Metaphoric Recursiveness and Ternary Ontology: Another Look at the Language and Worldview of the Yaminahua

Carlos A. Segovia
Saint Louis University, Madrid Campus, carlos.segovia@slu.edu

ARTICLE

Metaphoric Recursiveness and Ternary Ontology: Another Look at the Language and Worldview of the Yaminahua

Carlos A. Segovia
Saint Louis University, Madrid Campus
SPAIN

Introduction

My purpose in this paper is, first, to explore metaphorical recursiveness in Yaminahua, i.e., the latter's folding of the common binary structure (x) things + (y) words into the threefold scheme: (A) things + (B) external analogies + (C) internal metaphors, as displaying a multi iconic regime of signs of the type A ≈ [B] ≈ C, which is finally reduced to an indexical: A ← [B]. This is contra Graham Townsley's dismissal of semiotic theory—understood as the theory of sign production and the sign-based cultural codes that generate specific sign-functions (Eco 1976:3–5)—as being, in contrast to cognitive construction, of no relevance in the making of the "twisted" rhetoric distinctive of Yaminahua shamanism. I undertake this exploration in the second section. I aim also to show that within the traditional Yaminahua worldview "animism," "totemism," and "analogism"—which Philippe Descola (2013) has famously described as alternative ontologies—have not only coexisted but also structurally intertwined in a complex ternary system. This system supports, on the one hand, the basal binary logic characteristic of most Amazonian ontologies, and correlates, on the other hand, with the fourfold intersecting structure that has traditionally made possible the integration of the Yaminahua people into the four dimensions of space, time, society, and the cosmos. This, in turn, is my argument in the third section. Both sections, therefore, play with numerical notions (and basically with the same numerical notions: 2 and 3) to thereby decipher a fundamental aspect in the linguistic and ontological grammar of this specific Pano group of Bolivia, Brasil, and Peru. I endeavor to contribute to recovering the richness and complexity of the language and the traditional worldview of a people – regretfully like most in Amazonia – endangered by today's neocolonialism and neoextractivism; for as Blaser (2013:548) puts it, in our world all conceptual issues are (rather) "politicoconceptual (one word)."

Metaphorical Recursiveness or the Ternary Folding of Language and Reality

The Amazon basin is home to more than 350 languages, which are commonly grouped into six major linguistic families: Arawak, Tupi, Carib, Panoan, Tucanoan, and Macro-Jê, plus around a dozen minor linguistic families and some isolated languages. Yet this extraordinary variety represents but a fraction of the even-greater multiplicity of Amazonian languages predating the European invasion, which may have been "as high as 1,200 or as low as 600" (Aikhenvald 2012:21). (Put otherwise: the percentage ratio of European linguistic ethnocide amounts to ~75% at worst, ~50% at best.) Yaminahua, in turn, belongs to the Panoan linguistic family. This family comprises more than thirty languages, of which fewer than twenty are still spoken today, and may have originated in northern Bolivia (Aikhenvald 2012:43; Fleck 2013). Yaminahua speakers (fewer than 1,000) can be found today at the intersection of Bolivia, Brazil, and Peru, i.e., along the territory appropriated by these three modern states in what are now officially the Bolivian department of Pando, the Peruvian departments of Madre de Dios and Ucayali, and the state of Acre in Brazil.

A preliminary remark on the special qualities of Amazonian languages and their seemingly unrepresentable yet experienceable worlds is nonetheless in order before we narrow our focus on Yaminahua language.[1]

It has been argued that "the Amazon basin is the least known and least understood linguistic region in the world" (Dixon and Aikhenvald 1999:1). In fact, Amazonian languages

represent a major challenge not only to any project to establish universal linguistic principles but also to any attempt at defining what is susceptible to fall under the category "language" and, therefore, what is possible in terms of language and ultimately what human language is (Epps and Salanova 2013:1). In the first place, many Amazonian languages can be defined as polysynthetic, which means they both present an ultra-agglutinative morphology and are ultrasynthetic in conceptual terms, the latter to an extreme that is hard for us to even fancy; thus, for instance, a single verb in Amuesha, an Arawak language "from" Peru (viz. the verb *o-omaz-amy-eʔt-ampʸ-es-y-e-s-n-en-a*), means: "They are going downriver by canoe in the late afternoon stopping often along the way" (Aikhenvald 2012:129). Similarly puzzling is that in some languages like Iatê, a Macro-Gê variant, nominal phrases and even nouns have grammatical tense (i.e., they can be specified as naming something past or future), while nouns can be further specified considering their degree of reality (a "former house" being different from "what could have [merely] been a house," for instance [Aikhenvald 2012:385]). It should also be noted that in Pirahã, from the Mura-Pirahã language family, the very language can be spoken, sang, or whistled (Everet 2008:182, 185–86, 189), whereas many languages (e.g., Pastaza Quichua) have abundant (~ 1,000) "ideophones," i.e., "a class of words that communicate through imitative simulations the vivid impressions of sensory experience . . . including bodily processes, configurations, cognitive capacities, movements, sounds, and proprioceptions," as well as nonhuman "reaction[s] to being acted upon by humans" (Nuckolls 2012:3) which, furthermore, can eventually transform into verbs (Faust and Loos 2002:26, 111; see also Nuckolls 1996, 2010; Kohn 2013:8, 31, 118; Nuckolls et al. 2015).[2] Among other transformations one also finds causative suffixes that shift into intensifiers and vice versa (Aikhenvald 2012:241). Although more could be added to this short list of remarkable features (for an overview, see Aikhenvald 2012:382–91), one may note too that Karajá, another Macro-Gê language, has a phonological gender-based speech distinction, whereas in Kadiwéu, a southern Circum-Amazonian language belonging to the Guaicuruan family, men and women often use different words for the same things (Aikhenvald 2012:375). Lastly, I would like to emphasize that Panoan languages—to which Yaminahua belongs— present "striking morphological possibilities" (Fleck 2013:43) and cases of clause-chaining that are "unique in the world" (Aikhenvald 2012:344; cf. Fleck 2013:44). Sadly many of the linguistic peculiarities of the Amazonian languages (when not the languages themselves) face today the peril of extinction due both to Christian missionary activity and state-sponsored education. Thus, for example, the Arawak Palikur "had a special vocabulary they would use when fishing so as to "mislead" the evil spirits and avoid an attack from them [but w]ith the advent of Christianity—and the loss of fear of evil spirits—this register is all but gone" (Aikhenvald 2012:365); and among the Panoan languages only twelve out of the thirty-two are still spoken today on a daily basis (Fleck 2013:9). As for the modern education "offered" by the state, one wonders—to put it mildly—whether basic botanic knowledge relative, say, to the parts of plants is of any help for peoples who have developed their own, far richer taxonomies (see Lévi-Strauss 1966, ch. 1).

Yaminahua represents anything but an exception in this fascinating landscape, presenting a good many interesting features susceptible of being glossed. Yet I would like to concentrate on its complex semiotic system, multilayered rhetoric, and reverberating semantics – and, more concretely, on the peculiar status of the "twisted language" (Townsley 1993; Aikhenvald 2012:365–66) or "twisted words" (Townsley 1987) (literally: *tsai yoshtoyoshto*, "language twisting twisting" or "twice-twisted language") characteristic of the Yaminahua shamanic curing song or *koshuiti*.

There are two studies on this unique linguistic phenomenon, both by Townsley (1987 and 1993, the latter being mostly a slight re-elaboration of the former). More recently Aikhenvald (2012:365–66) has briefly referred to it as well. The following analysis is based on Townsley's ethnography, which may be deemed outdated in the sense that it no longer reflects the circumstances under which the Yaminahua communities live, i.e., from a current ethnographic standpoint, but it remains crucial to understand the complexity and richness of the language that the Yaminahua fight to preserve today as one of their major identity markers (Merelis et al. 2010).

> What shamans actually do, more than anything else, is sing. Singing is by far
> the most important shamanic activity and is considered by the Yaminahua

to be the vehicle for all shamanic powers. It is through his songs that a shaman claims to be able to cure illness and to influence the world in a variety of ways. The songs (*kushuiti*) are usually sung under the influence of an hallucinogenic brew (*shori*) made from lianas of the banisteriopsis and the shrub psychotria viridis [ayahuasca].

. . . [Thus w]hat a shaman actually does when he cures, is sing. His singing will be intermittently accompanied by the blowing of tobacco smoke on the patient or a more rapid, vigorous and staccato blowing onto the crown of the patient's head, but the effective healing power is thought to originate in the song. The blowing effects a sort of physical transfer of the meaning and power of the song into the patient. (Townsley 1987:3, 9)

This immediately shows the powerful role of language among the Yaminahua. Yet it is the elusive (Townsley: "elliptical") language of the *koshuiti* that is worth considering here. Townsley adds:

These songs are elaborately metaphoric, in two quite distinct ways. They make very little direct reference to the illness or to the real situation which the song is intended to influence. Instead they seem to create elaborate analogies to it. Confronted by an illness, a shaman sings a song to the sun, to the moon, to an animal, or perhaps he chants a myth. This is the first way in which these songs are metaphoric: the overall form of the song as a whole is constituted by an extended analogy to the real context of the song's performance. (Townsley 1987:3)

There is, however, (fold after fold, so to speak) a second way in which the shamanic *Sprechgesang* is metaphoric: not now in relation to the pre-linguistic context (A) to which the song refers analogically through its first metaphorical register (B) but in relation to the analogical register itself, thus establishing a supplementary metaphorical register (C) that overlaps with B) and complicates (duplicates) the referentiality of the words themselves. A is the given situation the shaman confronts; B is what he "sees," i.e., the content of his vision, which thereby substitutes A (first fold, first metaphorical register) by an "external analogy" (Townsley ibid.); C is the actual words the shaman uses to (indirectly) refer to B (second fold, second metaphorical register) by means of what Townsley calls, in contrast, "standardized internal metaphors," for

none of the things importantly referred to in the song [B] should be indicated by their proper names. To give but a few examples: all trees are referred to as "tapirs" – different types of tree are indicated by qualifications such as "big-sitting-tapir" or "pungent-tapir"; all fish are referred to as "while-collar peccaries" and distinguished by similar qualifications; anacondas are referred to as "hammocks"; rivers become "anacondas"; rain becomes "big-cold-lean-to"; tobacco becomes "shaman-hawk-wings"; jaguars become "baskets," etc.[3]

These metaphors seem to be remarkably standardized and were understood by all shamans, even those from widely separated communities who had had no personal contact, in the same way. Being standardized one might assume that they were not consciously metaphoric usages at all but simply culturally fixed equivalents which were learnt and employed automatically with no awareness of the metaphor. This is not so. In every instance that I came across the logic of these metaphors, as metaphors, could be explained by shamans with no hesitation. In every case the basic sense of the usages was carried by some resemblance, usually visual, between the song-word [C] and its referent [B]. Thus fish become white-collar peccaries because of the resemblance between a fish gill and the white dashes on this type of peccary's neck which give it its name; jaguars become a particular type of basket because this basket (*wonati*) is loosely woven with large gaps between the fibres that can be seen as similar to the pattern of a jaguar's

markings; rivers are anacondas because the winding course of a river resembles the snake's sinuous movements, and so on. Basic visual resemblances are often qualified by other references. Thus tobacco is a "shaman-hawk-wings" because tobacco leaves are seen to resemble a hawk's wing. Rain is "big-cold-lean-to" because the slating sheets of rain in a downpour resemble the slanting roofs of the lean-tos which the Yaminahua build for shelter when away from their village; rain is also cold. (Townsley 1987:10)

Besides, there is always here room for "improvisation and creativity" (Townsley 1987:15).

The reason for these "internal metaphors" or, as the shamans themselves call them, "twisted words" (*tsai yoshtoyoshto*)—put differently: the purpose of this impressive "metaphorical recursiveness"[4]—is beautifully made clear, moreover, by one of Townsley's informants: "With my *koshuiti* I want to see—singing I carefully examine things—*tsai yoshtoyoshto* bring me close to things but not too close—with normal words I would crash into things—normal words are no good —with *tsai yoshtoyoshto* I circle around things – I see them clearly" (Townsley 1987:11). In other words, "internal metaphors" must substitute the "external analogy;" the shaman must replace B with, or circle it through, C to keep control of the vision itself—both perceptively, i.e., theoretically, and pragmatically. Thus Townsley (1987:16) seems to be right in his observation:

> They seem to be figurative devices considered to have a pragmatic function not in terms of the external world but in terms of the shaman's own vision. Shamanic discourse seems to reveal the idea that they are simply necessary to create and sustain the sort of visionary precision which shamanism claims for itself . . . .
>
> In everyday language the Yaminahua often make use of metaphor and word-play in jokes and are obviously aware that in these contexts their metaphors are incorrect names, and a playful use of language. In the context of shamanism however the use of metaphor becomes the only correct means of precise identification.[5] (Townsley 1987:16)

Yaminahua shamans need to be precise because they need to be effective to cure—their "external analogies" aiming, e.g., at linking a physiological disorder to a regular natural event so as to symbolically dissolve the troubling outcome of the former into the regularity of the latter and hence mitigate its unwanted effects (see the example and analysis in Townsley 1987:12–14). The percentage of efficient cures is remarkably high, and most cures likely involve a psychosomatic component, although this paper is no place to ponder it.[6]

For our purpose it is important to stress (1) the idea of "metaphorical recursiveness"; (2) the "baroque" (or Borgean, one could argue) folding of the common binary structure (x) things + (y) words into the threefold scheme:

$$\text{things} + \text{metaphors}_1 + \text{metaphors}_2$$
$$=$$
$$\text{(A) things} + \text{(B) external analogies} + \text{(C) internal metaphors}$$

In this structure the signifier B becomes the signified of a new signifier C while not losing its condition of signifier of a signified A that gets, in turn, an additional signifier C not signified, however, by a new (third) signifier—which means the "recursiveness" thus displayed is "limited"; (3) this entails a "reverberating semantics" as much as a "multilayered rhetoric"; and (4) that all this presupposes an extraordinarily complex, if relatively oblique, multi-iconic sign-system of the type:[7]

$$A \approx [B] \approx C$$

which is finally reduced to an indexical sign-system of the type:

$$A \leftarrow [B]$$

I conclude this analysis in agreement with Townsley (1993:466) that this peculiar use of metaphors shows that Yaminahua traditional "cosmology, far from being a complete and ready-constituted system of things known [was and] is [still to a certain extent perhaps], for the Yaminahua themselves . . . a system in the making, never finished and always provisional." This does not mean that Yaminahua or any other Amazonian languages are imprecise in any way, as most of them have different markers of evidentiality for statements that refer to things directly perceived by the senses (indistinctly or privileging the vision over the others senses), things merely assumed by the speaker, things conjectured and/or inferred, reported things (be it through secondhand or thirdhand reports) to which the speaker is no direct witness, and things simply known to everyone, i.e., things of general knowledge; the incorporation of most such markers is sometimes obligatory in the everyday speech (Aikhenvald 2004, 2012:350–59).[7] It means the Yaminahua semiotize the world in a creative polyvalent fashion, thus avoiding the trap of subsuming content and expression under a closed semiotic circuit—or into what Guattari (2016:165–66) called a "signifying" semiotics.

Animism, Totemism, and Analogism; or, the Ternary Basis of Traditional Yaminahua Binary Cosmology

I shall now examine a feature of the Yaminahua worldview in which, once again, a binary structure becomes ternary, or is somehow subordinated to a threefold taxonomy. But first I must open a brief conceptual parenthesis.

In a groundbreaking and elegantly written monograph titled *Beyond Nature and Culture* which Claude Lévi-Strauss (2005) welcomed as "giv[ing] to anthropological reflection a new starting point" and Sahlins (2013:xii) hailed as a "paradigm shift" in the "current anthropological trajectory," Descola (2013) famously distinguishes four different ways we may map nature and culture—"we" meaning here all human cultures—be it by delimiting their supposed boundaries as being external to one another or by complicating any attempt to trace a clear-cut divide between them. These different worldviews he calls:

(*a*) *animism*—though he moves beyond Tylor's derogatory use of such term to denote the belief in souls or spirits proper of "lower races" due to their incapability of telling "man . . . [from] beast . . . and plants or even objects" (Harvey 2017:8);

(*b*) *totemism*—which he takes in turn from Lévi-Strauss's (1964) redefinition as a "classificatory" or "categorizing" attitude that articulates the social, the personal, and the natural along reciprocal principles, while simultaneously attributing it with a more straightforwardly ontological quality (Descola 2013:144);

(*c*) *analogism*—which roughly coincides with Foucault's (1970) concept of analogy as the premodern episteme of Western culture, albeit expanding it beyond such rather narrow temporal and geographical boundaries; and

(*d*) *naturalism*—which he equates with the very type of mechanicist take on the world distinctive of modern (i.e., Galilean, Cartesian, and Newtonian) science.

In the first case (*a*) all or most "things" are endowed with a living principle of their own (which is the reason why, e.g., many native American languages have "animated" and "unanimated" genres accompanying their nouns and verbs); thus one can say most of them share in common an embodied "interiority," whereas they differ as in terms of their "embodiments," to which different lived, experienced worlds (*Lebenswelten*) correspond in turn.[9] An example of this worldview is the widespread Amazonian belief that before the "ethnographic present" all differences chaotically communicated with one another so that most animals, plants, geographical features, meteorological phenomena, and celestial bodies were externally as "human" as men still are, but they lost their human physicality due to their many ontological becomings, through which they morphed into the biological species and other beings and realities that form the present world (Danowksi and Viveiros de Castro 2017:63–64). According to this view, therefore, "what we call "environment" is . . . a society of societies,

an international arena, a *cosmopoliteia*" (69)—a term I will use abundantly in this paper. Conversely, in the fourth case, (*d*) what all living things have in common is their equal belonging to "nature," with humankind representing the only exception to this rule insofar as humans have managed to develop something else: apart from nature, and in opposition to it, they also have "culture," which makes them different and justifies their privileged position in a cosmos they attempt to conquer against all possible natural constraints and limitations. "Totemism" (*b*) differs from these two worldviews in that it establishes a full, i.e., a twofold—if in another sense somewhat-restricted—continuity: natural and cultural. In this case the different human groups share their interiority and their embodiment or physicality with the different animal species (one or more per human group) whose respective precosmological archetypes are ontologically responsible for the production of the different observable ecosystems in nature. These have been instituted through a series of differential and creative cosmological events. Lastly, in the fourth case (*c*) nature and culture differ from one species to another and from one reality to another, so that de rigueur one can only speak of an irreducible multiplicity: the world as an infinite collection of singularities. Yet it is simultaneously possible to associate some things with others due to their similar qualities or states of being, i.e., by applying to them the principle of analogy, which thereby allows the ideal portrayal of the world as a web of more-or-less evident or secret relations. Thus Descola (2013:122) summarizes the major differences existing between such worldviews or "ontologies" (201):[10]

Similar interiorities Dissimilar physicalities	**Animism**	**Totemism**	Similar interiorities Similar physicalities
Dissimilar interiorities Similar physicalities	**Naturalism**	**Analogism**	Dissimilar interiorities Dissimilar physicalities

And note that in the case of "naturalism" all natural beings presenting "similar physicalities" means they have in common needs like nurture and biological reproduction, they are all born biologically, and they can all die, etc. Moreover, "naturalism" is "anthropocentric" as much as "animism" is "anthropomorphic," to concur with Déborah Danowski and Viveiros de Castro (2017:69ff.): from an "animist" perspective the concept of "humanity" does not denote a specific biological species but an extensive, i.e., trans-species, "condition."

In discussing animism[11] Descola (1996:88) remarks that it may eventually combine with totemism, for example in the case of the Bororo, whereas Danowski and Viveiros de Castro (2017:138) follow Sahlins (2014) in arguing that their difference "is not very clear and possibly not very meaningful" (see also Viveiros de Castro 2009, 2012a, 2015:230–35). As for "analogism" and "naturalism," Descola envisages them as representing two radically different options, notwithstanding the fact that they have occasionally coexisted, and coexist even today in Europe in the juxtaposition of science and astrology in the minds of many Europeans. Therefore, he defines these four "ontologies"—the theorizing of which represents a very notable contribution to contemporary anthropology and philosophy alike—as being exterior to one another.[12]

Following Townsley's ethnography of the complexity and richness of Yaminahua ontologies I challenge Descola's view regarding ontology boundedness. Although, Townsley's ethnography as apropos their language no longer reflects the circumstances under which the Yaminahua live it remains nonetheless crucial. For within the traditional Yaminahua worldview animism, totemism, and analogism can be said not only to have coexisted but to have intertwined in a complex ternary system that made possible the dualism characteristic of most Amazonian ontologies.[13] This binary matrix relying on a ternary system (and hence presenting a two-part arithmetics that Viveiros de Castro [2012b] has explored from a different perspective) is another outstanding feature of the traditional Yaminahua (and more broadly Amazonian) "baroque" mind. Townsley (1994:214–40), who extensively and accurately describes Yaminahua binary logic, offers a tentative functional hypothesis of its genealogy (ibid.:230, 235–40, 244, 246) in an attempt to overcome what he sees as Lévi-Strauss's too-"static" reading of Amazonian binary logic. However he fails to perceive this crucial arithmetic co-implication (↔):

Here the latter component (i.e., the ternary system) plays a (literally) "transcendental" role (in the Kantian sense) insofar as it establishes the conditions of possibility of the first component (i.e., the basal binary logic). Therefore, the ternary system forms a structure that is inherently connected to a basal binary structure, for which reason their connection forms a first macrostructure; "first" because, as shown later, this macrostructure intersects (∩) with another one (fourfold this time). Notice that we are moving here on a relational level different from that of the aforementioned co-implication. Every individual (if it makes sense to speak of individuals)[14] within the fourfold relational level is simultaneously (i.e., synchronically) integrated into space, time, society, and the cosmos. In the end,

$$\{2 \leftrightarrow 3\} \cap 4.$$

Put differently: a binary opposition conceals a ternary system, and they somehow unfold into a parallel quaternary system. Let us now consider these three steps successively.

1) The Basal Binary Structure of the Yaminahua Cosmopoliteia; or, the Division of the Real into Two Opposite but Complementary Ontological Classes

Like most Amazonian (and many non-Amazonian premodern) worlds the Yaminahua is a binary universe. Everything that exists falls under one of two classificatory categories, as all reality (be it corporeal, social, cosmological, etc.) divides into two opposite but complementary halves. These halves take the form of moieties *roa* and *dawa* when such division applies to the social. The former comprises all things that like the tribal "chiefs," who due to their age prove wiser than the other men and whose wisdom and persuasive rhetoric grant stability and durability to the community, may be said to belong to the very center of the latter. They are hence "inner" to it like the women, the children, and the elder in contrast to the young hunters and warriors, and they are therefore too "white" or "colorless," "big," "soft," "humid" or "belonging to the water," and "of intense smell" as well as "archetypal" or "belonging to the sky" like, e.g., the "royal vulture," above which no other animal can fly. The latter are the "shamans" who communicate with the "others," i.e., the spirits of the dead, plus all things that are "external," "black" or "colorful," "small," "hard," "dry" or "belonging to the earth," and "aromatic" as well as similar to the young warrior, like the "jaguar." And just as it can be affirmed that everything (from names to sizes and colors and other physical qualities to spatial positions and ecosystems, from animals and humans to socio-cosmological roles and groups) belongs to one of these two classes, it must also be stressed that humans permanently circulate through one another by marriage, as each human person (for humans are not the only true persons in the Yaminahua world) must espouse another one belonging to the opposite class.

There is little need to stress that sociality consists in such alliance and that reciprocity is its rule; thus all social forms that betray it should be somehow viewed as deviant (Segovia 2019). The same holds for the significance of kinship relations from an anthropological perspective (Sahlins 2006). Furthermore, those societies that do not betray it may be defined as "serial," since they consist of a number of binary series that echo, or rather express, a basal dual logic: this "and" that; and one could suggest, following Lévi-Strauss and Pierre Clastres, that the mechanism through which the binary opposition is expressed in such societies implies the "reciprocal subordination" of any two terms thus opposed, so that a hypothetical primacy of any of them over its opposite (and hence the creation of a sphere of power separated from the social and against the unity of the social) is prevented—whence Clastres's well-known and precise definition: "societies against the state." In short, the social is neither subsumed into the rule of One nor divided into the multiplicity of the Many; i.e., it forms neither a state with its characteristic vertical subordination nor a (neo)liberal playground for individual competition. Yet it does not reflect the struggle of Two—a struggle that would only come to an end when one of the opponents manages, first, to defeat its opponent, and then finally to dissolve all imaginable division in the all-encompassing substance of a

(re)new(ed) One: the social is here instead, to paraphrase Gilles Deleuze, a world made of "disjunctive syntheses."

Figure 1 below shows how this dual organization has been progressively lost in many Yaminahua settlements, which used to reflect it as well but have undergone over the past decades a gradual atomization, thus displaying the globalized/colonial Western model of a mononuclear family (composed of a few highly individualized members). I distinguish three phases (*i*, *ii*, *iii*), of which the second (*ii*), based on the spatial redistribution of the uxorilocal "extended domestic unit" (EDU) formed by an old couple, their daughters, and their daughters' husbands and premarried children plus eventually some of the old couple's divorced or even married sons with their own families, represents the transition between the traditional binary model (*i*) with its two well-defined "malocas" (M) or communal houses (with their typical two doors for men and women, respectively) that persisted until approximately, the third quarter of the past century, and the current model (*iii*) based on the segregation of the "nuclear families" (NF) that were earlier constitutive of each EDU, which significantly includes a modern school (S).
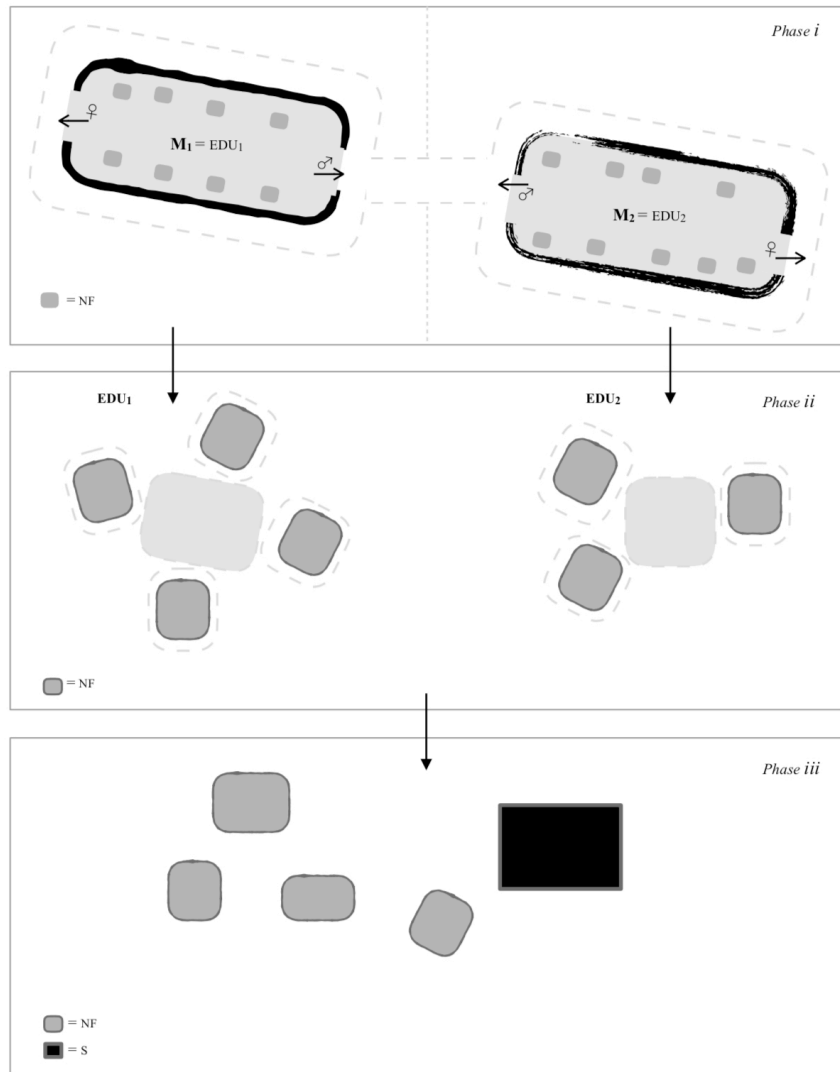

Figure 1. Atomization of the Traditional Yaminahua Settlement

It is interesting to note that if, according to the traditional Yaminahua (and more broadly Amazonian) view the whole cosmos partakes in this fundamental binary division that provides its infrastructure to all reality, it is less because there would be something beyond the social but that is organized in the same way than because the cosmos itself proves to be social in all its layers. In fact, from the traditional Yaminahua standpoint sociality is a continuum that exceeds what we (but only we) would label as "human." To put it succinctly: everything falls under one of the two aforementioned categories or classes because there is

nothing beyond the cosmopolitical web in which the world consists, from the royal vulture and the jaguar to the Yaminahua themselves.

2) An Underlying Ternary System; or, the Transcendental Structure behind the Basal Binary Structure of the Yaminahua Cosmopoliteia

But how is such a twofold division made? In other words, what are its formal or logical conditions of possibility? There are three, I posit. First, beings are grouped in two classes according, first and foremost, to their "inner," albeit simultaneously embodied, qualities, which in turn requires that they be all provided with an embodied "animated" principle or (for lack of a better term) "soul" (*yoshi*) responsible (as their "cause") for their "particular characteristics" (Townsley 1994:215). This amounts to adopting, as I have formerly underlined, an "animist" perspective. Secondly, this in turn demands that certain analogies be established among each being's characteristics, for otherwise it would not be feasible to group them within a category. "Softness," or "hardness," for instance, must be shared by a number of them, and the same can be said of any other opposing traits: they must be identified in these particular beings (in the plural, therefore) as being characteristic of them all, whereas other beings present opposite characteristics. But is this not to posit, alongside an animist take on things, their association by virtue of their analogies—and hence to establish "analogism" as a complementary principle? Thirdly, is it not true that, as a consequence, all things grouped in the same class share those very qualities that make them far more similar to one another than they are to the things gathered in the opposite class, so that members, say, of one of the two social moieties into which Yaminahua society divides resemble their respective totems— the royal vulture or the jaguar, respectively—more than they resemble members of the other social moiety, which are nevertheless their potential affines? And is this not, in last analysis, the very principle of "totemism?"
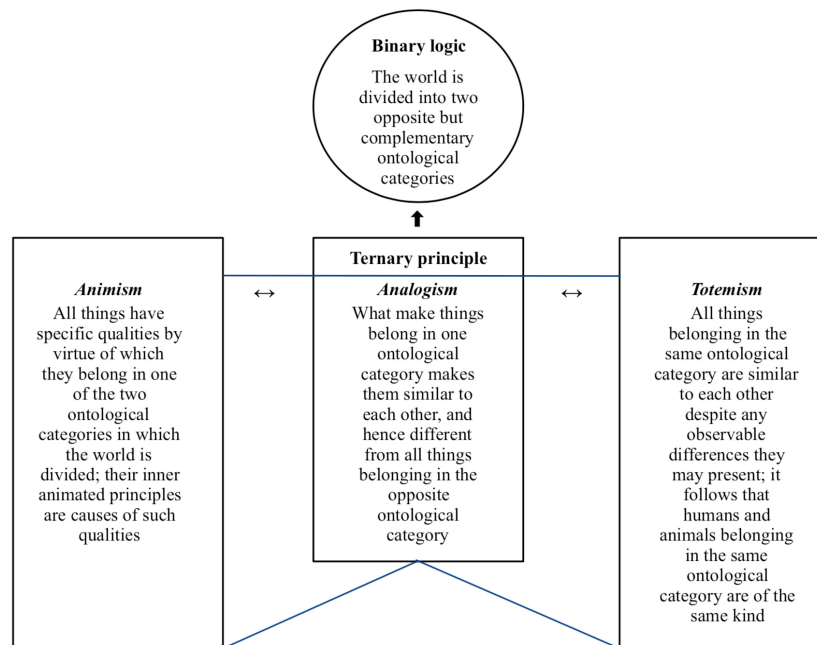

Figure 2. Transcendental Ternary System Underlying the Cosmopoliteia Binary

This, in sum, means "animism," "analogism" and "totemism" (to use Descola's terms) do not only overlap but also fuse into one another; and that rather than being exterior to each other, these three "ontologies" (as Descola calls them) can eventually, and do indeed often, combine (do not many "savage" cosmologies bear witness to their combination?) into a single ternary system without which the basal binary division I have explored in the preceding paragraphs would remain unimaginable. Therefore, we can illustrate the relations within a ternary system as in figure 2 (see above).

This is not something exclusive to the Yaminahua, however. In fact, I am formulating a somewhat recurrent structural pattern, according to which any distributive binary division of the type x, y, and z belong in Class A, while m, n, and p belong in Class B, necessarily operates on a dual, both "animist" and "analogical," distributive basis (if x, y, and z belong in Class A it is due to their inner, if embodied, qualitative similarities, and the very same applies to m, n, and p within Class B). This, in turn, connects the member in each class, including humans and their respective "totems." Thus, for example, as Lévi-Strauss (1966:39) observes after Dieterlen (1950), among the Dogon of Sudan natural and biological phenomena, body parts, social classes, techniques, and institutions are typologically correlated. More precisely, their multi-arithmetic taxonomical system consists of twenty-two main plant families, some of which are further divided into eleven subgroups, all subdivided into three regular subcategories and grouped into two major classes that stand in inverse relationship to one another and are extensive regarding various sensible qualities, types of births, biological sexes, body parts, social classes, techniques, and institutions. Analogy and totemism are reciprocally at play here, but in a way in which through them everything becomes not only linked but also alive, i.e., animated, in specific ways, with all things simultaneously sharing embodiment and interiority with other things. Likewise, Barbara Glowczewski (2007) notices that totemism, analogism, and animism often go hand in hand in Australia.

3) A Parallel Quaternary System; or, the Intersecting Structure That Makes Possible the Integration of all Yaminahua People into the Four Dimensions of Space, Time, Society, and the Cosmos

Finally, I would like to argue that if, by virtue of their embodied inner qualities, all things are integrated into the cosmos, in the sense that they are incorporated in one of the two ontological classes into which the world divides, in the case of humans such cosmic integration depends on their lineage. The latter expresses, so to speak, an essence or living principle, and thus ultimately amounts to its embodiment. Additionally, their lineage or physical heredity (i.e., their consanguinity) provides the Yaminahua their *yora*, or collective body, a body shared (for no term exists that denotes the individual body), therefore; and in this way they are also integrated (literally: see the drawing of the traditional settlement above) into spatiality. Simultaneously, their exogamy forces the Yaminahua to marry someone belonging to the opposite social moiety, thus allowing all members of the group to actively partake in the very foundation of the social qua alliance. Lastly, the way in which all proper names are distributed and replicated in alternate generations (the grandsons always receive the names of their grandparents, which are thereby kept within the moiety to which they belong), while integrating the Yaminahua into both society and the cosmos in a different manner, incorporates them too into a realm of time that is permanent and stable, i.e., synchronic; thus Townsley (1994:213) observes that Yaminahua generations, rather than falling under the logic of "descent," fall under that of "replacement," which permits them to live, I dare add, in a Nietzschean "eternal return" where infinite intensive differences happen to unendingly express other prior and more basic differences—"difference and repetition," therefore, to paraphrase Deleuze. Arguably, then, we have:

$$name \Rightarrow \textbf{Time} \mid \textbf{Space} \Leftarrow physical\ heredity$$

$$marriage \Rightarrow \textbf{Society} \mid \textbf{Cosmos} \Leftarrow spiritual\ heredity$$
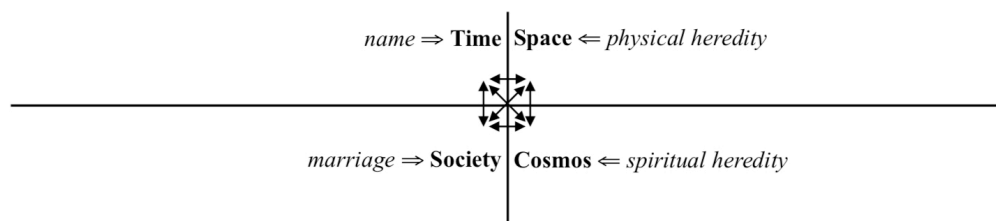
Figure 3. Co-implied Time/Space/Society/Cosmos Dimensions

With full correspondence and circulation between such co-implied dimensions there can be neither time without space nor cosmos without society; the cosmos is, in turn, contained like society in space and time, and these provide extension and rhythm to the former.

Conclusion

Examining the "twisted" rhetoric of Yaminahua shamanic songs allows one to understand how complex and polyvalent semiotic systems can be. It also shows how diverse the relations between words and things prove in different cultural contexts. More specifically, what I have labeled "metaphorical recursiveness" suggests the figure of a twofold, both ternary and binary, folding of language and reality in which the referent is circumvallated if not completely elided. Finally, it calls one's attention to the fact that the differential component of indigenous languages is not only to be found in their semantics or syntax but also in their rhetoric, i.e., in their use or performance.

On the other hand, the ontological classifications of the Yaminahua reveal a likewise imbricate structure that is simultaneously binary, ternary, and quaternary: binary concerning the overall classification of all things in two classes; ternary in the sense that such classification, based as it is in the extensive distribution of embodied inner qualities, brings together animist, totemic, and analogist features often thought to form independent worldviews; and quaternary because it makes possible the integration of the Yaminahua in time, space, society, and the cosmos in connection to a number of endogamic and exogamic distinctions.

Combined, the two things show ethnology still needs today as much theory as it always has. Furthermore it is possible to add that, to some extent, shamanic songs stand on the two sides of the famous theoretical divide analyzed by Lévi-Strauss in *La Pensée sauvage* (1966:32–33): while their "twisted" rhetoric aims at producing specific events by means of a given semiotic structure, the Yaminahua ontological classifications they express organize sets of events (since everything is alive in any indigenous context) in structural fashion.

Notes

[1] The most complete Yaminahua grammars are those by Norma Faust and Eugene E. Loos (2002) and Eakin (1991), whereas the most complete (if the author acknowledges it as provisional) lexicon is André-Marcel D'Ans (1972) despite its relative antiquity.

[2] On ideophones and interspecies relationality in indigenous contexts, see Segovia 2020.

[3] A possible analogy would be Mahler's *Das Lied von der Erde*, with its "two coexistent motifs, one melodic, evoking the assemblages of the bird, the other rhythmic, evoking the deep, eternal breathing of the earth" (Deleuze and Guattari 1987:339), but as we shall see, unlike the romantic artist the shaman does not end up lost in his disjunctive journey.

[4] Cf. Wagner's 1978, 1986:xi) notion of "obviation."

[5] "It is likely that something similar occurs in the [Arawak] Piro case," writes Peter Gow (2001:145), "for the corresponding Piro category would seem to be *koschepiru*, 'the words of a song,' deriving from *koscheta*, 'to guess, to divine' (Matteson 1965:346). The same word root, *-sche-*, also generates the term, *gischega*, 'a curl', which suggests a basic similarity between Yaminahua and Piro conceptualization of shamanic song imagery." On possible similarities in the Arawak Tariana, Kurripaco, and the Carib Kalapalo shamamic chants, see Aikhenvald 2012:366. On the circumlocutions of mestizo shamanic songs in the Upper Amazon, see Beyer 2009:76.

[6] There would be little mystery to such possibility, however; for as Oltmanns and Emery (2014:227) remark "Medical scientists now view every physical illness—from colds to cancer to AIDS—as a product of the interaction between the mind and body." Eduardo Viveiros de Castro (2013:29) makes a somewhat complementary point when he contends that the shaman's bell is a "particle accelerator"—no metaphor implied. See also Giraldo Herrera 2018.

[7] Here I respectfully disagree with Townsley (1987:17) who holds that cognitive constructionism rather than semiotic theory is the apt frame in which to interpret shamanic metaphors. Paraphrasing Eco's (1976:3–5) classical definition of semiotic theory, I take it be the theory of sign production and the sign-based cultural codes that generate specific sign-functions.

[8] I am grateful to Anne McCabe (Saint Louis University) for her helpful comments on an earlier draft of this section of my paper.

9 Cf. the parallel concepts of "perspectivism" and "multinaturalism" in Viveiros de Castro 1998 and 2014:49–75), which goes far beyond the timid recovering of the term "animism" by Nurit Bird-David (1999) and Graham Harvey (2017) [after A. Irving Hallowell (1960)].
10 Descola (2011) also includes abundant visual illustrations of these four ontologies.
11 For the reutilization of animism in the social sciences and the ecological humanities, see Pedersen and Willerslev 2012; Harvey 2013; Kohn 2013; Brightman, Grotti and Ulturgasheva 2012.
12 One can compare Descola's conclusions with Morten A. Pedersen's (2001) study on "animist" and "totemic" Asian cultures.
13 As Claude Lévi-Strauss showed, dualism, i.e., the division of the real into two opposite albeit complementary categories has very little to do with our common, dramatic understanding of such a term.
14 On whether premodern Amazonians were/are not individuals see, e.g., Falleiros 2017.

References

Aikhenvald, Alexandra Y.
    2004   *Evidentiality.* Oxford: Oxford University Press.
    2012   *The Languages of the Amazon.* Oxford: Oxford University Press.
Beyer, Stephan V.
    2009   *Singing to the Plants: A Guide to Mestizo Shamanism in the Upper Amazon.* Albuquerque: University of New Mexico Press.
Bird-David, Nurit
    1999   "'Animism' Revisited: Personhood, Environment, and Relational Epistemology." *Current Anthropology* 40(suppl):67–91.
Blaser, Mario
    2013   "Ontological Conflicts and the Stories of Peoples in Spite of Europe: Toward a Conversation on Political Ontology." *Current Anthropology* 54/5: 547–68.
Brightman, Marc, Vanessa Grotti, and Olga Ulturgasheva (eds)
    2012   *Animism In Rainforest And Tundra: Personhood, Animals, Plants and Things in Contemporary Amazonia and Siberia.* New York: Berghahn.
D'ans, André-Marcel
    1972   *Léxico Yaminahua (Pano).* Lima: Universidad Nacional Mayor de San Marcos.
Danowski, Déborah and Eduardo Viveiros de Castro
    2017   *The Ends of the World.* Cambridge: Polity Press. [orig. 2014]
Deleuze, Gilles and Félix Guattari
    1987   *A Thousand Plateaus. Capitalism and Schizophrenia.* New York: Continuum. [orig. 1980]
Descola, Philippe
    1996   "Constructing Natures: Symbolic Ecology and Social Practice." In Philippe Descola and Gisli Pálsson (eds*), Nature and Society: Anthropological Perspectives.* London: Routledge, pp. 82–102.
    2013   *Beyond Nature and Culture.* Trans. Janet Lloyd. Chicago: University of Chicago Press. [orig. 2005]
Descola, Philippe (ed)
    2011   *La Fabrique des images. Visions du monde et formes de la représentation.* Lyon: Musée du Quai Branly and Somogy Éditions d'Art.
Dieterlen, Germaine
    1950   "Les Correspondances cosmo-biologiques chez les Soudanais." *Journal de Psychologie normale et pathologie* 43(3):350–66.
Dixon, Robert M. W. & Alexandra Y. Aikhenvald
    1999   "Introduction." In R. M. W. Dixon and A. Y. Aikhenvald (eds), *The Amazonian Languages.* Cambridge: Cambridge University Press.
Eakin, Lucille
    1991   *Lecciones para el aprendizaje del idioma Yaminahua.* Lima: Ministerio de Educación/Yarinacocha, Pucallpa, Peru: Instituto Lingüístico de Verano. Documentos de Trabajo. N° 22.

Eco, Umberto
    1976   *A Theory of Semiotics.* Bloomington, IN: Indiana University Press. [orig. 1975]
Epps, Patricia and Andrés Pablo Salanova
    2013   "The Languages of Amazonia." *Tipití* 11(1):1–27.
Everett, Daniel
    2008   *Don't Sleep, There are Snakes: Life and Language in the Amazonian Jungle.* London: Profile Books.
Falleiros, Guilherme
    2017   "Notas para uma crítica anarco-Indígena ao indivíduo / Notas para una crítica anarco-Indígena al individuo," *Palimpsestos: revista de arqueología y antropología anarquista* N° 0-Year 1:189–225.
Faust, Norma and Eugene E. Loos
    2002   *Gramática del idioma yaminahua.* Lima: Instituto Lingüístico de Verano.
Fleck, David W.
    2013   *Panoan Languages and Linguistics.* New York: American Museum of Natural History.
Foucault, Michel
    1970   *The Order of Things: An Archaeology of the Human Sciences.* New York: Pantheon Books. [orig. 1966]
Giraldo Herrera, César
    2018   "Shamanic Microscopy: Cellular Souls, Microbial Spirits." *Anthropology of Consciousness* 29(1):8–43.
Glowczewski, Barbara
    2007   "The Paradigm of Indigenous Australians: Anthropological Phantasms, Artistic Creations, and Political Resistance." In Lucienne Strivay and Géraldine Le Roux (eds), *The Revenge of Genres. Australian Contemporary Art.* Paris: Editions Aïnu, 84–108.
Gow, Peter
    2001   *An Amazonian Myth and its History.* Oxford: Oxford University Press.
Guattari, Félix
    2016   *Lines of Flight: For Another World of Possibilities.* London: Bloomsbury. [orig. 2011]
Hallowell, A. Irving
    1960   "Ojibwa Ontology, Behaviour, and Worldview." In Stanley Diamond (ed) *Culture in History: Essays in Honor of Paul Radin.* New York: Columbia University Press, pp. 19–52.
Harvey, Graham
    2017   *Animism: Respecting the Living World.* 2nd ed. London: Hurst & Co.
Harvey, Graham (ed)
    2013   *The Handbook of Contemporary Animism.* London: Routledge.
Kohn, Eduardo
    2013   *How Forests Think: Toward an Anthropology beyond the Human.* Berkeley: University of California Press.
Lévi-Strauss, Claude
    1964   *Totemism.* London: Merlin Press. [orig. 1962]
    1966   *The Savage Mind.* London: Widenfeld & Nicolson. [orig. 1962]
    2005   Promotional blurb on Philippe Descola *Par-delà nature et culture.* Paris: Éditions Gallimard.
Matteson, Esther L.
    1965   *The Piro (Arawakan) Language.* Berkeley: University of California Press.
Merelis, Ana, Manuel Rodríguez, Mariana Rodríguez, Francisco Gonzales, Joel González and Durimar Merelis
    2010   RSCSCMTY/Registro de saberes, conocimientos, sabidurías, cosmovisiones, relacionados con la Madre Tierra del pueblo Yaminahua Ministerio de Educación: Estado Plurinacional de Bolivia. http://biblioteca.minedu.gob.bo/biblio/electronic-book/1205

Nuckolls, Janis B.

    1996   *Sounds like Life: Sound-symbolic Grammar, Performance, and Cognition in Pastaza Quechua.* Oxford: Oxford University Press.

    2010   "The Sound-Symbolic Expression of Animacy in Amazonian Ecuador." *Diversity* 2:353–369.

    2012   "Ideophones in Bodily Experiences in Pastaza Quichua (Ecuador)." Proceedings of the 2011 Symposium for Teaching and Learning Indigenous Languages of Latin America (STLILLA). Indiana: University of Notre Dame.

Nuckolls, Janis B., Tod Swanson, Alex Rice, Diana Sun and Sarah Hatton

    2015   Ideophone-gesture composites: depictive type, sensory class, and modality. Program with extended abstracts for the Linguistic Society of America Annual Meeting, Portland, Oregon, January 7–11. (4 pages)

Pedersen, Morten A.

    2001   "Totemism, Animism, and North Asian Indigenous Ontologies." *Journal of the Royal Anthropological Institute* 7(3):411–27

Pedersen, Morten A. and Rane Willerslev

    2012   "'The Soul of the Soul is the Body': Rethinking the Concept of Soul through North Asian Ethnography." *Common Knowledge* 18(3):464–86.

Sahlins, Marshall

    2006   "The Western Illusion of Human Nature." *Michigan Quarterly Review* 45(3): 454–83.

    2013   "Foreward." In Philippe Descola. *Beyond Nature and Culture.* Trans. Janet Lloyd. Chicago: University of Chicago Press.

    2014   "On the Ontological Scheme of Beyond Nature and Culture." *HAU: Journal of Ethnographic Theory* 4(1):281–90.

Segovia, Carlos

    2019   "Re-theorising the Social and Its Models after Lévi-Strauss's and Pierre Clastres's Study of Stateless Social Assemblages." *Anarchist Studies 27(2):*

    forthcoming   "Ontologies and Ecologies of the Otherwise: Notes on Post-development Practices in Malawi." In J. Pedro-Caraña, E. Herrera-Huérfano and J. Ochoa-Almanza (eds), *Communication Justice in the Pluriverse: A Dialogue towards the Planetarization of Experiences.*

Townsley, Graham

    1987   "Metaphors and the Unseen: The Shamanic Use of Verbal Metaphor amongst the Yaminahua of Southeastern Peru." *Cambridge Journal of Anthropology* 12(2):1–17.

    1994   "Los Yaminahua." In Fernando Santos Granero and Frederica Barclay (eds), *Guía Etnográfica de la Alta Amazonia.* Vol. 2. Quito: FLACSO-Sede Ecuador and IFEA, pp. 239–360.

Viveiros de Castro, Eduardo

    1998   "Cosmological Deixis and Amerindian Perspectivism." *Journal of the Royal Anthropological Institute* 4(3):469–488.

    2009   Perspectivisme et animisme: débat avec Philippe Descola. Maison Suger, Paris, January 30. Video. <https://www.canal-u.tv/video/fmsh/perspectivisme_et_animisme_debat_avec_philippe_descola.30901>.

    2012a   *Cosmological Perspectivism in Amazonia and Elsewhere.* Masterclass Series 1. Manchester: Hau Network of Ethnographic Theory. <http://haubooks.org/cosmological-perspectivism-in-amazonia>.

    2012b   *Radical Dualism: A Meta-Fantasy on the Square Root of Dual Organizations, or, A Savage Homage to Lévi-Strauss/Radikaler Dualismus: Eine Meta- Fantasie über die Quadratwurzel dualer Organisationen, oder, Eine wilde Hommage an Lévi-Strauss.* Ostfildern, Germany: Hatje Cantz.

    2013   *La mirada del jaguar: introducción al perspectivismo amerindio. Entrevistas.* Buenos Aires: Tinta Limón. [orig. 2008]

    2014   *Cannibal Metaphysics.* Minneapolis: University of Minnesota Press. [orig. 2009]

2015   *The Relative Native: Essays on Indigenous Conceptual Worlds.* Chicago: HAU Books.

Wagner, Roy

1978   *Lethal Speech: Daribi Myth as Symbolic Obviation.* Ithaca: Cornell University Press.

1986   *Symbols that Stand for Themselves.* Chicago: University of Chicago Press.