

An Auditory Anthropology of Birds' Postures of Listening

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Abstract

Auditory anthropology examines sound production and sound perception under combined ontological and epistemological premises. This article presents ideas and examples concerning postures of listening and sound communication between humans and birds. These discussions are grounded in two of the four ontological types proposed by the French anthropologist Philippe Descola. A distinction is drawn between the ontology of moderns (referred to as naturalists by Descola) and the ontology of animism, which is prevalent among indigenous peoples. In the former, birds are typically categorized as “non-human animals,” while the latter consistently regards the interiority of birds as in the broadest sense “proto-human”—exemplified by insights from the indigenous Pemón community (Venezuela/Brazil). A bird’s definition as either a “non-human animal” or a “proto-human” points to different perceptions and epistemologies regarding human-bird-sound relations in ontological comparison. I examine these differences using the concept of listening postures, as proposed by Stoichiță and Brabec. Their categorization of enchanted listening, which views sound phenomena as independent sonic beings capable of evoking otherwise non-sonic effects and affects (e.g., tension and release), serves as the foundation for a concept I call radical enchanted listening. I develop this concept by comparing different phenomena in the animistic understanding of the indigenous Pemón with phenomena observed by modern bioacousticians, such as attacks of mountain bluebirds on sound traps, which are difficult to explain from a naturalistic point of view. Additionally, I compare phenomena of mimesis to elucidate the relationships between (radical) enchanted listening and specific qualities of mimesis. These mimetic qualities transcend ontologies and can only be fully comprehended through an examination of their differences in relation to one another.


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Introduction

Auditory anthropology^[1] scrutinizes the interaction between sound production and sound perception under ontological and epistemological premises. This article will undertake the thought experiment of examining the phenomenon of birdsong from two different knowledge traditions and their associated postures of listening. One perspective is that of indigenous knowledge and its ontology. The other examines the ideas and concepts of the Western ontology, which will be referred to as “the moderns”^[2] in the following. In the course of these mostly inter-semiotic translations, trans-ontological comparisons and references have to be taken into account, with the aim of reaching mutual understanding.

In order to illustrate the difference between these two ontologies with regard to sound perception and sound production, it is necessary to discuss the respective listening attitudes and forms of sound communication by means of specific examples and the particularities that can be derived from them. I apply this approach to two areas: On the one hand, I investigate human postures of listening in relation to birds and vice versa. On the other hand, I try to comprehend sonic relationships and the perception of birds, either within their species or in interaction with representatives of other species, that is, other birds, as well as other animal entities. All these considerations are rooted in the discipline of anthropology, because the arguments and thoughts as uttered here are human: humans relate to birds (naturalism, see below), or birds are conceived as possessing a human interiority (animism, see below). In this paper, I juxtapose animistic thought as conceived among the indigenous inhabitants of South America with the views, the ways of hearing, and the ontologies of the moderns.

Therefore, the study is based on research data collected from two geographical regions whose climatic zones, ecologies, and human ontologies are very different: The first is the Gran Sabana region, which extends from southern Venezuela and the adjacent western part of the Co-operative Republic of Guyana into northern Brazil. It is a tropical climate zone and primarily consists of a grassland plateau, interspersed with scattered patches of lowland rainforests. It is inhabited by the circum-Roraima people,^[3] mainly the indigenous Pemón and Kapón. Between 2005 and 2019, I conducted extensive field research in this region and lived in direct proximity to and in constant exchange with indigenous people in Santa Elena de Uairén (Venezuela). In the context of these interactions, relationships among people and birds and their respective perceptions were a recurring theme.

The second set of data was compiled within the research project Seeking Birdscapes.^[4] For this purpose, about thirty people socialized in the ontology of the moderns were first interviewed about their relationships with and their perception of bird sounds in semi-open interviews and recorded conversations. Participants were selected in advance depending on their affinity to birds. The interviewees initially included participants from a field ornithology course in Switzerland, a nightingale expert working as an eco-popular scientist, experts working as bioacousticians and in acoustic ecology, and some primarily auditory birders in Catalonia who share their recordings of bird sounds on the website xeno-canto.org. Furthermore, composers and sound artists who deal with bird sounds and interspecifically practicing musicians were interviewed. Due to the COVID-19 pandemic, most artists and sound ecologists were interviewed remotely.

For the following elaboration of birds' postures of listening, I must first discuss the two ontologies in more detail in order to explain the different perceptions and behaviors of birds from a human

perspective. In a second step, I present cases of specific postures of listening, focusing mainly on the enchanted listening posture. This is extended to radical enchanted listening on the basis of case studies. The examples are discussed separately as pertaining to either modern or indigenous ontology. In the end, however, they all culminate in three categories for a trans-ontological determination of birds' radical enchanted listening.

Ontological Basis in Comparison

The conception for overcoming the nature-culture dichotomy by French cultural anthropologist Philippe Descola^[5] provides a good starting point for comparing Amazonia and modern Europe in terms of human and non-human entities. Instead of a dichotomy centered on culture versus nature, he proposes another dualism based on a being's division into a physicality and an interiority. Descola understands "physicality" as the external form, the substance, and physiological processes such as perception and sensorimotor action, as well as temperament and habitus, that is, the way of acting in the world. It also includes bodily fluids, nutrition, anatomical features, and specific behavior (e.g., reproduction). Physicality is not limited to the materiality of an organic or abiotic body but also includes the sum of all visible and tangible expressions that determine the individual dispositions of an entity, which are assumed to have emerged from morphological features and physiological essences.^[6] Interiority includes concepts such as mind, soul, or consciousness, as well as intentionality, subjectivity, reflexivity, affects, and the capacities to signify and to dream.^[7]

My experience living with indigenous specialists and dealing with a wide range of related issues and concepts confirms Descola's dichotomy of physicality and interiority as appropriate for explaining indigenous thought and translating it for the academic discourse of modernity. To do so, one must understand the ontological foundations of the moderns as well, accepting the risk of generalization for both domains, that is, for the indigenous world as much as for the world of the moderns. In other words, the multiplicity of variants and intersections of multi-ontological ways of thinking is ignored here. Descola describes the moderns or their "western culture" with the ontology of naturalism, which is diametrically opposed to indigenous animism. While animistic ontology assumes a continuity of interiority, in the Western world interiorities are considered discontinuous. With respect to physicality, it is the other way around: a continuous physicality of moderns is opposed to a discontinuity of physicalities in animistic ontology.^[8]

With regard to musicology, the central point is the attribution of sound phenomena to either interiority or physicality, especially when they involve non-human entities. In the cases discussed here, these are birds.

Descola himself does not treat sonic relations. Therefore, it is necessary to ask basic questions about sound production and perception within different ontologies.

An ontological bias defines different cultural biases of the respective human actors and their relations to the bird world and the associated sound expressions. The inclusion of indigenous culture and a sensitization to the animistic ontology, which grants personhood to non-human entities, also opens up the possibility for interpretations from the bird's posture of listening.

The continuity of the body and the discontinuity of interiority are evident in the Western naturalistic ontology, especially in Westerners' perception of the bird as an animal that can

always be read in the dichotomy of nature (non-humans) against culture (humans). I perceived this mode of existence not only in interviews but also by participating in several theoretical courses at the Sociedad Española de Ornitología's Bird Life in Barcelona and follow-up birding expeditions to the Ebro Delta. In 2019, I also visited bird-call recording workshops during the Delta Birding Festival at Monatura. An initial evaluation round of interview and field research notes yielded a preliminary classification of types of human agents among the aforementioned moderns, as follows:

- person self-identifying as birder (visual/auditory)
- person in traditional human-bird-sound relationships
- person working on artistic approaches to human-bird sound relations (sonification, transmutation, equilibration, interspecific music-making)
- person engaged in bioacoustics/ornithology
- other specialists, such as ecologists, biologists, ornithologists

The argument in this article concerning human-bird relations among moderns mainly builds on interviews and correspondence with the artist Jimmy Grima^[9] and with the ornithologist and bioacoustician Shannon Luepold.^[10] Jimmy Grima and Shannon Luepold were very helpful with their critical reflections on the topic.

The dilemma of the interviewed moderns quickly becomes apparent: they see humans and their sphere of activity as culture, which is opposed to nature in a binary or mutually exclusive way.

The easy solution to this dilemma is to consider human culture to be part of nature and vice versa. The concept that the human species forms part of the animal kingdom builds on such ontological premises and even implies the study of the humanities as animalities.^[11] Ultimately, this "solution" only builds on an extension of physical continuity. The limitations of this ontology become clear in that the extension of biological-organic materiality takes place with the creation of the supercategory "animal." The interiority remains subjected to the evolutionist (under- or further developed) categories. In this context, the term "non-human animals" deserves mention. It was introduced by Joan Dunayer,^[12] who in 2001 explored speciesism in language. The term "non-human animals" constitutes a linguistic equilibration as a strategy against speciesism. Speciesism, as a form of discrimination, is characterized by an alleged superiority of one species over another, which Peter Singer, among others, relates to racism and sexism.^[13] The pinnacle of a speciesistic hierarchy would be *Homo sapiens*, who sees him- or herself as superior to all other species. Although the majority of the interviewees tended toward an equivocal argumentation, the difference between humans and non-human animals was nevertheless emphasized. Even interviewees with a great affinity for birds consistently distinguished between bird and human species, on the basis of a distinction in their ability to reflect or autocue,^[14] their use of language, or their adequate but always limited endemic communication skills. Humans, likewise, are thought to be able to express emotions, an ability commonly denied to birds.^[15]

Thus, when it comes to human-bird relations, the most prominent distinction between indigenous and modern thought is the absence, among the former, of a definition of the term "animal" and consequently the absence of Dunayer's categorization of birds as "non-human animals." The ontology of the circum-Roraima inhabitants is characterized by a mode of existence that can be understood as "proto-human type." Most entities—whether animate or inanimate—possess and exhibit such a proto-human interiority, which can manifest in multiple variations, as will be shown with an example of the *moroné* in Pemón language. However, human as well as non-human beings are considered to have human interiority. Consequently, a human entity may, or may not,

manifest with human physicality. In other words, while, for example, a human being has a human interiority (mind) and human physicality (body), an animal has a proto-human (or in certain cases human) interiority and an animal body.

An important axiomatic opposition in the comparison of the two ontologies surfaces in the past emergence of these categories: for animistic ontologies, animality emerged from humanity. Moderns, though, in their naturalistic ontology, understand humanity as having emerged from animality.^[16]

This proto-human continuity among entities in animistic worlds counteracts the ontology of the moderns. This becomes evident in ever-recurring difficulties when translating terminologies and taxonomies from the human-nonhuman continuum in indigenous ontologies to languages of the moderns. Nevertheless, an attempt will be made in this article.

In animism, the bird appears different from the human body in terms of its physicality. In terms of its interiority, it is a proto-human. This means that the term “non-human animal” no longer works in this context, which has implications for the perception and translation of animistic anthropologies in the context of the moderns.

Similarly, it is not entirely correct to define animals as “non-human entities” when obtaining the perspective of animism, because it defies processes of transformation: A bird entity, for instance, can be perceived as both a hybrid partly-human entity or a completely human proto-human entity, depending on the perspective and listening position of the person in question. A shaman, for example, who has special capacities for “seeing,” negotiates with a human interiority, which he also sees in a bodily constitution as a human being, even though this being may differ from a real human body. As a rule, an indigenous non-shaman person does not see the spirits and is not allowed to see them, as this would mean that the person has been transferred to the world of the spirits, transformed, and thus no longer participates as a human in the local world of the present. It should be noted that various qualities of human interiorities can manifest as a bird. In the cases discussed in this paper, the proto-human type appears in four trans-specific dimensions:

- as animal-human interiority
- as spirit
- as human (shaman)
- as hybrid (invisible-humanlike but not spirit)

These are trans-species qualities of proto-human types. Such entities cannot be assigned to any species in biological terminology. The materiality and physicality of these entities usually recede. Spirits, animal-human interiorities, and hybrids, for example, are not species. From the postures of listening and interactions of birds, these can also be perceived as inorganic matter.

In the following, I will discuss examples from the ontologies of moderns and indigenous people separately in order to avoid terminological friction. In the end, I will compare both bird-human sound relations with the aim of juxtaposing their difference with their anthropological continuities.

The first part of the article is written from the perspective of the moderns. This means that a proto-human interiority of birds is excluded. At the same time, however, individual peculiarities and exceptional cases in the behavior of birds from a human point of view are discussed as being recognized in the ethnographic data.

Postures of Listening, Communications, and Mimesis

In the context of modern thought about listening positions of birds, the concept of postures of listening as conceived by Victor Stoichiță and Bernd Brabec^[17] will serve as a basis for much of this paper's argument. The authors use discourse and terminology of the moderns when they distinguish between (1) indexical listening, (2) structural listening, and (3) enchanted listening (see also Stoichiță's contribution to the present issue).

Indexical listening can be further divided into three subcategories: The first is characteristically shared among most animals and is used for orientation in space. Listeners "discover and locate other entities acting in their surroundings ('something is walking there'). From the sounds heard, they assume the mere existence of 'something.'"^[18]

Second, a hypothesis can be formed about the thing or being that is heard. This hypothesis is based on experience or repeated observations, which—third—also leads to the formation of hypotheses about the inner state of other beings.

Stoichiță and Brabec, however, quickly relativize this second point by writing that this indexical reference in the sense of identification can also be faked:

The fruit dove, for example, can be tricked into believing that it hears the calls of a potential mate, when in fact a hunter lies hidden in the bushes. It is worth noting that tricks of this kind work precisely because they are exceptional. Humans too rely on voice recognition in many daily interactions, because voices are difficult to imitate.^[19]

This note touches a central point. The question arises whether it is a simple trick or whether there is perhaps another form of perception at work. Maybe the modes of existence of sound, which are implicitly conflated, influence the listening experience with regard to the sound source.

In order to further elaborate on this question, however, it is necessary to introduce the other listening postures. The second one is "structural listening," which alludes to the level of abstraction and signs in human and animal perception. Language is the best example for all humans. For interspecific communication, however, it goes beyond language, for which the authors cite an example by the anthropologist Harry Walker,^[20] who describes the widespread perception of bird sounds as omens in Amazonia. They also provide further examples of intraspecific communication in human-to-human relations and in abstractions from the sonic-like musical notations or sonifications of data.^[21]

The third posture constitutes a novel approach to listening, "enchanted listening." This conception initially builds on Scruton,^[22] who realized that humans have the gift to also direct their consciousness to sonic phenomena characterized by a separation between sounds and their physical causes. Accordingly, sounds form an autonomous realm. They become objects of listening with properties that sound perception lacks in the other two postures of listening:

Most of the time human beings do not consider it under a distinct “system of the properties of existing beings.” Indexical listening points to non-auditory causes. Structural listening points to non-sonic structures. On occasion, however, human audition can materialize specific systems of sonic beings which then display particular sets of sensory and relational properties. People typically describe them in terms of unhearable dimensions which are not linked to any physical causes. Quite often too, sonic beings are endowed with agencies, meaning the capacity to initiate actions by themselves. We call enchanted listening the fact of experiencing a properly auditory ontology.^[23]

Stoichiță and Brabec then use the example of “tension and release” to discuss the perception of music as an extra-musical affect in humans. In his commentary to their theory, ethologist Michel Kreutzer discusses the proposed postures of listening, drawing on his experience with the world of birds. In their response, the two former authors agree with Kreutzer that birds engage in structural listening even though they have no language, but they disagree with Kreutzer on the point of enchanted listening in birds. In his commentary, Kreutzer references two articles on “hedonistic listening” in birds.^[24] According to these, birds experience pleasure when they listen, as indicated by dopaminergic activation in their brains. Stoichiță and Brabec understand the argument for “hedonic listening” as a path toward enchantment. On the other hand, they argue, structural listening is sufficient to define avian aesthetics. This kind of aesthetics is limited to the choice of mates for reproduction, that is, the song and possible appearances of some male specimens are considered more attractive than those of others. This sense of beauty is therefore something other than enchantment.^[25] Nevertheless, it needs to be clarified that by “hedonistic listening” Kreutzer means *l’art pour l’art* that birds practice, independently of the human theory of evolution. In addition, Kreutzer introduces another dimension when he writes: “‘Enchanted listening’ corresponds to a form of listening where a subject is confronted with its own subjectivity, that is, its emotions and alterations in its state.”^[26] Postures of listening never stand alone but are always possible in all their variation, although not simultaneously. But they are closely related to a possible intention of a sound source, or to the use of a reproduction like a recording. The communication types play a considerable role, for which the intention of the sound producer forms a starting point (as mentioned above in the example of fake intentions in cases of sound imitations). Accordingly, it is still necessary to introduce the variety of forms of communication, as well as forms of mimesis.

Concerning communication and postures of listening in bird-human sonic relations, three communication types must be distinguished. These types can be used for analyzing both modern and indigenous discourses.

- intra-specific communication (within a species, i.e., among members of either human or animal species)
- inter-specific communication (between different species, i.e., humans and animals as non-human animals but also as physical animals to be recognized in proto-human status; this also includes interactions between humans and birds)
- trans-specific communication (between species or trans-species like spirits, hybrids, or further variants of proto-humans, but also between inorganic things and living entities like sound traps for birds)

In addition to the listening position and these forms of communication, mimesis also plays an important role. Mimesis refers to both the intention of a sound source and the perception of the listener. The concept of mimesis may also manifest in three forms: in imitation, manipulation, and transmutation. These include, for example, the imitation of animal sounds by human voice or

mechanical instruments, sonification, and transmission of animal sounds into human music or the direct reproduction of bird sounds via a recording. The following definition is taken from ornithology and behavioral biology:

A vocalisation is mimetic if the behaviour of the receiver changes after perceiving the acoustic resemblance between the mimic and the model, and this behavioural change confers a selective advantage on the mimic.^[27]

The Modern Auditory Stance on Birds' Listening

This definition of mimesis points to the modern mindset toward nonhuman animals, which, as mentioned earlier, are not considered to have proto-human interiority, even though they may behave in a human-like manner.

The modern concept of mimesis can only be touched upon here, but it is important in the field of postures of listening. The example of the fruit dove mentioned above, which is subject to betrayal when it hears a hunter's imitation instead of male mating sounds, is based on modern ontology: it implies a lack of autocuing and of possible choices or decisions on the bird's side. Since imitations of animal sounds by human hunters do not always work, it cannot be ruled out that the fruit dove may be aware of the slight difference between original and imitation. It may also be that it has doubts about the sound source, which may produce curiosity, astonishment, or even fear. This hints at a form of enchanted listening, even though the fruit dove indexically follows the doubtful sound source. It may be that the fruit dove approaches the sound because of its certainty about the agency of the hunter's mimic sound and not necessarily with the goal of finding a partner for reproduction. Mimesis, as described by Dalziell et al.,^[28] can also fail and thus not lead to reproductive behavior. In such a case, either the mimicry was unsuccessful or the hybrid sonic being of the mimicry between human and bird sounds did not generate enough doubt to gain attention. Thus, the possibility of choice on the part of the bird is equally to be considered when determining postures of listening.

Until recently, a (now prohibited) practice of bird trapping was popular in Malta: The human bird trappers produce sounds with their voices by whistling and through other forms of sound production in their mouths and throats. The sounds are imitated as faithfully as possible in order to attract the birds. The trappers mainly use mating sounds. This example also raises the question of what the bird actually hears and what it thinks that it hears. The question is directly related to the forms of mimesis in use (imitation). According to Dalziell et al.'s definition of mimesis, a sound imitation is mimetic if the behavior of the receiver changes and this behavioral change gives the imitator (mimic) a selective advantage.

If the trapping is successful, the bird's behavior is influenced so that it enters the trap. Whether the bird actually assumes that it hears its species or merely doubts the nature of the imitation cannot be known at this point. In both cases, though, the bird ends up in the trap. Similarly to the fruit dove example, it is possible that the attracted birds do not listen only indexically but also enchantedly. While from a human audible stance this practice is conceived as inter-specific communication, the possibility of doubt indicates trans-specific communication on the part of the bird. The symbolic interpretation by the moderns states that the bird perceives mating sounds, therefore wants to reproduce, and flies into the trap. It does not explain, though, why a large number of birds do not fly into the trap or do not even start. We have to go beyond this

interpretation and accept the possibility of doubt in the bird.

If successful, the Maltese bird trappers then hold the birds captive and train with them. A bird thus becomes accustomed to living in captivity and probably realizes that certain sounds are imitations uttered by humans. From both humans' and the birds' points of hearing, we approach inter-specific communication in this case. It is, however, still possible that the trained bird also thinks that it is defending its territory from a conspecific.

The phenomenon of doubt in the context of avian auditory perception and response is also illustrated by a luring technique used by modern birdwatchers. Visually oriented birdwatchers in particular have developed camouflage techniques to hide themselves from birds, because they know that birds can visually detect, and consequently avoid, humans. Among a plethora of camouflage techniques, "car birding" is worth mentioning. Birds see and hear cars as less dangerous than humans. During my field research in the Ebro delta, I could witness various "car birding" expeditions. The cars observed in this context constantly accelerate, slow down, or even stop suddenly, depending on the passengers who want to spot interesting bird species and document them, either as part of a census to statistically record their occurrence over the years or to quickly get a good photo.

In this example, communication is purely intra-specific (if one ignores the interesting role of the cars). Humans talk to humans about birds. Nevertheless, from the audible stance of moderns it is a form of inter-specific communication, an interaction between non-human animals—birds—and humans.



Figure 1: Sound Dummy, Shannon Luepold, Jura Mountains (Switzerland); © Matthias Lewy

Car-birdwatchers also utter sounds out of their cars, especially sounds which are called *phishing*. This was explained to me in situ by a birdwatcher and auditory birder. We then practiced it together during an interview in Girona, producing the typical “*phish*” sound with our mouths. After only a short span of time, a magpie (*Pica pica*) appeared. One explanation of this phenomenon is that the birds become curious. They hear a sound that they normally do not hear in their environment. This means that *phishing* disturbs the usual sequences of sounds that are heard at a specific place in a more or less temporally constant way. Therefore, the bird senses a sonic intrusion into an otherwise constant soundscape. Its own curiosity encourages the bird to leave its hiding place and try to identify the source of the sounds. The bird then obtains certainty by seeing and being seen: the birds reveal themselves as they approach the sound source. In order to achieve this, one must produce a sound that is very different from what birds usually perceive from human sources.

This phenomenon of doubtful perception has to be added to the phenomenon of hedonistic listening. Possibilities of doubt from a bird perspective are illustrated by the above-mentioned cases of the fruit dove, the bird trappers, and the *phishing* technique. Birds, therefore, also can obtain auditory experience that goes beyond their aesthetics and the well-known stereotypes of territorial defense and reproduction. They strive for certainty because they have doubts about the source of the sound. Whether they attain auditory certainty and attribute this new sound to the human sound source is still unclear. Interestingly, the magpie we attracted by *phishing* in Girona also began to vocalize: The bird probably intended to communicate. However, we cannot know whether the bird perceived us humans as humans or as trans-species entities, or whether it was trying to communicate with us or to address its conspecifics about the strange sound source. At any rate, the bird again seemed to experience doubt. It is possible that it applied enchanted listening and trans-specific communication in the moment of hearing and responding to the *phishing* sound.

By *phishing*, human birdwatchers produce sounds beyond imitation of the birds’ voices. They alienate the sound source so that the bird can only perceive the *phishing* sounds by the means of enchanted listening. This uncertainty about the sound source can be interpreted as a precursor to a “radical” enchanted listening (see below), since it is not necessary for the bird to have certainty about the entity it faces.

The third example from the modern world of bird-human sound relationships is taken from bioacoustic practice. During a field visit, ornithologist Shannon Luepold introduced my colleague Patricia Jäggi and myself to her research. Among other things, she demonstrated how they used a “sound dummy.” The dummy emits sounds that should be perceived by a target bird, in this case by a warbler. In Luepold’s project, the sounds used in the dummy are synthesized from historical sound recordings of this region. This means that the target birds do not hear recent sound utterances by birds from the respective zone but bird sounds from past decades. This technique is applied with the aim of investigating behavior of possible competitors on territorial searches, including reactions of potential sexual partners. For this purpose, the behavior of birds during playback is analyzed. It is recorded, for example, which warblers approach the dummy up to which height, or whether they start to sing themselves. Luepold explained that the most radical form of interaction occurs when warblers directly attack the sound dummy. This is surprising, because the bird can see before or, at the latest, during the attack that the sound source is not a competitor but a plastic box (see fig. 1). I asked Luepold how she explains this behavior. I asked,

“Why doesn’t the bird see that it is a sound dummy?”^[29] and she replied:

It is indeed surprising that the birds somehow do not realize that they are attacking a speaker. I am not certain about this, but my guess is that the song itself is such a strong stimulus that they react to it regardless of what they perceive with their other senses (e.g., vision, touch). It seems to be a sort of “reflex” to attack the source of the sound, and this is not overridden even when other sensory input is lacking. It is important to note that the playbacks represent a highly artificial situation, and in nature, a song would always be associated with a real bird. Over the course of evolutionary history, discriminating between the song of a real bird and the song of “fake bird” has probably not been relevant. Consequently, many bird species may not have developed the ability to make this distinction.^[30]

I would like to add another approach to this comprehensive interpretation. Although one individual always represents a species, it is never the case that all individuals of a species act in the same way. Behavioral biologists are, of course, aware of this and develop quantitative research tools in order to detect tendencies and make general statements. Only a small number of warbler individuals attack the sound dummy. Probably, the majority perceive the dummy as a non-bird, maybe as a plastic box; they remain without reaction in the auditory world.

Doubting the identity of the sound traps can be interpreted—as in the previous examples—as a form of radical enchanted listening: When the bird makes the choice to attack the dummy, the listening posture becomes radically enchanted. Behavior is changed so radically that the phenomenon lies outside the mimesis definition of Dalziell et al. The target bird does not sing back in this case, as expected, or look for another territory, but attacks.

The potential “reflex to attack” implies that an auditory certainty in the bird overrules other sensory perceptions in the process of forming the final certainty that the dummy was a competitor. In other words, the physicality of the sound dummy recedes (in some cases completely) into the background. Therefore, we do not only witness a case of enchanted listening, which detaches the perception from the sound source, but a case of radical enchanted listening: even despite the bird’s possibility to detect the delusion and identify the sound source, this difference between the material and the enchanted source is overridden.

In sum, many avian listening positions pertain to the realms of indexical and structural listening, but a few can be interpreted as enchanted and even as radical enchanted listening from the auditory position of the bird. One of these surprising cases is the interaction between visual birders and birds via *phishing* sounds that cannot be assigned to, or assigned by, the bird, where it seems as though the uncertainty attracts the bird. Similar serendipity is provided by the sound dummy. It creates an auditory certainty in some birds that the sound trap was a competitor. The attacking bird acquires its auditory certainty independently of other sensory perceptions.

Although in the ontology of the moderns these phenomena are understood as uncommon reflexes or unwanted side effects, from the position of birds they indicate the existence of enchanted listening among birds—specifically, a variant that I introduce as radical enchanted listening and that occurs when the auditory enchantment overrules certainties as construed by other senses.

The Animistic Audible Stance on Birds' Listening

At this point, I ask the reader to use his or her ontological imagination in order to allow for very different forms of existence. The ontology of modernity is now abandoned, and birds are henceforth understood as entities that have a human or proto-human interiority. Nevertheless, birds, in their physicality, are still perceived as birds by all humans, as shown in figure 2.

In a world where indigenous thought and animistic ontology are certainties, the respective birds' postures of listening have to be related to different qualities, such as to proto-humans. As discussed above, the assignment of "non-human animal" to birds (and other animals) no longer works since a proto-human status is ascribed to most bird interiorities. Both human perceptual abilities and human abilities of sound production—such as human song—are understood as relating to proto-human beings.

One might think that any interaction between humans and proto-humans is a kind of intra-specific communication. However, since interiorities must not be confused or conflated with biological species, the trans-species terminology must be used when intending translation. The trans-specific characteristics of interactions will be highlighted in each of the following examples. For this purpose, I have selected three cases of bird-human sound practice among the Pemón, which allow for primary concentration on the listening position of the birds. Emphasis will be placed on the forms of interaction and interpretation, and on the meaning of sound for the birds.

The first example is about the *wantoto* bird. Its sound, when heard by Pemón, has an impact on human behavior. The *wantoto* bird's perception of human sounds will also be discussed. The second example explains how a healing ritual works by contacting potentially harmful bird entities. The third example is similar to the second but involves choosing a different sonic technique (called *tarén*) to contact the proto-human aspect of the respective bird entity.

To start with, I will investigate the relationship between humans and the *wantoto* bird. For Pemón humans, the sound of this bird references the hybrid *maikok* entities. These are people who have human characteristics despite their bodies being invisible to humans. The call of the *wantoto* bird indicates that *maikok* people wish to warn approaching beings off from intruding into their territory. Indigenous people like the Pemón can decide either to take a different route or to deposit food for the *maikok* along the way. The latter is considered a gift by the *maikok*, which then allow the Pemón to continue on their way through their territory.

Hearing the bird sound in this way is, of course, a structural feat from a human perspective, since the call of the bird indicates an instruction on how to behave in the landscape. For Pemón, the source of the sound cannot be clearly identified: although certainly a *wantoto* utters it, the interiority of the bird could—but does not necessarily have to—be a *maikok*. Again, there is a choice. Usually, the safe path for self-preservation will be taken, that is, to either leave a sacrifice or change the route. Only if you are a human shaman, and you consider yourself more able than the shamans of the *maikok*, and you are not afraid of a confrontation, can you choose to ignore the *wantoto* call and advance.

Shamans can perceive the interiorities of bodies and can assign the sound. Only the positionality of the perceiver is decisive for the discourse. From the shamanic position, the listening posture and the perspective remain in the indexical area. (Here, the narrative of the moderns has to accept the uncertainty about the sound source and therefore falls back on the enchanted posture of listening.) This also concerns the listening posture of the bird. According to indigenous

discourse, the bird perceives the conversations of humans by means of its *maikok* interiority. The bird thus analyzes the language heard and listens indexically (who speaks) and structurally (what do they say). In relation to a shaman, who can also disguise his voice and interiority for the *wantoto-maikok* entity, radical enchanted listening may also apply for the bird and its *maikok* interiority. The *wantoto-maikok* entity likewise cannot pinpoint the sound source and does not know how to react to a possible attack; all this is implied in the shaman's formalized and disguised sounds—like sound traps or dummies.

These techniques of changing one's own appearance and of appropriating alien identities is also used by the shaman in the process of healing. The second example for indigenous trans-specific sonic interaction introduces the magic formula (*tarén*) of the *moroné* of the ducks.^[31] Like most incantations, *tarén* have to do with animal-human interiorities: the proto-human aspect of animals called *moroné*. The shape of proto-humans shares similarities with their animal bodies as perceived by humans. For example, a proto-human with a long mouth is associated with a certain fish species that has a long mouth. In the case of bird-proto-humans, certain colors on the skin are indicative of the plumage of a bird body.

These proto-human interiorities are known to bring about disease and disaster. It is said that they want to take revenge on humans for eating their flesh. Usually, they attack the weakest member of a family. For example, when a child falls ill after eating duck meat, the common interpretation is that the *moroné* of the ducks was striving for vengeance and that it stole the child's soul. The child weakens and can fall seriously ill. In that case, the family commonly calls a shaman who performs the healing *tarén*. For the given purpose, the shaman makes use of the proto-human interiority of a hawk. The *moroné* of the ducks fears the proto-human hawk, because the hawk is a predator of the ducks.

Performing the *tarén*, the shaman repeats the phrase "I am the proto-human hawk."^[32] This creates certainty in the *moroné* of the ducks that the shaman is indeed a hawk, regardless of the visual appearance of the shaman and the value of the child's soul. The shaman's formula induces an auditory certainty about the identity of the utterer in the *moroné* of the ducks. By inducing its fear of the hawk, the shaman persuades the *moroné* of the ducks to free the child's soul so it can return to its body.

The formalized sound applied in the *tarén* practice is called chanting. From these specially-charged words there emerges an anthropomorphic sound entity that targets the *moroné* of the ducks to perceive it as a bird sound (that of a hawk). For the *moroné*, the shaman becomes a hawk through this anthropomorphic sound of the bird. We can witness here that this form of sound production brings about transformation: the perceiving entity (*moroné* of the ducks) sees its respective opponent as "transformed into hawks." The utterance suggests transformation in the perception of the *other*. The change brought about with the statement "I am the proto-human hawk" is indeed structurally grasped by the *moroné* entity. What changes here is the visual perception of the *moroné* entity of the ducks. It gains certainty that it is not dealing with the soul of the child or with a shaman but with its predator—with a hawk.

The shaman creates a sonic being, the *tarén* incantation, which enforces this certainty in its target. From the point of view of the shaman and the child, this act constitutes a trans-specific kind of communication. Although, from human perspective, it is a trick that the shaman plays on the ducks and that leads to the dissolution and alienation of the sound source, the sonic beings still produce auditory certainty in the *moroné* of the ducks. Here we witness another occurrence of radical enchanted listening, occurring on the part of the *moroné* of the ducks.^[33]

The third indigenous example of enchanted listening illustrates the interactions around the bird entity *kumarak pachi* (see fig. 3). In the “mythical past,” this bird transmitted its anthropomorphic sound to the human shamans, which thus became an anthropomorphic bird song (fig. 2). The proto-human interiority of the bird is a spirit of the *mawarí* kind. These birds are seen by human laypeople in their animal form (physicality) but by shamans as a human female (interiority).

1. Teewanmaken müro, Kumaraka pachi	1. Teewanmaken müro, Kumaraka pachi
2. Etarimaiko, Newunewu pachi	2. I insist, Newunewu pachi
3. Tukuchiwa pachi, Newunewu pachi	3. Tukuchiwa pachi, Newunewu pachi
4. etarimaiko, etarimaiko	4. I insist, I insist
5. Kumaraka pachi, Kumaraka pachi	5. Kumaraka pachi, Kumaraka pachi
6. etarimaiko, Turönöwö pachi	6. I insist, Turönöwö pachi

Table 1: Song of *kumarak pachi* and other *mawarítón* (spirits)

The anthropomorphized song of this bird is also used in a shamanic session for healing. If an ordinary person sees this bird interiority as a human woman instead of a bird (which is considered an accident), then the soul of this person can be abducted by the *mawarí*. The spirit-woman-interiority *kumarak pachi* takes the soul, and consequently, the body of the now soulless person falls ill. Healing this condition means restoring the soul of the affected person. In order to achieve this, the shaman must contact *kumarak pachi*. Again, he needs to control his own proto-human interiority, which is often translated as “soul” or “shadow.” The shaman connects with the proto-human woman interiority *kumarak pachi* by singing the anthropomorphic song (fig. 2). This is the very song that *kumarak pachi* herself once transmitted to the shamans. This means that interactions take place between two proto-human beings (shaman and spirit) who perceive each other as human-like.



Figure 2: Kumarak pachi as Elanoides forficatus bird; © Matthias Lewy

From an indigenous perspective, this interaction appears as intra-specific communication, similarly to the previous example. From the point of view of the moderns—lacking knowledge about proto-human ontology—it appears as inter-specific communication between a human being and a bird. If an observer is able to distinguish between interiority and physicality and the distinctive qualities of the proto-humans, then the interaction appears trans-specific, since the spirit-woman-interiority of a bird represents a trans-species. Furthermore, for moderns, the act of healing with the *kumarak pachi* song represents a case of radical enchanted listening, because they fail to categorize the anthropomorphized bird sound (the song as in fig. 2) as a bird sound.

However, from within the ontological layer of those directly concerned (i.e., in animistic ontology), in the understanding of the bird-spirit entity and the shaman, this interaction is primarily a simple act of obtaining an indexical and/or structural posture of listening.^[34]

Conclusion

The examples presented in this article highlight the importance of including an ontological basis for analysis. Only in this way is it possible to construct the corresponding epistemes. As mentioned in the introduction, the perspective of investigation is always an anthropological one:

the entities “bird” and “bird sound” are always only studied in terms of human ontologies. Here, the modern ontology of naturalism and the indigenous ontology of animism were juxtaposed, along with their respective competencies in interpreting the qualities and meanings of bird sounds.

In trans-ontological comparison, the most salient difference concerns the attribution of bird capabilities: Modernist discourses largely deny birds language, reflexivity, autocuing, and even reflexive mimesis. This denial in turn causes problems of interpretation, as illustrated by the examples of sound *phishing* and the decisional competence of birds in choosing and responding between original or imitation (fruit dove, bird trapper, sound trap dummies). In animistic ontology, the opposite is the case: Here the bird entity is equated to the human soul in terms of its interiority, which also influences or even defines sound perception and sound production.

Thus, in an ontological comparison of the reasoning for the various attraction techniques, the *phishing* success and the attacking of sound dummies remains unsolved by moderns. The birds seeing the sound source unexplainably fail to recognize the fact that it is not a bird that produces the sound.

The ontological reasoning from the indigenous peoples’ point of view is different. Indigenous hunters also imitate birds to attract them. Sometimes these birds approach the hunters, so that they can kill the bird at close range. This is because the bird perceives itself as a human^[35] and the human hunters as spirits and consequently accepts that it has already entered the lethal spirit layer of the world. In this understanding, the bird definitely sees the sound source and realizes that they are not bird-proto-humans but spirit-proto-humans. Since the latter are more powerful than the bird, it does not try to escape but decides to stay in the layer of spirits.^[36]

Understanding trans-specific sound interactions requires thinking and applying the respective postures of listening differently for animistic and naturalistic ontologies. In addition, the concerned entities’ positionalities and perspectives have to be integrated, as exemplified here by shaman-spirit interactions. From the perspective of the shaman and the various proto-human interiorities (the *wantoto*, the *moroné* of the ducks, and *kumaraka pachi*), these interactions are forms of intra-specific communication generating primarily indexical and structural postures of listening. But for outside observers, these interactions are trans-specific communication. Outsiders, though, have to restrict themselves to perceiving the trans-species spirit or hybrid as proto-human only sonically. Non-indigenous or indigenous non-shamans are not prepared to see the spirit or hybrid. Therefore, their posture of listening toward the shaman-spirit interaction is enchanted: they hear a song that “means” a spirit voice.

In the case of voice masking, transformation, or persistent repetition of a formalized magic formula by the shaman, the birds and their interiorities also listen from an enchanted posture. This generates an auditory certainty (a sonic being), which changes the physical nature of the source in the visual perception of the bird entity. I propose that this perception be filed under radical enchanted listening, similar to the birds’ listening in the dummy attacks and *phishing* sounds.

Consequently, the birds’ behavior remains constant across the highly different human ontologies (indigenous vs. modern). From within a modern ontology, this observation does not seem certain and, in a broader sense, contradicts modern epistemology.

As a final point, I would like to return to Descola’s definitions of physicality and interiority as mentioned in the introduction. The sound perception and sound production of bird-entities is not

based on physical characteristics but rather on characteristics of their proto-human interiority. Regardless of ontological positioning, it is particularly the described instances of radical enchanted listening that lead beyond the dichotomy of interiority/physicality, because the effect of the unique sonic being is crucial for generating auditory certainty: On the one hand, not all individuals of a bird species react equally to the generated sonic beings, as in the imitation practices of sound dummies and bird trappers. This means that the auditory certainty of radical enchanted listening depends on factors other than mere perception. On the other hand, it is important to consider why and how the behavior of birds in the context of intra-, inter-, and trans-specific sound communication gave rise to different human ontologies and thus, by extension, culturally defined sign systems in relation to bird sounds. These resulting questions can be considered further in a subsequent step.

The aim of this article was to examine and compare the ontologies between naturalistic and animistic ways of thinking about bird sounds in order to approach the birds' postures of listening. The examples chosen here focused on radical enchanted listening. This is the result of a bird's own auditory ontology, which demonstrably places the interaction with the sonic beings in the sole center of perception and performance. From a trans-ontological listening approach, three possible criteria can be found for radical enchanted listening: (1) radical enchanted listening through doubt (bird trapper, sound dummies, car birding); (2) radical enchanted listening as hedonistic listening (*phishing*); and (3) radical enchanted listening as bird sounds that *are* human sounds (*maikok*, *moroné*, *kumarak pachi*). These categories are only final suggestions here and need to be expanded in future studies.



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