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Sonic Substances and Silent Sounds: an Auditory Anthropology of Ritual Songs

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Abstract

In Western Amazonian indigenous and mestizo medical concepts, substances play a great role. In order for a substance to be efficient, a ritual or medical specialist should sing a song or whistle a melody towards the remedy. The song is then ‘contained’ in the remedy. The song may be for instructing, negotiating with, or repulsing non-human persons, like animals, spirits, or ancestors. Magical singing is also effective by singing directly to a client. Specialists can establish performative ontological linkages between human and non-human persons. By singing such linkages into being, the singer inscribes the non-human’s qualities in the human client’s body, very much like when ingesting a substance. The singers’ voices are understood as a substance that remains in the body. The same applies if the song was sung or whistled onto a remedy or a tobacco cigarette. These phenomena allow for a deeper investigation into indigenous conceptualisations of the sonic and of what can be heard and understood by whom. Finally, these findings shed more light on local concepts of the structure of the world within which we, and the spirits, live.

An Assumed Certainty Creates Many Questions

This Special Issue is dedicated to “the alchemical person” that is, to the crucial roles that a variety of substances obtain in their applications in the making and the maintenance of human persons. A collection of excellent contributions highlights many different aspects of substance production and uses, sometimes even abuse. In order to extend, rather than further deepen the issue’s scope, my descriptions of vegetal, animal, or inorganic remedies, which I have yet to mention, may appear somewhat superficial. This is the case because my focus is not on physical matter; rather, I will try to grasp and explain the applicability of a substance usually (although rather arbitrarily) understood as intangible: sound.

The standard Western definition of sound is generally described as a form of energy that travels in waves through a medium. This appears rather commonplace, but let me try to make clear what this means. In acoustics, sound is defined as energy emitted by vibrations or turbulence transmitted through a medium, where it dissipates with time, unless constantly repeated. For example, imagine a person plucking a string on a guitar once: the player transmits energy to the string, which in consequence moves back and forth until the energy is neutralised by inertia and air resistance. Meanwhile, every impulse of the cord moving back and forth, say, its vibrations, are transmitted mainly via the wooden (or in some cases metallic) bridge to the guitar’s body. The hollow body of a guitar is designed in a way so that the air contained within resonates with major formants of the string’s complex movements.¹ Thus, the wooden cover of the guitar’s body acts as a membrane² (allowing movement back and forth) that transmits the vibrations, amplified by resonance, to the surrounding air. Although intuition tells us that the air does not move in the same way as wind does when transmitting sounds, it actually does, on a smaller scale. The membrane (guitar body cover) hits some air molecules, which are thrown away from it by this impulse. They move that way until they collide with other air molecules that take over the impulse and continue this movement. Meanwhile, the membrane has moved backwards, thus creating a downfall of air pressure, “sucking”

back the first wave of molecules, which will again be hit hard by the membrane as soon as it moves forth again. Thus, wave after wave of air molecules move back and forth, until the initial vibrations die away (this can happen rather quickly; e. g. an ideal “click” only issues forth one wave of molecules). With this example it is shown that sound moves not only through air (in transversal waves) but also, usually considerably faster, through solid bodies like the guitar’s bridge and body (in longitudinal waves).

On the other end of this energy transmission, a receiver may be located. The receiver may be a measuring unit like a microphone, but also a human being with, we assume, a “normally working auditory apparatus”, and, to be sure, who is in a “normal waking state”. The outer ear of our ideal listener captures, directs, and focuses these waves of colliding air particles on the tympanum—another membrane (note that also most sound detecting machines, like microphones, make use of membranes) that is put into vibration. Now, a highly complicated succession of energy transmission and transformation is triggered, which I will describe here briefly.³ The tympanum is directly connected to the first of three middle ear bones, which are linked to each other. Here, the waves are transformed into solid body vibrations (through the bones) before being transmitted to the next membrane: the third ear bone is attached to the “oval window”. On this membrane’s far side, inside the cochlea, a lymphatic liquid awaits to take over the impulses from the membrane, so the guitar cord’s energy finally causes this liquid to flow in and out of the cochlea, thereby causing the cochlear basilar membrane to move. This movement “pumps” liquid into and out of a tiny chamber on the Corti organ. In the channel to this chamber, hair cells are stimulated: when the hair is put into motion, the cell’s far end causes neural transmitter substances to be released into a synaptic gap. Now, a chemical reaction ensues in an incredibly short span of time where a neuron fires an electrical impulse through the auditory nerve towards the limbic system in the central nervous system, where another complex and still not entirely explored succession of electrochemical transformations and transmissions in the auditory cortex occur, before the listener “consciously perceives a sound”.⁴

This analysis of physics and neuroscience may appear rather surprising in the context of this volume but serves two major purposes to further our discussion of sonic substances. First, it helps to underline how tightly the transmission and translation of “energy” is bound to its carrier “matter” that not only consists of air, but of a confusing multitude of “substances” (the cord, bridge, wooden cover, skin, bones, lymphatic liquid, neurotransmitters, neurons and their axons). Secondly, it serves to illustrate that psychophysics do not, by any means, explain what we actually hear when we “hear a sound”. The philosophical analysis of ‘what is a sound’ is just as complex as the physical and physiological explanations above.⁵ Physically speaking, we are supposed to hear sound waves coming through the air; however, nobody ever perceives air waves. We commonly perceive the energy emitter, an agentive object, for example, we “hear a guitar playing”. This becomes more confusing if the chain of energy transmission is prolonged by an electromagnetic pickup on the guitar’s body, causing us to still “hear a guitar playing” while actually a recording is causing a membrane in a loudspeaker to move the air. In such a case, no guitar is actually being played in earshot, but the illusion is almost perfect: the sonic stimulus is caused by the speaker, but we do not “hear the speaker”, we still “hear a guitar playing”. Finally, take into consideration what happens if we question (and as anthropologists we are supposed to question this all the time) the basic presupposition of the hearing process outlined above, that is the “normality” of a “normally working auditory apparatus during normal waking states”. Without delving into the long history of how “normality” came into being (as for example elaborated by Michel Foucault as an “objectivisation of the subject”, see e.g. Foucault 1970), the casualness, or rather, self-evidence in how “normality” is being treated in psychological studies about perception (auditory and otherwise) is rather surprising. This is where an anthropological approach allows for a much broader range of questions: What is heard in dreams, in “not-normal” waking states, what are auditory hallucinations, what about these “hearing impairments” that affect all of us in more or less intense ways, and what happens to these sound waves we do not hear (sorry to remind you that the clock has been ticking all the time or even that your radio is still on)? What does it mean when ethnographers tell us that indigenous people in the central Amazon can hear things not even audible to so-called Westerners (for example in Menezes Bastos 2013)?

Analytical philosophy tends to understand sounds as discrete objects that exclusively exist in the auditory imagination of a subject (if a tree falls in the woods, where there is nobody to hear it, sonic waves are created, but no sounds; on the other hand, auditory

hallucinations create sounds in spite of the absence of sonic waves).⁶ As in the case of an entire village in the Kalahari perceiving the clang of one (1) glass bottle hitting the ground in the middle of the plaza after being dropped from an airplane, there are as many sounds as there are listeners. The *clang* of the bottle manifests in the minds of those people apt to hear it, thus multiplying and “individualising” its distributed existence (as well as the assumptions as to what actually caused this *clang*). This is not only the case for hearing people; the “entire village” does include much more: for example, non-human beings in the village with hearing capabilities cannot be excluded from this count either. This takes us to increasingly interesting inquiries, for example, what, and how do non-humans hear? “Very similarly”, one may be tempted to answer at least when referring to non-human animals (a dog may also rush towards the plaza attracted by “the same” *clang*), but can we be so sure? What about these invisible beings indigenous people seem to constantly be in communication with? If it is mainly sonic communication, how and what do spirits even hear? And finally (in spite of many possible and unanswered questions I still can imagine), what does it mean that ethnographers indifferently tell us, that indigenous people, at least in many cases in South America, would understand sound as a kind of substance?

I plan to shed as much light as possible through an inquiry about invisible things, as sounds cannot be seen. I will refer to my own ethnographic data from the western (Peruvian) Amazon, as well as to material collected by other researchers. In the next section, I will review how sounds can be applied to substances, especially how agency transported via sounds can be attached to material things. Thereafter I will discuss the ways in which non-human agents (many of them being other-than-animal), can transmit meaning towards humans that is perceived by the latter as sonic impressions. Based on this, a model of the agency of sonic substance will be proposed, including a typology of different modes of listening that may convey meaning to otherwise unclear ways of inter-specific communication.

Homeopathic Doses of Song

“*Bewan tsakata riki!*” somebody comments on the apparent sickness of a patient who was sung to by two Shipibo-Konibo healers during an hour-long night-time curing session. “She is pierced by the song!” would be the corresponding English translation; *tsakata*, “pierced”, also being used for an animal (or enemy) impaled by a spear, a harpoon or an arrow. During the curing, the two healers were sitting before the patient, exposing her to a massive auditory onslaught, polyphonic singing performed with loud and powerful voices and with surprising endurance. In their song lyrics they express, among many other troublesome topics, how they enter the patient’s body, opening it with their mighty song-machine, cleaning away bad influence, blowing and fanning fragrant air in order to replace pungent smells, summoning beautiful sirens to attract ugly river spirits who stink and make people sick, surrounding, and caging them for their later unleashing upon the person they hold responsible for bewitching their patient in the first place. The patient, who does nothing besides sit on the floor in a fairly comfortable position listening, maybe even dozing a bit, feels *paena*, “drunk, inebriate” without any drug intake. She may feel dizzy, even vertigo, and nausea. In the indigenous world this is considered normal, because the patient was directly exposed to the singing, which seems to cause effects similar to an intensive gamma ray bombardment. This is normal because the song entered the patient’s body, intervening with and manipulating physiological processes, staying there, lingering in flesh, blood and bones, long after the singing ceased.

Whatever the song *does* in the body after having faded away in its sonic manifestation, it is said to *work* there. It has an agency of its own which is not necessarily connected to its sounding moments (although in this sonic appearance its power is most easily recognised). It is very difficult to determine the ontological status of sounds, or of a song (worse if it is “a certain song”), while it is not audible. Does it exist?⁷ Maybe a song can exist as an intention or idea in a singer’s mind before a performance, it may also linger as an imprint in a listener’s memory (a singer is also his or her own listener). The ontological quality of imagined or remembered music is intuitively very distinct from music during performance, when it hits tympani or a microphone’s membranes.⁸

Such thoughts may appear somewhat fancy in the context of understanding indigenous auditory ontology, but in fact we can find some critical aspects of the models in question by trying to find out more about the localisation of sounds and songs.

Ethnography tells us that such “full-blown” sonic treatments as recounted above are an exception rather than the rule. Anthony Seeger, in *Why Suyá Sing*, explains that the magical musical genre “‘Invocation’ (*sangéere*) is a quietly recited form that is performed over patients by adults of either sex in a number of different locations – although usually not in the plaza. It is a private verbal form, not meant to be heard by many people” (2004: 26). This style of performing is quite the opposite compared to the aforementioned Shipibo-Konibo curing session: in the Suyá case it does not seem to be important whether people understand the lyrics during the barely audible performance. Seeger goes as far as to compare the Suyá/Kisédjê invocations with a substance: “The best Western parallel for the efficacy of an invocation is a hypodermic injection. The blowing injects a particular powerful essence of animality, distilled through metaphor, through the skin of the patient into his or her body. Once in the body it either rectifies weaknesses or strengthens positive tendencies” (2004: 35). The crux of this comparison is that, ontologically speaking, the specific pharmacological agent present in the syringe is the same before and after being injected into the patient’s body, wherein it mixes with blood or other substances. Contrastingly, the “particular powerful essence of animality” mentioned by Seeger is being uttered during the performance and thus, still outside of the patient’s body, forms part of the invocation song. When this essence passes “through the skin”, where it is located “once in the body” of the patient, it does not anymore exist as a sonic utterance. Instead, its ontology is rather unclear.⁹

Seeger says “blowing injects” a powerful thing into the patient’s body. A relatedness—that in many cases reaches synonymy—of singing with blowing is well known in indigenous South America and beyond. The Suyá described by Seeger do not use tobacco, but Beaudet (1997, see also the editors’ introduction in Hill & Chaumeil 2011) has shown that tobacco smoke connects the two, because it makes both human breathing visible as well as the song that is contained in blowing—the smoke takes on a quality of materialised sound (see also Menezes Bastos & Piedade 1999 and especially Hill 2009). Tobacco is certainly one of the most widespread plants in South America that is used for medicinal and magical purposes (see for example Wilbert 1987, or Russel & Rahman 2015). This is also true for the western Amazon, where I conducted fieldwork from 2001–2006. Both indigenous as well as mestizo people use tobacco. On the one hand it can be smoked for pleasure (or addiction) not unlike as in other parts of the world; but on the other hand it is indispensable in almost any ritual or magical task. In the Peruvian Amazon, tobacco is said to be the food of the spirits, a notion known also in other parts of South America. In some instances, tobacco paste, a decoction, or water with tobacco is ingested. Tobacco is also used in conjunction with other remedies. For magical purposes and during curing rituals, however, it is currently most often smoked in pipes or as cigarettes.¹⁰ Here, the simple cigarette is often “charged” with more power by specialists capable of doing so, a process called *icarar* in regional Spanish.¹¹ In the whole of the western Amazon, *icarar* (as a “Spanish” verb) is often used synonymously with *soplar* (“to blow”) and is commonly used for denoting this special act of “charging”: the specialist¹² holds the cigarette or a pipe filled with tobacco close to his mouth while either singing in a loud voice with or without pronounced lyrics, or more commonly, whistling a melody. In the case of whistling, usually much air is let out between the teeth, thus creating a sound reminiscent of blowing and whistling simultaneously. Although this process is here described with a cigarette or pipe, which is the most common form of use, the same act may be performed on liquids like perfumes or medicinal remedies and directly on people or other living beings (it is fairly common to *soplar* a dog, for example, or living plants). In case the “charging” is used on people, usually the melodies are performed singing, with pronounced lyrics, although the whistling style can also be applied. French physician and *ayamaska* specialist Jacques Mabit once explained this process in an illustrative way (personal communication, 2001): a specialist can acquire, for example, access to the *chiricsanango* (*Brunfelsia grandiflora*) plant entity. This is done by completing a “diet” (Spanish *dieta*), that is, a span of time (most often a few months) of periodically ingesting a liquid preparation made from the plant’s roots, while at the same time abstaining from salt, meat, spices, fat, sugar, sexual intercourse and most contact with humans. Once completed, this “diet” results in newly acquired knowledge very often manifested in the form of new songs. During a healing session, the healer now sings the *chiricsanango*’s (or any other entity’s) song to the patient. Mabit explained that the song would thus enter the patient’s body in order to “work” there, despite the total physical absence of the living plant or any remedy made of it. The song stays inside the patient’s body and goes on “working” although the singer has

long stopped performing. During the prior lengthy “diet”, a specific quality of a plant entity is transferred to the specialist, in this case the “warming” property of the *chiricsanango* bush (the *chiricsanango*, among other uses, can be applied for treating problems involving cold, or coolness, like shivering, arthritis, rheumatic pains, or problems with sexual potency or activity.). The specialist thus “owns” this property in the form of a specific song he learned during the “diet”. Therefore, this song also “carries” the same properties. When sung to a patient, the entity’s quality is transmitted to him or her in the sense that, with the song, it would enter the body (much like an injection, I daresay) in order to linger there and extend its properties to the patient as a whole. The whole process is also called *soplada* (from *soplar*, “to blow”), probably because of the custom, once the singing is concluded, of blowing in the direction of the patient, such that the “last remainder” of the song should also be transported into the patient’s body. There are many cases where neither the patient nor the victim are present (imagine a love charm, or sorcery for a paradigmatic example), or when the treatment has to be repeated a few times. This means that the songs cannot be performed directly, and this is where tobacco or liquids have to be “charged”. In these cases, lyrics are seldom pronounced and the whistling style is applied. When the whistling is concluded, optionally a faint blow can also be directed towards the object. If in the case with the patient described above, the “song” lingers within the patient’s body, it can likewise stay in the tobacco or the liquid, carrying a certain entity’s quality. Its effects kick in, and the quality unfolds, when the tobacco is lit and its smoke is blown towards the patient or victim. If a fragrant liquid—often industrially produced perfumes like the popular *agua florida* are used here—is “charged”, its powers are unleashed by either applying it to the body or when somebody takes a mouthful from the flask and blows the fragrance towards the target. If a remedy of sorts was “charged”, it transports the entity’s properties into the body when being ingested.

If the singer performs directly for the patient, the effect, that is the extension, and the “working” of the song, fades away after about three days, although the transmitted qualities may be permanent. How long tobacco or a liquid may remain “charged” is less clear. Some specialists say that it is unlimited, others think that the charge fades away, although generally more slowly. That such a charged object remains powerful for a couple of weeks is generally agreed upon. In the subtitle to this section I used the metaphor of “homeopathic” doses of song because the idea of homeopathy can be useful here (much like Seeger’s injection): homeopathy claims that certain substances, often extracts from plants showing analogous signatures to desired effects, have a “structure” that can be transmitted to pure water by mixing, shaking, and diluting. Finally the water should acquire the “structure” although very few, if any, of the original substance’s molecules are contained anymore in the solution. The tobacco and any other “charged” substances “contain” the “song” in a very similar way: there is “nothing” present in a naturalistic understanding that could be revealed by chemical or scientific testing. However, some “information” is retained in the object, in an almost literal sense: the cigarette is in-formed, there is a musical, melodic form inserted into the object. But this form unfolds and becomes effective (upon being smoked, blown, or drunk) without generating sonic waves; it is not a recording that can be replayed. This is remarkable because the final effect is thought to be similar for both the direct singing towards the patient (in the Shipibo case as well as in Seeger’s and Mabit’s descriptions) and for the application of a charged cigarette or remedy.

In both cases the song remains the same, it still “exists” after the sonic waves have faded. One may object that it is not the song that is contained within the person or the object, but the agency of the entity in question: powerful songs stem from powerful “diets” where access to or communication with powerful entities was established. Before taking on this dilemma, let us assume that it worked in this way. The entity (for example the *chiricsanango*’s plant-person) was summoned by performing its song and at the same time “instructed” to exert its magical or manipulative agency on the patient. This works well as long as the lyrics are pronounced, but what about the whistling? How can the entities be instructed by a mere melody? Although I can imagine that the melodic-rhythmic form of such a “song” contains enough “information” to achieve this, it is not the explanation given to me by Shipibo *médicos*. They reiterate that it is of crucial importance to use the correct lyrics: while whistling, one has to *think* the lyrics in their correct sequence! Thus, although apparently inaudible, the words can be heard by the corresponding entities.

Hearing the Apparently Inaudible

Dale A. Olsen, in his book *Music of the Warao of Venezuela*, describes a similarly radical sonic reduction of a related genre, the songs performed by “*hoarotu*” ritual specialists for inflicting illness or death upon a victim: “a *hoarotu* must sing his inflicting song mentally, facing the person or object he will kill or destroy. While he is singing to himself, he continually smokes a long *wina* cigar and fixedly glares at his victim. And as he sings and glares, his tobacco-smoke *kaidokotuma* leave the corners of his mouth to strangle and weaken his victim” (1996: 259–60), and later, “As the *kaidokotuma* wind their way to the victim, the *hoarotu* continues to think-sing... his inflicting song while mentally naming the animal or object whose essence he will later shoot through the air and into the victim’s body via his magical arrows” (1996: 261). Again someone is “pierced by the song”, although in a less benevolent situation. In this case, the song is not only whistled or sung very quietly but is completely inaudible. And it is the tobacco smoke or the invisible magical arrows that contain “the song”, or that are “charged” with the song’s power, to finally “pierce” the victim.

It appears that South American lowland spirits and animal “souls” are able to hear things; specifically voices that are not present as sonic waves and cannot be recorded or measured by technical devices, not unlike some people in industrialised countries usually diagnosed with schizophrenia. The crux in my comparison here is that societies (the locals with whom one interacts everyday), in which those considered ‘mentally ill’ live, completely deny the existence of the voice outside of the unlucky person’s imagination.¹³ Among the Warao however, the voice is acknowledged to exist in a certain intersubjective sense: the *hoarotu* “think-sings” a song that must exist, because it takes effect. Possibly spirits or other non-human allies or agents (like tobacco, for example) can “hear” what the *hoarotu* “sings”, although no sonic energy is transmitted, at least not in a scientific sense. The Wauja indigenous people in Brazil are quite explicit on that; Acácio Piedade writes that “The Wauja discourse describes a conception of the audible world in which human thoughts have sound, an audio reality imperceptible for humans but not for the *apapaatai* [spirits]: thoughts can be heard by the spirits” (2013: 313). This implies a sense of paranoia in the Wauja’s engagement with the world, because any incoherence between a person’s thoughts and actions can be witnessed by the *apapaatai* spirits who, as a consequence, can enter into this “gap” and cause illness (2013: 314). There is some symmetry available at least for human specialists: “both the mistress *iamurikumã* singer and the flute master can be considered a type of *pajé iakapá* [clairvoyant ritual specialist], but instead of being clairvoyant they are ‘clairaudient’ *pajés*: they have the capacity... to perceive clearly the audio world, including the sound dimension of the *apapaatai*” (2013: 318). They not only “hear” this music during dreams, they are, as musical masters, also able to convey its meaning to their kin, they

...have a great analytical ability that allows them to conduct comprehensive listening to the musical structures of the music, dreamed of and heard obliquely, and they can therefore memorise and perform them in the ritual of the humans. This ability is a shamanic power, because its agents... can transport musical information from the supernatural world—the immanent and imperceptible world of the spirits—to ordinary reality. This ‘musical information’ is not merely audible, but effectively involves a language: the *kavoká* music is understood as the speech of the spirits; a shamanic ability for translation and elocution of the words of the spirits,... (2013: 318).

This description reminds me of my own recording sessions with the Shipibo fisherman and ritual specialist Roberto Mori Valera. During his state of altered perception and cognition induced by the hallucinogenic *ayawaska* brew, he would clearly hear sounds (*tsaana*) from the spirit world. He repeatedly insisted that he heard the songs of the spirits or sound producing entities, which fostered healing as they came along dancing and singing. The songs he performed himself during these sessions would be an imitation of the celestial voices of “doctors” (*roktorobo*), “angels” (*anjiribo*), or even the “royal Inka people” (*inka rai jonibo*).¹⁴ Roberto explained the spirits *yoshinbo* can hear your thoughts, so be careful what you think about. The same is true for experienced curing and sorcery specialists: during ritual, dream, or altered states, they can likewise hear your

thoughts; they are *yoshina*, “transformed into a spirit” and therefore own the same capacities.

We can infer from these examples, in a fairly consistent manner, that South American indigenous people conceptualise sound in a way very distinct from Western concepts. There are places and situations where sounds exist, although they do not sound in this moment. However, it seems that a sound cannot linger by itself; it has to be “contained” within a person, an object like a cigar, or within a liquid. In Western thought, sound needs a medium to extend in waves (in vacuum, it is inaudibly extinguished), and in indigenous thought it needs a medium in which to stay while it does not sound or extend. Further, sound is much more independent from what scientists call sonic waves: Thoughts can be heard either by non-human spirits, or likewise by “clairaudient” specialists. Even “normal”, non-specialist indigenous people seem to be able to, in specific circumstances, hear sounds that are apparently inaudible, as described by Menezes Bastos (2013) for the case of the Brazilian, Kamayurá/ Apùap. Menezes Bastos recounts his research associate “hearing” the “songs” of fish. I remember a couple of situations myself where indigenous people told me to be quiet and listen to sounds or “songs” of animals I could not hear by any means, or of spirits, like the whistling of the *mahua yoshin*, a spirit of the dead. This implies that indigenous thought ascribes a “sonic quality” to many perceptions that are not understood as hearing in Western thought, or are often dismissed as “imagination”.

A Topology of Audible Worlds

Most indigenous collectives do not conceptualise one single cosmos, but rather many worlds that are connected to each other and overlap in a multitude of ways. “Worlds” may be an inadequate term, as hinted at by my Shipibo research associates Pascual, Benjamín, and Gilberto Mahua Ochavano. They explained that there is only one world (*westiora netebichores*), but many facets within it (Pascual called these “*planetas*”) that are inhabited by different kinds of beings and only a few of them would be fit “for us”. These facets are, however, accessible for specialists (and also, though inadvertently, for laypeople, who usually fall seriously ill or die when crossing their boundaries). Similar conceptions can be found among many indigenous groups in the lowlands. In his comprehensive analysis among Carib-speaking groups, Halbmayr shows that their respective “cosmologies do not create encompassing totalities or an integrated universe, but... a multiverse of co-existing and multiply connected worlds relying on a specific form of non-totalizing partial encompassment” (2012: 120). This author proposes an indigenous mereology, a conceptualisation of parts and wholes. This multiverse is however, as far as I am able to judge, always distinguishable into two parts: first, the part where “we” live in (for the corresponding social group), and second, the part beyond the first; however vast, complex or even multifaceted this second part may be. These parts may partially or completely overlap in a spatial sense, as, for example, Piedade states for the Wauja that “The world of the *apapaatai*... is not far: according to the shamanic discourse, the *apapaatai* only appear not to be immediately present in this world but in fact their world is right here—their village is close although it is invisible” (2013: 311). In some sense, the world(s) of the spirits exhibit a mirroring quality respective to “our” world. Michael Taussig, in his excellent book *Mimesis and Alterity*, states that

...it is something altogether too grand to contemplate that the entire known world could be copied in this way. Thus construed on the principle of self-mimicry, this world becomes power-packed, too. “The world of spirit underlies the world of substance, resides inside it, and provides it with its vital force,” says Chapin, and as we shall see, this is the force that, in strings of images, has to be tapped by the readers of dreams and the curers of disease. This strange world of reality-copy “extends out in all directions,” Chapin tells us, “through a series of eight levels labeled ‘level one,’ ‘level two,’ and so on.” (77) Yet it is also modeled after nature, following the topography of the land. (88) And just as physical bodies, people, animals, and the land itself are mimicked in this way—or is it the other way around; which comes first, spirit or substance, original or copy?—so it follows that basic Cuna social relations themselves are replicated—chiefship, marriage rule, matrilocality, house-forms,

households, and major life-ceremonies (Taussig 1993: 103, citing Chapin 1983).

Such a copy-world is common in many ethnographies and a main pre-requisite for Amerindian perspectivism (Lima 1996, Viveiros de Castro 1996), where any non-human persons are living in a “human” way with food, drink, ceremonies, and so on. This grand copy of the world usually involves even much more than the “whole world” as perceivable by untrained humans, and in Taussig’s words, it has “to be tapped by the readers of dreams and the curers of disease.” It has to be accessed, which should be rather easy, as it is right here. The difference between “here” and “there” is not merely spatial but a matter of perception, or of ontological positioning. A trained specialist is usually (and this is similar in many lowland groups and beyond) able to access this “there” without moving far in a geographical sense.

Ritter states that in Kakataibo language,

“La diferencia entre el estado de sueño y el estado de vigilia es, a veces, descrita como una diferencia de lugar. El adverbio ‘uxë (al otro lado, al lado enfrente) es asociado con el acto de dormir (‘uxvë). Con nëcë (a este lado) se designa, oposicionalmente, el estado de vigilia” (1997: 229).

This is interesting to explore a little further. In the following table (Table 1) the Kakataibo terms ‘uxë, ‘uxvë and nëcë mentioned by Ritter (with contemporary orthography in parenthesis) and a few more are complemented with terms from the closely related Shipibo language and their English translations or explanations:

Kakataibo	Shipibo	English
‘uxë [‘uke]	oke	“there” (on the other side)
‘uri	ori	(going over) “there”
‘ura	ochó	“far”
‘uxvë [‘uxti]	oxati	“to sleep”
‘uxe	oxe	“moon”
‘uxén	oxné	(in the) “light of the full moon”
[?]	onsá	“dangerous”
‘uta	ota	“shadow”
‘utano	—	“shadow-people”, forest demons
[?]	onóti	“to become wild/savage”
‘uku	oko	“slime” (of illness), “cough”
‘uñe	oi	“rain”
ñëcë [neke]	neke	“here” (on this side)
neri	neri	(coming right) “here”
nete	nete	“light” (also “day” and “world”!)
netati	[?]	“to visit/come together” (people)
neati	nexati	“to bind, attach” (also people, love magic)
[?]	neskati	“to do/be like this” (in the correct way)
[?]	neseti	“to calm” (to calm down)
ne-	ne-	prefix: close to or related to water
[?]	neino	“water-jaguar” (nutria, water sorcerer)
nemín	nemín	“deep” (water)

Table 1. Kakataibo and Shipibo terms with the prefixes ‘u-/o- and ne- (based on Ritter 1997, Shell 1987, Loriot & al. 1993, Illius 1991).

In the central Panoan languages Kakataibo and Shipibo and to my knowledge, also in other Panoan languages like Amin Waki (prefixes *bo-/nu-*, see Hyde 1980), Kapanawa (prefixes *bo-/ne-*, see Loos & Loos 1998), Kashinawa (prefixes *u-/ne-*, see Montag 1981), the prefixes ‘u-/o- and ne- designate distance and closeness respectively, as well as darkness and light, danger and sociality. Considering that both the Kakataibo and the Shipibo preferably dwell at river banks,¹⁵ the association of the “proximity” prefix ne- to water becomes logical. The most interesting oppositions for our current inquiry shown in Table 1 are those of place in conjunction with those of shadow and light, and

especially of sleeping (*'uxti/oxati*) and binding (*neati/nexati*): during sleep, the “soul” *kaya* becomes “detached” from the sleeping body and goes “there” (*oke*); while literal and metaphorical attachment is associated with personal relationships and love, which undoubtedly form the very centre of western Amazonian life during the day (*nete*) and here in the village (*neke*; for the importance of relationships see e.g. Gow 2000).

Consequently, two semantic fields are circumscribed, comprising the overall greatness, vigilance, health, and social life of humans during the day close to the village on the one hand, and dangerous, detached, possibly pathogenic and dark regions far from the first on the other hand. Thus, the “*ne*-world” is the part “we” live in, as outlined above, while the “*u/o*-world” embraces a continuum between far places, the forest, other countries, sky and underworld, and the regions only inhabited by mythical or spirit entities. These latter regions are reminiscent of Taussig’s copy of the world; however, for Taussig it seems that all tangible is “the original” while all intangible, all that is sung and told about is the spirits’ word, the “copy”. If only it were that simple, but the copy overlaps the original in a sloppy manner. The overlapping is irregular: while there is little “copy” within the village (*neke*), there is more of it in faraway places that are possibly perfectly known to the speaker though still removed from actual current experience. Copy and original also overlap in the woods (most Panoan speakers regard the deep forest as the home of dangerous spirits and monsters constantly threatening lone wanderers and hunters to be transformed into one of them), and of course they overlap during sleep and during ritual. Finally, far away regions like sky, underworld, mythical river’s headwaters, the “no-places” (utopia) where e. g. the mythical “Inka” people dwell (see Brabec de Mori forthcoming) then have to be “only copy”, these are a definite “there” (*oke*), without an overlapping tangible part of reality.

This *oke*, “there” is always invisible. One may know about far places by “hearsay”, on what travellers report, or nowadays on the telephone. Myth-telling is almost entirely occupied with stories and knowledge from “there”, where this dimension also extends in time to a remote “mythical past”¹⁶ Knowledge about processes occurring in the deep forest is obtained mainly through listening to certain bird calls that share news and deliver omens (cf. Walker 2010), as well as other sonic signs. When walking the woods, one should always have one’s sensitivity towards sound heightened, everything seen can (and definitely should) be heard beforehand. Experienced hunters are engaged in a constant dialogue, listening to the apparently inaudible and making specific meaningful noises. They are “continually conversing with the ‘animals’ and ‘spirits’ all around them, telling them, for example, that they did not intend them any harm, and simultaneously asking these beings to leave them unmolested” (Menezes Bastos 2013: 293). This conceptualisation of the cosmos with vast extensions into invisible realms relies heavily on sonic production and perception. Lewy (2015) terms this “sonorisms”. As shown above, this indigenous “sonic” is not to be confused with an understanding of audibility like microphone reception or Westerners, and therefore obtains a quality which is somewhat “not-exactly-sonic” and which I propose to call “sonicoid”.¹⁷

Auditory Cosmogony

Thoughts can be heard by the spirits, so thinking contributes actively to shaping the world. Thoughts may become sounds when they pass the hazy border between “here” and “there”, and sounds may even become matter.

Philippe Descola describes the opposition between these many interiorities people all over the world understand as a constituting part of human beings (most often described or translated as “souls”) and their physical localisation in parts of the human body, such as in the heart, brain, blood, liver or where ever:

But however intimately linked they may be with the nonphysical components of a person, the organs and humors in which these components are incorporated are never any more than imperfect objectifications of them. Their materiality cannot represent the totality of the predicates that one attributes to the elements of one’s internal identity: the liver does not move spatially outside the body when the soul believed to inhabit it is said to travel during dreams, nor do the heart and lungs of a dead person move when they liberate the part of the individual that is believed to live on after death (Descola 2013: 187–88).

The distinction of interiority and physicality as constituents of any human being, as proposed by Descola, and similarly in Amerindian perspectivism allows for the understanding of such a dilemma. However, Descola and Viveiros de Castro keep surprisingly quiet when it comes to the topic of utterance: is the voice part of a being's interiority or physicality? Is the voice *represented* by an organ or liquid in the way a "soul" is represented, or is *it* an organ? Can the voice travel, as souls are thought to, or is it rooted to a spot? In order to answer these questions, Lewy proposes a third ontological category beyond interiority and physicality, because "la creación de sonido exige fisicalidad, mientras su localización en sí se encuentra en el campo de la interioridad ya que la forma musical (*Gestalt*) de la entidad del sonido es antropomorfa", and "la interacción sonora entre humanos y no-humanos funciona a través de una entidad que se compone por cosas materiales y no-materiales generadas en el momento de la *performance*" (Lewy 2015: 89–90). In addition, the sonority of thoughts contributes to this proposal, as thought by itself is definitely considered part of an interiority, while its effects (remember the *hoarotu's* thought-song) can be so material as to result in death. The question whether thought results from a material organ, such as the way a voice is emitted from vocal cords, cannot be answered even by contemporary neuroscience. It is interesting, however, that the "inner voice" slowly comes to the attention of scientists and philosophers alike (compare McCarthy-Jones 2012, Dolar 2006) and thus the sonic dimensions of the audible also make their appearance in postmodern Western thought.

To take one step back in order to proceed, let us ponder again Taussig's proposal that the spirit worlds are a more than complete copy of "the real world". Taussig hints at the crucial role of singing when he explains how the spirit double of a tree, for example, is brought into existence through the detailed description applied during a Kuna curing chant. The chanter chants the spirit into being, so that this copy of the real may have real effect on the real by the means of what Taussig calls the "magic of mimesis". But "what is more, the chanter chants himself into the scene. He exists not just as a subject but also as a mimeticised Other. In this way, as both chanter and person chanted about, as demonstrator and demonstrated, he creates the bridge between original and copy that brings a new force, the third force of magical power, to intervene in the human world" (Taussig 1993: 106). I think that the sonic and sonicoid objects that have to be located beyond the internal and the physical (as indicated by Lewy), and that create, as Taussig suggests, a third force to be effective on the world, are one and the same. Lewy insists that the voice and consequently sound, are not a part of Descola's interiority or physicality, but overlap with both, and thus build a bridge between body and soul, tangible and intangible. It appears that comprehending the workings of these sonic and sonicoid objects constitutes a central issue necessary to understand South American indigenous cosmogonic practice. The sonic domain endows us with the facility of creating beings, entities that do exist and do have tangible effects. Taussig (1993: 103) is unsure "which comes first, spirit or substance, original or copy?"—which existed first, the world "we" live in or the timescape of powerful spirits? If, as he suggests, the copy is brought into being by being chanted, there is still a mode of pre-existence possible, because in most indigenous ontologies a song already exists before it is being sung (and possibly even before the chanter came into existence). The song may be owned by a spirit or linger in some substance before it is obtained by the chanter. If the song existed beforehand, it is the song that brings into being the chanter who brings into being the spirits that previously brought the song into being.

A place "there" (*oke*) can be visited by somebody travelling. In the same way as a faraway village becomes a "here" (*neke*) in the moment of the visitor's arrival and thus reveals a totally convincing reality; a specialist visiting the "there" where the spirits dwell, be it by the means of dreaming, singing/chanting, drug intake or mere concentration, arrives at a "place" in a "time" that likewise confirms their undoubtable materiality and definite existence to the being whose ontological position is within. From the "outside"—imagine a specialist healer sitting amongst his patient and family during a night-time curing session—the healer sits and thinks, while from the inside, "there", among the spirits, he talks. Although "here", the healer only whistles, without pronouncing lyrics, "there" he sings, possibly in beautifully elaborate heterophony with those highly musical spirits. And when we can hear him sing "here", chanting the spirit world into existence, as Taussig would put it, or doing *kamoai*, "creating a way/framework/landscape" as Shipibo lore explains,¹⁸ he engages in actual cosmogony

“there”, creating a sonicoid landscape that is totally material from the perspective of those beings located inside “there”. This perfectly material world is however fairly intangible when it comes to proving its existence. Western naturalistic thought would consider it completely subjected to the domain of “imagination” or “culturally constructed system of beliefs”. That such “imaginings” and “belief” among “the moderns” do nevertheless consist of real existence was eloquently shown by Bruno Latour, who defines this landscape as a “mode of existence” called “metamorphosis” (2013). However, it is not my aim to debate the reality of imaginations. One reality is obvious, because it can even be registered by non-human machines: the corresponding songs.

Indigenous laypeople present at a curing session, without taking drugs or being specialists, testify to the presence of non-human entities, usually spirits or deceased people, by noting the singer’s quality of voice and singing style.¹⁹ Indigenous people, as all human people with hearing capacity, can listen to any incoming sonic waves in different ways. Victor A. Stoichiță and myself work on a model of human listening (cf. Stoichiță & Brabec de Mori 2012) that distinguishes three modes of listening (or hearing) based on the ontological positioning of hearer and sound producer on the one hand and the ascription of agency to involved entities on the other. The first mode works in the way of an index—the perceived sound points to a certain activity of an agent in the world; for example, one infers to both the existence as well as to the agency of a dog when hearing barking. The second mode perceives a structure that lies beyond the sonic appearance, which is only possible if the relation of sound to this structure has been learned correspondingly. We usually do this when understanding language, but the mode is not restricted to this: indigenous people can likewise understand the structure and therefore the message of certain bird calls or a musicologist is supposed to understand the major/minor tonality and modulations in a Beethoven sonata. The third mode enhances, or enchants (Gell 1992) the sonic element perceived, so that the sound itself becomes greater than the parts of its sum. The sonic element is ascribed an identity (e. g. a specific “tune”) and agency of its own (e. g. the tune interacts with another tune or with the percussion). A “sonic being” is even apt to “capture” the listener in order to “take her away” into the realm where sound creates realities. It seems that these three modes of listening are known and applied by humans all over the world, and—at least the first and second modes—even by many non-human animals.²⁰

When an indigenous listener hears a certain sound in the indexical way, she or he will likely infer the existence and agency of a source; such as in the prior example with the barking dog. However, with sounds coming from further away, the reality of “here” and “there” may overlap and some high-pitched, lengthened tone can indicate the existence, presence and possible agency of a spirit of the deceased. Sonicoid phenomena can likewise be “heard” indexically: one may “sense” (I substitute for “hear” to underline the absence of sonic waves, although many indigenous people would say “hear”) that some entity calls one’s name from within the forest. Do not follow! It is a spirit, and if you go, you will end up trapped “there”. As already mentioned, the structural listening mode can also be applied to any sonic and sonicoid phenomena that could possibly hold a structure one has learned. The most interesting phenomena occur in the enchanted mode: as in the aforementioned example, an indigenous layperson hears a curing specialist singing during a night-time session: the quality of the singer’s voice (possibly a “voice mask”, Olsen 1996: 159) takes on the indicated agency and with that it becomes very easy to identify the “sonic being” present in the room (and even on the recording if made) with the spiritual entity in question. Thus, specific entities that are summoned by the singing specialist become manifest in his voice, the spirits’ “physicality” offers substantiality to the voice of the singer: the healer’s voice is the spirit’s body.

If the singing healer is “there”, on the spirit’s side of the cosmic coin, he will perceive the patient from the spirit’s perspective (whatever this means in terms of appearance). Singing, he describes in detail how the spirit he brings into being with his song enters the patient’s body and removes the illness. From the “inside” of the song, it is a totally material being that digs into the patient; from its “outside”, the song makes the materiality of itself self-evident in the way it is performed. No wonder that the patient feels “pierced”.

Listening Beyond (Beyond Listening)

Charles Peirce, the father of semiotics, not only developed the well-known system of signs that distinguishes icons, indexes, and symbols, but he also produced “weird parts” in his writings. Eduardo Kohn, in his recent and much debated book *How Forests Think*, is most interested in the ‘weird’ Peirce, by which he means “those aspects of Peirce’s writing that we anthropologists find hard to digest—those parts that reach beyond the human to situate representation in the workings and logics of a broader nonhuman universe out of which we humans came” (Kohn 2013: 7–8). Kohn rather successfully develops a semiotic of the tropical forest, including Runa humans, jaguars, monkeys, dogs, falling palm trees and other entities that may carry meaning, as well as represent and recognise signs, and that occasionally may acquire selfhood.²¹ It is not necessary here to go into the depth on Peirce’s “weird parts,” just understand that any symbol is based on or is a chain of indices, while any index must emerge from a chain or chains of icons. When listening indexically, we (humans in general) create a linkage between an auditory perception and a thing; we hear “woof! woof!” and have a dog in mind. This is possible by the recognition of a sound compared to its icon we have created beforehand through a process known in the cognitive sciences as “auditory imagery”, or mental representation in semiotics: We are capable of memorising an “image” of a bark that works iconically. The mental representation of a dog may consist of memories of what a dog looks like (the “classical” icon), how it smells, how it feels when one strokes its fur, and what the dog may sound like. It is difficult to describe in words how a wet dog smells, but it is distinct and easily recognised, most people “have it in their mind”, are able to recall this olfactory icon without actually smelling a wet dog. Likewise, I have a standardised “barking icon” in mind, which upon hearing “woof! woof!” instantly compares it to the perceived, and experience helps to decide if the perceived is sufficiently similar to the recalled. If it is, I hear a dog barking, if it is not, I have to investigate what the sound’s source may actually be.²² In the case that representation (what I recall) and presentation (what I perceive) are alike, an index is created. A chain of indices involving “what does a curing specialist’s song sound like”, “what does a spirit sound like (when represented by a human singer)”, and so on, can form a symbol: a certain way of singing, a certain melodic contour or motive, comes to indicate a name, an image that stands for a certain spirit acting in the current situation. This process, transferring meaning from a chain of mental representations via performed sequences of sound into non-human agency is called “transmutation” by Carlo Severi (2014): a process of semiotic transformation related to translation but unlike the latter not taking place between languages, but within one and the same culture:

In both visual and acoustic images, the passage from verbal to iconic signs (or from one nonverbal code to another) mobilized by transmutation never limits itself to the description of the appearance of the beings it represents. On the contrary, the process of transmutation of words in images (be they visual or acoustic) makes the presence of supernatural beings indirectly perceivable through the appearances of other beings. [...] The aim of transmutation proper is both to make relations between signs (be they technically interpreted as icons or as indexes) perceptible—and “supernatural” special beings imaginable as generated by relationships between them (Severi 2014: 59).

As shown above (and hinted at by Brabec de Mori & Seeger 2013 and also described by Severi 2014 in the case of Wayampi music), such transmutations can readily be traced in musical performance, audible or inaudible. However, in order to also take Severi’s “anthropology of thought” to its destination, these transmutations also occur when songs, sounds, spirits and their names are performed in thought, and thought only. Considering that certain spirits, as well as well-trained humans are capable of hearing thoughts, it becomes clearer now that a song exists also when it is not sung; a kind of silent transmutation, an act of transformation that takes place in the thoughts of the respective agent. Any mental representation seems to have an impact on the side of the world the spirits live in. Maybe this side, “there” is even constructed by mental representations that become reality once the observer crosses the border. “Sonic beings”, musical or other sonic entities materialise “on the other side” and a singing healer actively and purposefully manipulates the “substance” of this spirit world, its landscapes, its beings—including powerful primordial deities as well as the “souls” of

such interesting things like airplanes, the sciences, space craft, X-rays, jaguars, clouds, rivers (these look like great anacondas)—and even himself in his “material” appearance in the spirit world. Changing his voice, his way of singing, his timbre, melody, and so on, results in a material transformation of beings (including himself) and the environment “there”.²³

When the song is performed, the world it describes is heaved into recognisable, and therefore shareable existence. However, the silent existence as a mental representation is enough to maintain it alive. When put into action, the spirit so “animated” can enter a patient’s body or the “body” of a cigar, a pipe, a perfume or a medicinal plant extract. Although the song ends, its representation lingers materially: the “body” of the object works now as a container. It includes the index to the entity in question, an entity that is totally synonymous with the song (thought, whistled or sung, choose what fits the situation) that formed the “material body” of the spirit “there”.

This is how thought becomes sound and transforms into a substance, one that may take the form of beings, entities commonly called “spirits” that act on the world “we” perceive as real. These beings, through the singer’s lush description acquire personhood and selfhood, the spirit is able to represent, and to interact with the singer, with other entities, and the world. Thought—a sonicoid item par excellence—sounds in the spirit world, and, as ethnographies and indigenous specialists assure us, certain spirits’ utterings (or even thoughts?) obtain such sonicoid qualities so that they can be felt by humans in a way that resembles hearing. Songs from our world create landscapes in the spirit world, sequences of sung names, and chains of sonic symbols that transmutate into an array of beings that materialise in the spirit world. Singing (and certain other acts) from the spirit world manifest in our world in a material form like masked dancers, flutes, death, illnesses, and their cures. It is possible and suggestive that such auditory concepts of human and non-human interaction can be found throughout the world, far from the western Amazon. This would mean that what the European tradition knows as “music” could be the foundation of communication and interaction with non-human entities from animals and plants to spirits and deities.

Notes

¹ The cord actually moves in a very complex pattern of “harmonic” (numerically proportional) sub-vibrations causing a composite vibration rather than a sinus tone (which would emerge from a simple forth-and-back movement). Calculating acoustic properties of objects, bodies, or spaces requires terribly complex mathematics far beyond my own comprehension. For more advanced research on our example, the plucked string and bridge, see e. g. Kartofelev & al. (2013).

² A membrane, as relevant for acoustics, is a body of flat shape, elastic or loosely fixed, and thin enough so that it is capable of transmitting pressure differences. Membranes are, for example, used in loudspeakers or for drum skins, but can also be found in living beings, e. g. the tympanum.

³ For more accurate descriptions of psychoacoustic processes, written for a general academic public, see Thompson (2009).

⁴ This is only the “mainstream” auditory process, ignoring that we also perceive vibrations via the cranial bones, even the skin, and finally and most interestingly with the vestibular system usually associated exclusively with equilibrium and movement (Sheykholslami & Kaga 2002, Russo & al. 2012).

⁵ Again, my treatise here is significantly simplified, but see the excellent comprehensive entry on “Auditory Perception” in the *Stanford Online Encyclopaedia of Philosophy* (O’Callaghan 2009), as well as the insightful analysis by Sharif (2012).

⁶ In many languages other than English, this distinction is much clearer, for example in German, which is my mother tongue: “Schall” is exclusively used to denominate sonic waves and acoustic transmission of energy, while “Klang” is certainly a thing perceived by a listener.

⁷ In Western tradition we may feel inclined to locate songs, or music in general, on discs, tapes, or flashcards, or on those pages of paper where “the music” is written down. Whether recorded or written “music” exists, and if it exists “as music” is, for the moment, left to readers’ consideration because here we deal with concepts from non-literate people (although many contemporary indigenous people in the South American

lowlands are literate, the expressions and concepts discussed were probably known and formulated before the people in question learned about writing and recording).

⁸ Whether the things emerging from e.g. an abandoned but turned-on radio—parallel to the tree that falls in the woods when no-one is there to hear—could be “music” is also a philosophical question left to more specialized aesthetic inquiry than I am able to develop in the present context.

⁹ In the introduction to his edited volume *The Occult Live of Things* (2009), Fernando Santos-Granero also suggests that songs, understood as (substantial or intangible) things, can carry agency in Amerindian thought. However, although this suggestion points towards a promising theory of sonic substantiality, it is not pursued much further in this book. Only Hill (2009) highlights the “visibility of sound” when sonic performance is contextually connected to blowing tobacco smoke.

¹⁰ It seems that the ingestion of tobacco paste and other preparations was more widespread also in the Peruvian lowlands and was only during the last few decades increasingly substituted with smoking (see Brabec de Mori 2015).

¹¹ How to translate this verb is still open to debate. Luis E. Luna, for example, believes that the word was Quichua and meant “to blow smoke in order to heal” (Luna 1986: 92). Luna refers to the most widespread use of the concept in the noun *ikaro* denoting songs intrinsically connected with *ayawaska* drinking. This coincides with the entries in the more recently published dictionary of the Inga Quichua language, which translate the noun *ikara* as “rito(s) m. mágico(s) utilizando tabaco” and the verb *ikarana* with “curar o hacer daño a una persona fumando y repitiendo formulas mágicas” (ILV 2002: 109), that is, tobacco smoking in connection with singing (that is how I interpret the ILV missionaries’ magical formulae). Initially however, the etymological roots seem to be anchored in the Kukama indigenous language, part of the Tupi linguistic family, where we can find the noun *ikara*, “song” and the verb *ikarutsu*, “to sing”. Here, “song” and “to sing” are meant with any sort of song like love songs, drinking songs, and so on, including magical songs not connected to *ayawaska* intake like songs for “attracting” (*atraer*) game or fish, as well as healing and sorcery songs performed with or without *ayawaska* (see also Rivas 2004).

¹² Specialists for magical processes, sorcery and healing are commonly called “shamans” in anthropological and popular literature. I refrain from using this name because of its many and shrouded popular or romantic connotations and because I think that it is a false category, see Martínez González (2009). In the western Amazon, these specialist are referred to with generic terms in indigenous languages (Yine *kagonchi*, Asháninka *sheripiaari*, Shipibo *jobé*, for example), or as *curanderos* or *vegetalistas* among the mestizo people. The most common term used by indigenous as well as Spanish-speaking people is *médico*. When referring to *médicos*, I use male forms because of the predominance of males among practitioners (93% in my survey). Notwithstanding, there are a few female practitioners, traditionally mostly widows of *médicos*, and nowadays also young women attracted by *ayawaska* commerce in the same way as their male peers.

¹³ For a cross-cultural comparison of the “origin” of voices heard by those diagnosed with schizophrenia see Luhrmann et al. (2015): Voice-hearers in Southern India and West Africa do not limit the voices to hallucinations but attribute divine or human agency to them.

¹⁴ In order to prove the inaudibility of these sounds and songs I may refer you to the recorded sessions that are archived at the Vienna Phonogrammarchiv under file D 623–624, D 625–626, D 627, and more sessions with Roberto. While listening, you will probably notice that (rather surprisingly?) you do not hear such celestial voices. Neither did I.

¹⁵ During the 18th and 19th centuries, the Kakataibo were pushed to live in the hinterlands of the Ucayali valley, so although they do not occupy the great Ucayali river as the Shipibo do, they live on the shores of smaller affluents like the Aguaytía, Shambo, San Alejandro and Zúngaroyacu rivers (cf. Frank 1994).

¹⁶ Compare my analysis of the remote non-future timescape in Brabec de Mori (2011) and its occupation by “mythical” Inka persons in Brabec de Mori (forthcoming); for myth-telling as a sonic performance see e.g. Basso (1985) and Lewy (2014).

¹⁷ The auditory anthropology we propose (Schoer, Brabec de Mori & Lewy 2014) therefore engages not only with music (as ethnomusicology is supposed to), nor with mere sound (this could be comprised in sound studies), but likewise with the hearing and understanding capabilities of humans as well as non-humans, therefore contributing extensively to understanding such sonoristic cosmologies as most South American

indigenous people seem to hold, and, as in the present inquiry, with hearing phenomena beyond the sonic. Let us call these “sonicoid”.

¹⁸ For an analysis of the *kano* complex in Shipibo cosmology see Brabec de Mori (2012, 2013a).

¹⁹ For more detail on healer’s transformations and voice masking see Brabec de Mori (2013a, 2013b).

²⁰ Iconic, indexical, and symbolic forms of ascribing agency, that is animacy, were already formulated by Ellen Basso in her pioneering book *A Musical View of the Universe*. Basso, however, did not explicitly differentiate between how different sounds would be perceived by the listener. Her model of sounds and animacy proceeds from “sounds” of inanimate objects via “calls” to language and “music”, describing the latter as “hyperanimate” (Basso 1985: 67).

²¹ A semiotics of non-human, especially animal agents is not Kohn’s discovery (see e.g. Nöth & Kull 2001), but he is the first to apply a theory of representation beyond the human on an indigenous cosmology in a convincingly consistent way.

²² The uncertainty in this comparison is multiplied if the agency of the sound’s source is concerned. Lewy (2015), for example, recounts that he was told among the Venezuelan Pemón that a perceived tapir’s grunt can originate from an actual tapir, from a jaguar that imitates a tapir, from a human hunter that imitates a tapir, or a human shaman in jaguar form that imitates a tapir, and so on. However, it seems that some indigenous specialists are capable of distinguishing at least some of these possible agents by hearing only.

²³ This thesis in a way resurrects Siegfried Nadel’s (1930) theory about the origins of music, which this author locates in the capability of music to create “non-natural” languages for communicating with non-human beings.

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