an etymology is not proven (Bruce Mannheim personal communication).
- ³⁹ Mentioning this model when referring to Kallawayan of Kaata who « transfigured » mountains projected on an anatomical map where Humans are a part (Philippe Descola, conference at the Collège de France, “Formes du paysage”, 12/03/2014).
- ⁴⁰ “Altérité constituante” (Erikson 1986).

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