Barking, Singing, Quacking: On Human and Nonhuman Language and Those Who Speak (It)

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[The donkey] Benjamin could read as well as any pig, but never exercised his faculty. So far as he knew, he said, there was nothing worth reading.

He seldom talked, and when he did it was usually to make some cynical remark—for instance he would say that God had given him a tail to keep the flies off, but he would sooner have no tail and no flies.

George Orwell, *Animal Farm* (1945)

What does it mean to call bee dances,[1] bird songs, or human speech "language," even though all seem fundamentally different? To say that nonhuman animals communicate is far from controversial. Research continuously unveils new insights into the sometimes-unexpected attributes of nonhuman animal communication: studies on the grammar of bird language suggest its significant structural and substantive complexity, and experiments show the symbolic potential and extensive sentence repertoire of bee dances.[2] But surely, nonhuman animal communication must in some way be different from human languages, which allow humans to produce philosophy, politics and literature. If not, would humans not at some point have encountered a nonhuman animal equivalent of George Orwell's *Animal Farm* (1945) or Thomas Nagel's "What Is It Like to Be a Bat" (1989)? And if such a work exists, is it below the human radar because, so far, humans are unable to understand it, or

[1] "Waggle dance," to be exact.
[2] Meijers, *When Animals Speak*, 54; Gould, "Dance-Language," 688, 692-93.

because humans *know* they are unable to understand it?[3] Yet, exactly these questions seem to point to a concession. More and more, humans discover and study (to humans and other species) unfathomable methods of information conveyance by nonhuman animals. To acknowledge the intricacy and complexity of nonhuman animal communication methods represents a departure from long-held notions of nonhuman animal communication as mechanical, instinctive and rudimentary. Recognising such exchanges as equivalent to human language, however, is another story: doing so would deeply upset the belief in human language's uniqueness and exceptional potency, a belief that is fundamental to historical and contemporary human worldviews. This tension points to an uneasiness towards the potential implications of recognising nonhuman animal languages as equivalent or comparable to human languages, for such a turn could impact the current interspecies relational system, which comprises a human society in which nonhuman animals hold, euphemistically said, an instrumental function.

In this article, I want to investigate this tension in the relationship between human and nonhuman animal language, determining if and how it might hint at a larger ideological framework that circumscribes interspecies relations. This tension is

[3] In this article, I use the terms "nonhuman animal" and "human." Language is loaded, and it develops continuously, and therefore choosing what terms to use in research is a tricky task. While at the moment of writing "nonhuman animal" is a common term in animal studies, 'human animal' is less so. Words are not just words: "nonhuman animal" adheres to the idea that there is also a human animal, whereas the term "human" does not reflect this. Connotations of "human," instead of "human animal," imply an emphasis on singularly "human." This artificially distances "human" from nonhuman animals, which "human animal" potentially avoids. Nonetheless, I will use "human" as this is the more commonly used term at the moment of writing. The quickly evolving and expanding research on nonhuman animals, along with its ever-changing language conventions, bears witness to the necessary but complex consideration of interspecies relationships. Articles and research are in that sense also reflections of the time, so if at another time the terms I use in this article are no longer appropriate, which I imagine to happen as they rarely are, please regard this choice within the context of the time of writing.

just one of many indications, or symptoms,[4] that separately might not make an impression, and are perhaps barely even perceptible in daily life because they conform to normative conceptions of human and nonhuman animal language. Within this context, human utterances hold potential for profound meanings, while duck quacks are generally less likely to harbour similar expectations. Such normative conceptions are generally indistinct and unquestioned, yet purposefully so, as they are part of the prescriptive ideologies that determine meaning production in the context of human and nonhuman animal language. The result is that one specific interpretation of language—language as it is potentially used by humans—is privileged at the expense of other languages that do not quite fit into that category. This stigmatises other language practices, and by extension, their practitioners. I am interested in the processes involved in the representation and construction of differences between human language and nonhuman animal language. Language, human and nonhuman, is more than a theoretical phenomenon or social practice. It is an ideological concept that addresses human and nonhuman beings through everyday conventions and practices, as they partake in contemporary interspecies society.[5] The concept of language provokes various different questions that in distinct but subtle ways attend to and lean on species subjectivity: How are humans "different" from nonhuman animals? How do humans identify with but also

[4] Two examples of other symptoms of the tension in the relation between human and nonhuman animal language that I am interested in studying further are unserious or mocking depictions of animal language in human culture, such as the use of animal sounds in (popular) media to create a comical or absurd effect. Examples include Tim Burton's *Mars Attacks!* (1996), and humans speaking (metaphorically) through nonhuman animal figures in (popular) media to reflect on human issues, such as in Disney's *Zootopia* (2016).

[5] Rather than "society," a term that excludes nonhuman animals as societal subjects, I refer to 'interspecies society' to articulate my point of view that contemporary societal organization extends beyond species borders due to the far-reaching consequences of interspecies relations on both human and nonhuman animals, a point of view that is reflected throughout this article.

dissociate from nonhuman others when they reflect on relational positionality in interspecies society?[6]

Stuart Hall's understanding of ideology underlines the far-reaching implications of normative ideas on language. As a cultural studies scholar, Hall defines ideology in a way that focuses on society at large. As a result, the relevance of his concept of ideology to research on human and nonhuman animal languages might not immediately be evident. However, throughout this article I will follow the logic that society at large is inevitably an interspecies society because ideas about the human-nonhuman animal divide play a fundamental role in determining how society is organised and how its subjects are positioned. Hall explains that ideologies are "the mental frameworks—the languages, the concepts, categories, imagery of thought, and the representation—which different classes and social groups deploy to make sense of, define, figure out and render intelligible the way society works."[7] The ways humans understand and represent human and nonhuman animal language are not independent of or inconsequential to the human perspective on reality. These ways of understanding and representation actively constitute how interspecies society is organised. They inform and create what is considered part of consensus reality, and what is not.

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[6] While writing about "humans" might give the impression I refer to beings I am not part of, it has not escaped my notice that I, too, am a human. Problematizing anthropocentrism and normative human subjectivity as a human is difficult, and frankly disorienting. I do not assume I can shed my human subjectivity, for that would be unrealistic and presumptuous. To be able to estrange oneself (that is, me as I write and you as you read) even a fraction from this subjectivity, I think it is helpful to refer to humans with a slightly more distanced "humans" and "they," instead of "we" and "us humans." This is not because I especially believe that the illusion of distance is effective or even beneficial (for it is purely performative because this illusion, or any actual distance for that matter, is limited by what human subjectivity allows of it), but more so because the alternative wording of "us/we humans" pertains to a group sentiment, which in this context I particularly want to avoid. I do not speak for humans. I speak for myself, however, unavoidably I do speak from a human positionality. Consequently, it is very fair to wonder about to what extent I can reasonably execute this project without compromising the results, if at all. I wonder about that myself too. Rather than invalidating any attempt because a human is not the optimal being to do this research, I prioritise making an effort to develop this underexplored research.

[7] Griffin, *Communication*, 344.

The effect of ideology is that one does not question or suspect normal beliefs because they are normal, and that those beliefs are normal because one does not question or suspect them. Breaking with these tendencies, I aim in this article to examine what happens when I attempt to question assumptions that humans do not normally think to question.

I will examine the normative ideas on language and species that circulate in human knowledge production, considering how these ideas are connected and what parts they play in how humans construct and understand their subjective identity, which unfolds in relation to those of nonhuman animal beings. To do this, I will look at texts about human and nonhuman animal language to examine what the language used in these texts reveals of the ideological ideas humans hold, based on the concept of "species," about the human-animal divide.

In this philosophical research project, I follow a two-step process and therefore divide the article into two sections. In the first section, *The Language of Language*, I will trace the ways that ideas about species inform and influence conceptions of language. I will look at three text excerpts, each of which gives different insights into normative ideas of "language." By close reading these excerpts, which theorise "language" from different perspectives according the their research fields of their authors, I will look at the significant ways they shape human conceptions of language.[8] In the second section, I will zoom in on understandings of "species" and consider how interpretation influences interspecies relationships. Specifically, I will consider "species" in the light of the terms "naturalisation" and "construct." Finally, I will depart from abstract theorisation to briefly consider in what practical ways conceptions of "language" and "species" can be found in the physical world. Taking these steps, I

[8] To a (un)certain extent, I cannot avoid the arbitrariness of the material I examine. I have selected a number of texts that are illustrative, but not perfectly exemplary or representative for the research fields on language. My aim (and expectation) is not to formulate a conclusive evaluation, but rather to initiate the first steps of an inquiry on the relation between "species" and "language," which naturally requires a more extensive and thorough analysis of a wider selection of texts than I can provide here.

hope to come closer to an understanding of how the concepts of "language" and "species" are not just related but intertwined.

The language of language

Theories on the origin and nature of language explain how language is attributed to humans and nonhuman animals. Studying these theories, consequently, is a useful first step in examining the relationship between language and species. Broadly speaking, these theories branch out in two directions: there are biological approaches and the humanistic ones. The humanistic approach considers language as a socio-cultural construction, while biological approaches argue that language is the result of evolutionary or (socio)biological processes. In his debated yet influential *The Language Instinct* (1994), Steven Pinker follows a biological approach, arguing that language is "the product of a special human instinct" such that the ability to understand language is innate to the human mind.[9] There is an extensive number of works on the origin of language that are available today and this text offers relevant insight in normative ideas on human-nonhuman animal differences specifically because of its biological approach. I do not examine this text in an attempt to verify the theory it poses. Instead, I am interested in the language of the text, its narrative strategies and the underlying assumptions on which it builds. My aim, therefore is not to involve myself in debates on the epistemological truth of Pinker's theory of language. Rather, I want to explore how language is used in its formulation. Pinker's text mostly focuses on humans and language, but every now and then nonhuman animals appear. Why and how do nonhuman animals fit into explanations of how humans acquire language? What does the language in this text reveal about ideological assumptions around human-nonhuman animal differences?

According to *The Language Instinct*, language is universal to human societies. Language must be innate, rather than learned, because children show many signs of instinctual language use, develop intricate grammar systems without instruction, and apply

[9] Chomsky, *Language and Mind*, 24; Pinker, *The Language Instinct*, 21, 26.

and correct grammatical structures without exposure to correct use.[10] Pinker's approach builds on Noam Chomsky's notion of universal grammar, which is not a linguistic grammar but a mental grammar that underlies all human linguistic grammars and that humans are able to grasp and apply intuitively.[11] This universal grammar allows humans to produce language and participate in language exchanges between humans.

The Language Instinct uses cognitive science to locate the origin of language in the mind and evolutionary psychological adaptation.[12] Pinker writes, for instance, that "the mind contains blueprints for grammatical rules."[13] This is then not only a biological, but also an essentialist approach to language. Viewing language as part of a human's essence, it is even described as "our biological birthright."[14] This deterministic argument seems to disconnect the origin of language from the realm of culture and places it in that of nature. Historically, culture is founded and grounded in human existence, and therefore it already excludes nonhuman animals (and other nonhuman beings) right from the outset. By arguing that language is not produced culturally but biologically, *The Language Instinct* assigns a biological origin to language and leaves open a possibility for language in nonhuman animal instincts—for nonhuman animals, too, have a biological component (and arguably even more so than humans, following dichotomous nature-culture debates that emphasise humans are cultured beings).[15] This biologisation of language's origin might seem to create an opportunity for nonhuman animals to be included in the realm of language, for they, too, perhaps have language in their instincts. However, the text calls "language" a "special human instinct," refutes possibility of this: "language is a magnificent ability unique to *Homo sapiens* among living species."[16] At moments, the text considers ways that nonhuman animals are unique: while the human species is

[10] Pinker, *The Language Instinct*, 411, 22, 39, 293.
[11] *Id.*, 22-23.
[12] *Id.*, 18-19.
[13] *Id.*, 43.
[14] *Id.*, 19.
[15] Hall, *Representation*, 233.
[16] Pinker, *The Language Instinct*, 19.

unique, nonhuman animals certainly are unique too, for spiders can spin webs and bats use Doppler sonar. "In nature's talent show" Pinker writes, "we are simply a species of primate with our own act."[17] Despite these frequent comparisons of the human language instinct to nonhuman animal instincts, which create the impression of putting both the human and the nonhuman on equal footing, a dazzlement by human language permeates the text: the "formidable collective powers" that human language produces and the consequence that humans, "like blue-green algae and earthworms, [have] wrought far-reaching changes on the planet," may suggest that even though all living beings in the world are unique, some are just a bit more unique than others.

The first chapter of *The Language Instinct*, which lays out the foundation of the book's argument—namely, that an instinct to acquire and speak language is essential to the human species—has a title that is telling in itself: "An Instinct to Acquire Art."[18] In this title, the word "art" refers to "language," implying language is a form of art and thus excluding nonhuman animals not only from the realm of language, but from art as well. This title is illustrative of assumptions as to which conceptual and intellectual realms nonhuman animals can access, or rather, are given—allowed—access. Art is yet another realm exclusive to humans, something for which intentionality, consciousness, self-awareness and a certain level of intelligence are needed.[19] While nonhuman animals are excluded by means of "language" because of a special inherent instinct they lack, humans not only do possess that special instinct, but moreover, this instinct is artful. Even when humans find the roots of their traits in nature, those traits are elevated above nature or biology in itself, for the traits are also artistic, and decidedly out of reach of nonhuman animals. Language, then, is not singularly an ability to potentially gain, but it is a faculty to possess, and moreover, to be allowed to possess, to be properly given, and to be granted access to by those who control and produce the knowledge on language. Calling

[17] *Ibid.*
[18] *Id.*, 15.
[19] The interesting and relevant discussion of whether, an how, nonhuman animals can create art is not within the scope of this project, for which reason I will not elaborate on it further. However, I hope to do so some place elsewhere.

language "our biological birthright" elevates language to a right, a natural right, even; this means that humans have the right to language because of their inherent nature as humans.[20]

The Language Instinct works with and around ideas of species difference in unexpected ways. Even though species difference is not the topic of the work—which the introductory chapter announces to be *human language* as an instinct—clarifications, comparisons and explanations in the argumentative narrative throughout the chapters consistently feature nonhuman animals in a supporting role.[21] The theory promises to say something about human language, but when it does, it inevitably also says something about nonhuman animals and their language, even though doing so is not the proposed objective of the theory. Further, *The Language Instinct* specifically leans on ideas of the human-animal divide. The text explicitly calls humans a "species" amongst other species, presenting humans as a component of an interspecies whole, yet its implicit underlying reasoning has an anthropocentric tone: the specific essence of humans is more extraordinary than the specific essence of other animals.[22] The message that *The Language Instinct* presents up front is that a unique capability of "language" is at the essence of the human, and that this capability is a clear differentiating factor that separates humans from—and also elevates humans over—other animals. One could reasonably argue that the text does not presume *not* to be anthropocentric in nature, but what strikes me in particular about this text is the sense of unhesitating self-evidence with which the human (as well as its positionality and status) is defined and positioned relative to and against the nonhuman. The text works with, but to a lesser extent reflects on the proposed relative positionality. Why and how is it self-evident that the human use of language is especially extraordinary, compared to bats using sonar? The text, then, is formally about human language, but actually also about humans' position as a species relative to other animals.

The Language Instinct is just one contribution to theory of language, however, and it is not within the scope of this article to sketch out the full debate on the origin of language. Nevertheless,

[20] *Id.*, 19.
[21] *Id.*, 17-18.
[22] *Id.*, 19, 45, 104, 151, 305, 334.

human linguistic exceptionalism is a common conception in linguistics, philosophy, theory of language and ecology: nonhuman animals are not considered to speak language, at least not in a way comparable to humans, and this inability is presented as one of the most important criteria for differentiating between humans and nonhuman animals.[23] Throughout human history, a variety of differentiating markers have passed by to indicate the "species barrier" between the zones of the human and nonhuman: "first it was the possession of a soul, then 'reason', then tool use, then tool *making*, then altruism, then language, then the production of linguistic *novelty*, and so on."[24] Language is represented as a significant marker of difference because it does not only signify difference, but it also constitutes and prescribes understandings of difference, and it creates the subjects it differentiates. "Language" is both a marker and the act of marking.

Let me take a closer look at the question of what language is by turning to another text: linguist John Lyons' *Language and Linguistics*. Definitions vary, but also meaningfully coincide. The accepted definitions that Lyons discusses, as well as the onces in other philosophical works on language, point to the general conception of language as a system of signs and symbols designed to enable (intentional or unintentional) communication.[25] More than actual definitions of "language," the language used in research on language reflects ideological notions regarding human and nonhuman animal language.

The word "language" in itself points to how human language defines the category of language, and by extension that of nonhuman animal language. "Language" primarily refers to human language, that is, not-nonhuman animal language, not-computer language, not-mathematical language. Without a qualifier, "language" is not language in a vacuum, devoid of human context, existing as a self-determinative concept, but it is its human incarnation or

[23] Lyons, *Language and Linguistics*, 2; Akmajian et al. *Linguistics an Introduction*, 359; Meijer, *When Animals Speak*, 27; Heath, *Talking Greeks*, 16; Reznikova, *Studying Animal Languages*, 4, 7, 11.
[24] Wolfe, *Animal Rites*, 2.
[25] Lyons, *Language and Linguistics*, 8; Yule, *Study of Language*, 14; Morris, *Philosophy of Language,* 1.

manifestation. The word "human" is typically not included in titles of academic research publications on theory and philosophy of language. The absence of qualifiers implies that the research concerns human language, as opposed to other types of languages.

But in research into nonhuman animal languages, a qualifier to the word "language" is imperative so as to not confuse readers' expectations about the area of study. The "animal" in "animal language," announces a deviation from "language" in what Lyons calls the "strict sense."[26] Language in any other context than in one that centres human language then becomes a subcategory, a variation on normative language in itself: human language. While such a variation is predicated on the main, fundamental, and primary category—on account of its similarity to the main category, it is considered a subvariant of language—the variation is always located in a peripheral position. Thus, comparative positionalities of language are not created and maintained spontaneously or in a void, but in a specific anthropocentric context.

According to Lyons, the word "language" can refer not only to human languages such as English, but also to various other communicative systems such as programming languages (e.g., Javascript) and mathematical languages (e.g., fractions), though the answer to the question of "whether they are rightly called languages or not" remains inconclusive.[27] Interestingly, when he mentions examples such as "'body language' or 'the language of the bees'", Lyons explains that these

> are other systems of communication, both human and non-human, which are quite definitely natural rather than artificial, but which do not seem to be languages in the strict sense of the term, even though the word "language" is commonly used with reference to them.[28]

From this, we see that for Lyons there are systems of communication named by the term "language" that are not "strictly"

[26] Lyons, *Language and Linguistics*, 2.
[27] *Ibid.*
[28] *Ibid.*

language.[29] This implies that the term "language" has a strict interpretation, that of actual language, and a non-strict interpretation: language, but not really language.

Theory of language and ecological research on nonhuman animal language exhibit comparable notions of strict and non-strict interpretations of language, which in these contexts appear to apply only under certain conditions. In his *Study of Language* (2020), George Yule discusses the criteria for differentiating human language from animal communication, describing experiments in teaching human language to nonhuman animals. He distinguishes between human language and "animal communication,"[30] implying he does not consider the latter to be language.

Yule holds that human language has distinctive properties compared to nonhuman animal language: reflexivity (the ability to reflect on language and its use), displacement (the ability to refer to the past or future), arbitrariness (lack of "natural" connection between linguistic form and meaning), productivity (linguistic innovation), cultural transmission (the ability for a language to be passed down intergenerationally) and duality (the fact that intrinsic meaning is not connected to individual sounds).[31] The language Yule uses in this section of *Study of Language* is telling: while humans "talk," "speak," and "say," nonhuman animals "produce," "signal," "communicate" and "convey [a] message."[32] Identifying characteristics that differentiate human and nonhuman animal languages, Yule trivialises nonhuman animals that challenge the species-uniqueness of these characteristics by mentioning bee language as a "small exception" when bee language shares a quality with human language that deemed unique to human language, namely that of displacement.[33] Initially, the text bases the differences between human and nonhuman animal language on the twofold distinction between the categories of humans and nonhuman animals (meaning, all nonhuman animal species). But, with bee language,

[29] *Ibid.*
[30] Yule, *Study of Language*, 14.
[31] *Id.*, 14-18.
[32] *Id.,* 15-17.
[33] There are more bees on Earth than humans, and bees are vitally important to the existence of humanity. Beehour, "How Many Bees Are Left in the World?"

the nonhuman animals category potentially destabilises the formal boundary between twofold category distinction between humans and nonhuman animals by exhibiting language properties normally exclusive to the human category. In reaction to this, the text changes the conditions of these human-nonhuman categories: while humans represent the human category, a single species of nonhuman animals, bees, cannot represent the nonhuman category by itself, or, perhaps, form its own distinctive category to make a threefold distinction. The category "nonhuman animals" cannot (synecdochally) be represented by bees alone to form a credible threat to the proposed language properties, keeping intact a binary interpretation of the human-nonhuman animal divide, and invalidating potential category borders within the category of nonhuman animals. This emphasizes a certain status of "human" as a singular species in relation to "nonhuman." However diverse and extensive the total sum of nonhuman "species" the category "nonhuman" consists of, the singular being of the "human" species holds a greater weight when it comes to categorical comparisons that are ultimately based on binary oppositions.

In its discussion of experiments in teaching nonhuman animals to use human language, the text exemplifies unease around and resistance to potentially accepting nonhuman animals into the realm of "language," and above all, into that of human language. The author discredits the potential language abilities of a chimpanzee named Viki, who was taught English, by putting the word "say" between quotation marks each time he refers to expressions by this chimpanzee: "to get Viki to 'say' English words."[34] In the rest of this section, "saying" or "speaking" are not used to describe expressions by nonhuman animals learning human language. The effect is to gatekeep the domain of speaking subjects, reserving that position for human linguistic subjects. Viki does not say but "produce[s] some words."[35] Similarly, the chimpanzees Washoe and Sarah, having been taught sign language, do not use words and sentences, but '"words"' and '"sentences,"' which the author sets between

[34] *Id.*, 19.
[35] *Ibid.*

quotation marks.[36] The chapter concludes by nuancing what it means to "use language," but here too, the author distances human use of language from nonhuman animal language in the greater potentiality of the former:

> there is a difference . . . [in] the capacity to develop a complex system of sounds and structures, plus computational procedures . . . to produce extended discourse . . . No other creature has been observed "using language" in this sense. It is in this more comprehensive and productive sense that we say language is uniquely human.[37]

Human language is presented as unique, potent, and exceptionally complex. Nonhuman animal language, in comparison, is presented as mere communication. Moreover, the linguistic potential of nonhuman animals engaging in human language forms is invalidated; they may speak but they do not actually "say." The border of the realm of language, then, is determined not only by ability to speak the language but also by who speaks.

As in Pinker's *The Language Instinct*, ideas around the human-animal divide are fundamental to the arguments of Lyons and Yule's texts. Both Lyon's and Yule's texts, further, give a more detailed view of how interpretations of "language" and "species" fluctuate depending on the context, sometimes implicitly and at other moments explicitly. For example, their texts generate differences between 'say' and "say," and interpret "animal" as either one homogenous category or as a heterogeneous collection of nonhuman species, as opposed to the singular interpretation of the human species, creating a generalized and singular interpretation of "the animal." In this sense, interpretations are to some extent dependent upon one another: as terms and concepts float back and forth across the species-border separating human and nonhuman

[36] *Id.*, 20-21. *The Language Instinct* demonstrates this use of interpunction as well in a section that discusses ape Petitto learning American Sign Language, for instance by putting quotation marks around "translate," implying there is no actual translation process. Pinker, *The Language Instinct*, 338.
[37] *Id.*, 22.

animals, the interpretations and meanings of these terms and concepts shift depending on the side of the division they on which they land.

In discussing Pinker, Lyons and Yule's books, I have so far focused on texts concerning human language. Different insight might be offered by ecological research on nonhuman animal language: perhaps in this specific context, anthropocentrism is less assumed, takes form in a different way, or might be problematised. In her research on the language of ants, behavioural ecologist Zhanna Reznikova defines "communication" in nonhuman animals as "both unaware and unintentional sharing of information and language-like, symbolic communication."[38] Reznikova's definition of "communication" establishes the terminology of her project. She distinguishes between "language" and "language behaviour," which for her is "the intentional transfer of information between members of a group" and "usually refers to nonhuman animal communication systems in which referential signals exist that can be compared with words in a human language."[39] Only if it meets certain requirements in terms of purposiveness, structural integrity and complexity does Reznikova consider nonhuman animal communication to be language behaviour. She further explains that language behaviour is the "most complex form of nonhuman animal communication that takes place when nonhuman animals advisedly transfer the information to each other."[40] She also defines language behaviour as "intelligent communication."[41] These terms are synonymous in Reznikova's work.[42] While never explicitly determining the difference between language and language behaviour, Reznikova's text uses the aforementioned terminology to reserve "language"—which she regards as "the most sophisticated communicative system"—exclusively for humans.[43]

Moreover, while the text uses human language as a frame of reference by using the terms "language" and "linguistic" to refer to

[38] Reznikova, *Studying Animal Languages*, 2.
[39] *Id.*, 2, 7.
[40] *Id.*, 3.
[41] *Id.*, 4.
[42] *Id.*, 7.
[43] *Id.*, 5.

examples of nonhuman animal language,[44] it relies on a strategy similar to Pinker and Yule's texts when it indicates with quotation marks that the meanings of these words differ from their meanings in human contexts: "'nonhuman animal 'languages'", "'linguistic' potential", "the question of existence of developed 'languages' in non-humans."[45] Determining such differences without explicitly defining the terms language and "language" creates an active comparison between human and nonhuman animal language, prompting readers to understand nonhuman animal language by the literal means (terms) of human language. To explain research demonstrating evidence of the complexity and potency of nonhuman animal language, Reznikova compares this evidence against human linguistic capabilities. Nonhuman animal language is interpreted—both in form (terms) and content (value)—in the light (or shadow) of human language.

Reznikova's use of language in her research resembles that of Pinker and Yule, but something slightly different catches my attention here: even though Reznikova employs human linguistic terminology, she seems to call this use into question by providing an alternative nonhuman animal linguistic terminology (such as "language behavior") to express comparable terms and concepts in human language. Most curious about this, is that Reznikova frequently abandons this nonhuman animal terminology, opting for human terminology instead. So, in spite of proposed differences in the capabilities of human and nonhuman language, describing nonhuman language in terms of human language is a returning pattern, possibly implying that human language and human linguistic terminology are a norm, a neutral standard to measure against and compare to.

In research on linguistics, theory of language, nonhuman animal language and ecology, the language of "language" embodies and reproduces the overdetermined interpretations of language depending on human or nonhuman animal context. As I have shown, Pinker, Lyon, Yule and Reznikova's texts do not only say

[44] Other examples are "words," "babbling," "texts." Reznikova, *Studying Animal Languages*.

[45] *Id.*, in the introduction and chapter 1 and 2 alone: v, 2, *5*, 11, 12, 13, 18, 19, 22, 25.

something about language, but also—and most importantly, for my discussion—about the users of language. As language research appears to employ diverging understandings of language depending on context and subject, this dominant terminological mode may point to symptomatic evidence of anthropocentric and speciesist narratives. At the same time, there is no absolute dichotomous separation between human and nonhuman language in linguistic research. In research on nonhuman animal language, humans describe this language with the words "animal *language*." So, despite humans' long-term project to nuance the definition and perception of the word "language" in "nonhuman animal language," the word "language" stubbornly persists. As of yet, attempts to coin alternative terms or neologisms have not lessened the prominence of the term "nonhuman animal language" in academic debates around animal communication.

The Language of Species

Up to now, I have used close reading to focus on ways that theory of language implicitly expresses, constructs and reproduces different normative ideas about "species" in the light of the human-animal divide. The idea that interpretations of "species" possibly hold ideological connotations might strike one as a bit counter-intuitive, because the concept has a distinct connection with the scientific study of biology, a branch of science generally characterised as positivist in nature. Biology, therefore, stands at risk of being overlooked in critical inquiry. For this reason, I intend to dwell on the idea of "species" a bit longer in this second section, shedding more light on how and why "species" can be sensitive to normative assumptions. In what follows, I will take a closer look at the broader context of theoretical tendencies that the text analyses in the previous section demonstrated: namely that theory of language has underlying narratives of essentialised linguistic status connected to anthropocentrism and interspecies power imbalances. By taking a step back from specific texts to a broader theoretical context, I attempt to gain a deeper understanding of the conceptual mechanics that causes the term "species" to play a significant role in narratives on language. I do this even though the term "'species" is not explicitly central to the initial research questions, which were aimed

at human language. I will bring together possible underlying notions about "species" to learn more about what informs the narratives in the analysis in the previous section, allowing me to eventually move beyond theoretical concerns to real-world implications. I will consider the phrase "naturalised construct," which will help to further shed light on the ideological nature of "species," by examining the two terms that comprise it: first I will consider *naturalised*, and second, I will consider *construct*.

Considering how processes of naturalisation work and what their implications are is the first step in gaining insight into why "species" is fundamental to theories of human language even though it is seemingly unnoticed and unacknowledged. In the previous section, I discussed how Pinker's *The Language Instinct* positions language as essentially and uniquely human, calling it "our birthright," and implying that nonhuman animals are necessarily excluded from this right by being nonhuman, *not*-human.[46] The idea that language is a human linguistic birthright correlates with ideas in Yule, Lyon and Reznikova's texts. In these texts, nonhuman animal language is presented as not *really* language, such that nonhuman animals do not really "say" in the way that humans do, but rather only communicate. This adds a further dimension: nonhuman animal language is then not simply not a real language because in essence, nonhuman animal language holds different linguistic structural attributes and characteristics than human language, but further, the idea of a linguistic birthright makes of nonhuman animal language a language that is spoken outside of the rightful domain: an unrightful language. To speak in a language that is not rightfully a language is to speak in an invalided form of language: an illegitimate, unofficial, less substantial derivative of the proper human language which, instead, is rightful language, spoken by those who lay rightful claim on it by birth. Narratives of right connotate sentiments of protectiveness. Rights are assets to safeguard. The instrumental narrative strategies I have discussed perform this safeguarding. Underlying connotations like these legitimise anthropocentric assumptions. The concept of "right to language" essentialist and

[46] Pinker, *The Language Instinct*, 19.

deterministic: it is human (essence) and *in* human (biology), and that is just how things are.

To present nonhuman animal language as different from human language on account of formal linguistic specifics, or because of conceptual differences that are particular to language as a theoretical phenomenon, relies on an imagery of objectivity; it is to look at language as a scientifically factual defined structure. But a perspective that builds upon biological, essentialist values adheres to naturalising interpretations and representations of difference. While definitions of language as a theoretical and practical system are less permanent—for they are more open to change owing to historical, cultural and geographical interpretations and the development thereof—to define language according to an embodied biological principle anchors language to an ostensibly fixed state of biological essence and naturality. Directly connecting language to biological nature makes language deterministic, part of an identity and stable in its biological embodiment. Positioning language, or the normative understanding of language—"actual" human language, as Pinker, Lyons, Yule and Reznikova's texts imply—in biological human nature and presenting it as uniquely human, locates the difference between human and nonhuman animal language in biological nature, in the natural bodies of human and nonhuman animal subjects.

Hall explains the socio-political potency of this type of essentialist reasoning, which relies on naturalisation practices, when he discusses how racial differences are signified in the context of European imperialism. He describes how representations of racial difference were located in specific characteristics that were said to be innate or inborn, such as laziness and primitivism.[47] In this "racialised regime of representation," processes of ideological meaning production relied on reducing cultures and cultural practices to nature.[48] Characteristics of cultures or communities, and their differences compared to others, were presented as consequences of biological nature. Consequently, those characteristics that were said to be inborn, "natural," were not

[47] Stuart Hall, *Representation*, 233-34.
[48] *Id.,* 234.

subject to change. There is a sense of permanence in biological nature. Ideas on the concept of "species" are similarly subject to naturalisation and essentialisation, in spite of their biological—and by extension, objective—origins. According to Cary Wolfe,[49] a prominent scholar in the field of animal studies, the discourse of species is predicated on the notion that human is defined and constructed through, by means of and in relation to the nonhuman other.[50] Moreover, the category of the non-human animal in particular is significant in the formation of "human" because

> our stance toward the nonhuman animal is an index for how we stand in a field of otherness and difference generally, and in some ways it is the most reliable index, the "hardest case" ... the nonhuman animal possesses a specificity as the object of both discursive and institutional practices, one that gives it particular power and durability in relation to other discourses of otherness.[51]

Thus, ideas of what "species" is directly inform ideas of what "human" is, even in discourses of human otherness. Systematic discrimination against an Other based on the characteristic of species is known as "speciesism," a concept that emerged from animal rights theories.[52] The discourse of species, then, is a grouping instrument based on a naturalised construct of species. "Naturalised" is an important term here, indicating that ideas of species categories are not biologically stable but ideologically framed and determined by their links to the fixed embodied nature of subjects, reducing subjects to their essence. Constructs of species do not singularly start from biological taxonomy, but assume meaning in the ways that essentialised biological interpretations relate to difference: if language in its proper form is unique to humans and preserved for humans, then nonhuman animals, by being nonhuman, logically cannot inhabit the same position, for this would

[49] And with him Georges Bataille, Jacques Derrida and René Girard.
[50] Wolfe, *Animal Rites*, 3, 5.
[51] *Id.*, 5-6.
[52] *Id.*, 1, following Peter Singer in *Animal Liberation* (1975).

destabilise human positionality. In Yule's text on animals learning human language, there is some leeway, some room for ambiguity in that humans take an interest in teaching animals human language, or actively attempt to measure nonhuman linguistic ability such as in Resnikova's work. However, this ambiguity is regulated through controlled environments and attitudes in humans' research on nonhuman languages.

Eva Meijer can help me show where this ambiguity in human research on nonhuman language can be located. Meijer theorises the political potential of animal voices, which forms the common thread throughout her research in the field of critical animal studies.[53] As an illustration, let me briefly outline one research experiment Meijer discusses that demonstrates the complexity of interpreting interspecies language exchanges. In *Animal Languages*, she describes examples of research on the linguistic proficiency of chimpanzees and gorillas. One early experiment involved teaching chimpanzees human speech, with little success. Researchers initially concluded that the chimpanzees' failure to learn human speech was due to a lack of intelligence. But later attempts to teach chimpanzees sign languages proved successful, invalidating the earlier, premature conclusion that pointed to an inferiority in intelligence and instead suggesting that chimpanzees' brain structure prevents them from pronouncing human words.[54] Meijer discusses the results of sign language experiments on a chimpanzee named Nim, mentioning that Nim's actual language abilities were unknown. Researchers argued that rather than acquiring linguistic proficiency, it was possible that Nim had learned sign language through operant conditioning, thus not really understanding the meaning of the signs (though successfully understanding the reward he would receive for signing). Ultimately this interpretation of the data on Nim won out.[55]

Objective data may suggest that in experiments nonhuman animals are capable of learning human language in various ways: learning what is explicitly taught, learning by watching humans sign

[53] Animal studies and critical animal studies (CAS) are both interdisciplinary fields that focus on questions regarding 'the animal' (in the broadest sense), but critical animal studies is further characterised by its activistic nature.
[54] Meijer, *Animal Languages*, 24, 31.
[55] *Id.*, 26.

among each other, creating signs themselves, and demonstrating understanding of concepts that researchers might assume are foreign to nonhuman animals, such as crying.[56] However, interpretations of data analyses and results indicate that scepticism as to the degree of comprehension by nonhuman animals engaging with human language is a structural sentiment in human-performed animal research.[57] Here, Meijer's example of research on chimpanzees shows how initial conclusions appeared to be based on assumptions that reflected preconceived prejudices against nonhuman animals as comparatively less intelligent than humans, potentially colouring data analyses. These biases are reinforced in the process of interpreting research data in accordance with expectations on, for example, chimpanzees' performance as users of human speech. Meijer's example reveals how notions of comparative species intelligence—and nonhuman animals' capacity for and access to forms of language that are closely linked to human language—are informed by an assumption that nonhuman animals are essentially linguistically inferior to humans.

In *The Language Instinct,* Pinker discusses a similar experiment which sought to teach apes American Sign Language. Pinker states that the idea that the apes really learned sign language is "a preposterous claim" and that "[their] true vocabulary count would be closer to 25 than 125." Pinker explains that the observations of the research team and a deaf native signer differed as the native sign language user was less convinced of the ape's sign language proficiency than the researchers. But Pinker does not consider the possibility that, while the research team might miss the intricacies of sign language, the sign language user, being only indirectly involved in the research and therefore less familiar with apes' use of sign language, might misread an ape's signs. So perhaps the truth lies somewhere in between.[58]

To analyse the concept of "species," it is important to consider not only the term *naturalisation* but also *construct*. In the first half of this section, I explained that discourse of species is based on a naturalised *construct* of species. As I discussed earlier, the concept

[56] *Id.,* 24-25.
[57] *Id.*, 24-26.
[58] Pinker, *The Language Instinct*, 338.

of "species" is connected to biological research, which is generally regarded as positivistic and geared towards epistemological truth. To think of "species" as a construct, then, might feel contradictory. "Construct" suggests that the meaning of "species" is less a product of objective observation of biological organisms than it is dependent on subjective perspectives involved in its construction. The notion of "construct" draws attention to the manufactured, relative, conditional and inconclusive status of the concept. Strange as it may be to think of species as constructs, this idea is not new. In reference to evolutionary theory, David Hull discusses the complications of essentialism in and of species classification; he quotes Darwin:

> We shall have to treat species in the same manner as those naturalists treat genera, who admit that genera are merely artificial combinations made for convenience. This may not be a cheering prospect; but we shall at least be free from the vain search for the undiscovered and undiscoverable essence of species.[59]

The complex deficiencies in the theoretical apparatus of differentiating species are an accepted issue in contemporary biological research.[60] While the scientific correctness of "species" factualness is important to consider, in my discussion the point in question is really not about the verifiability of the statement that differentiating species is, or is not, biologically sound. Instead, there are several other points that I consider more significant in the discourse of species: first, this discourse (re)presents and (re)produces "species" and species differences through normative ideas of what species differences between humans and nonhuman animals are assumed, expected and imagined to be. Second, understandings of species can be employed to justify certain behaviours towards nonhuman animals, and can establish a certain social positionality of nonhuman animal groups. And third, these ideas are connected to knowledge production regarding species

[59] Hull, *Effect of Essentialism*, 320.
[60] The headache this issue causes in biological research is inconspicuously named "the species problem." Pavlinov, *Species Problem.* Richards, *Species Problem.* Wells, *Species Heuristic.* Stamos, *Species Problem.*

naturalisation, justification, preservation and monitoring. In constructing a specific representation of species, positionality based on differentiation and categorisation is the basis for hegemonic power structures. The consequences of this positionality permeate every branch of reality. For instance, constructing a species-hierarchised society supports an economic model predicated on differentiation and exclusion, where the line between production and consumption coincides with species.

Practices of taxonomy are strongly linked to knowledge production: they have zoological explanatory power. This means that constructs of species "must bear some relation to the actual qualities and requirements of the species in question, beyond mere prejudice . . . [A]nd here discrimination is equivalent to prejudice. But discrimination also means the making of . . . distinctions; being able to discriminate or distinguish on the basis of knowledge or objects or subjects in question."[61] Representation of species, then, is an accumulation of constructed naturalised differences. Firstly, these are differences that subjects embody. These differences are studied and established in the context of objective biological research, producing "species" as an object of knowledge. Secondly, the conditions under which this knowledge production occurs are important. Research is embedded in an anthropocentric context and informed by anthropocentric ideas and norms.[62]

In an anthropocentric context, ideas of species lose their explicit connection to their specific anthropocentric origin: species seems to be a self-explanatory, natural, normal, unquestioned concept that is inherent to reality. And it seems inherent to reality, or more accurately, to a commonly agreed upon reality as presented and represented by humans. Species do not exist because of their ontological actuality but because of epistemological processes of

[61] Cole et al., "Speciesism," 2.

[62] What is considered fact, is fact within a context, and to neglect taking into account this context, is an indicator of anthropocentrism. Research necessarily holds implicit and explicit narratives (mine does, too) and these narratives both echo the conditions of the context from which it is produced, as well as creates narratives that informs other contexts it is related to. Such conditions are inevitable, and they necessarily leave their imprint on all aspects of research (such as motive, approach, process, result, and interpretation of result).

differentiation. Species difference is a useful tool for structuring interspecies society: humans formulate normative ideas on species and species differences, and because of this, "species" exists. It is not the case as that acknowledging, mapping and implementing (consequences of) species differentiation result from objective, biologically embodied necessity. These processes of differentiation do not emerge spontaneously but constitute an effective and functional system of differentiation that, if instrumentalised as it has been throughout human history, creates and maintains a privileged human position over nonhuman animals (both linguistically and otherwise).

Conclusion

Privileging a human linguistic position over nonhuman linguistic presence potentially results in the obscuration, erasure, and alteration of nonhuman linguistic presence due to anthropocentric normativity in contemporary interspecies society. Species discourses shape the lives of nonhuman linguistic subjects. The degree of anthropogenic influence on nonhuman subjects' living environments varies, but it is universally and continually present. A linguistic perspective on the environmental terms of nonhuman animal subjects' lives reveals the significance of conceptualising linguistically exemplified ecological concepts in relation to anthropocentrism and ideas on "species." This perspective sheds light on the resulting reinforcement of anthropocentric hierarchical interspecies relations, and the deterioration and erasure of nonhuman animal subjects' linguistic presence.

Up to now, my inquiry has transpired in comparatively theoretical, abstract spheres. The issues I have discussed do, however, have concrete consequences. In this final section, I will therefore touch upon ways in which discourses of species and language reverberate in "real life." Studies suggest, for example, that human-induced noise pollution (by traffic or other forms of human presence) affects animals' acoustic communication. Anthropogenic sound pollution and city surfaces disturb animal communication by scattering sound waves and creating multiple

reverberations, interfering with animal communicative practices.[63] It has often been observed, for instance, that birds living in cities sing at a different pitch than conspecifics living in areas with less anthropogenic sound pollution.[64] This shows that anthropocentric contexts alter the living conditions of nonhuman linguistic subjects.

In the case of birds, sound pollution can mask bird vocalisations, requiring the birds to modify their vocalisations by increasing their duration, changing their structure, and producing them at different times and different frequencies—all of this provided that the birds are capable of "adaptations," as they are called (all of which are virtually unnoticeable by non-ornithologist humans).[65] Research on bird language grammar suggests its significant structural and substantive complexity.[66] This implies that altering birds' linguistic practices consequentially influences and reformulates birds' modes of communication, potentially irreversibly. The voices of birds incapable of "adapting" are at risk of being silenced or erased.

Studies show that in addition to disrupting bird communication, anthropogenic noise pollution affects insects, fish and amphibians.[67] Light pollution affects nonhuman animals, such as by changing the timing of bird songs.[68] Anthropocentric living conditions alter nonhuman animals' communicative processes but

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[63] Slabbekoorn et al., "Sound Transmission," 67. Perhaps it strikes one as surprising that after discussing the effects of using a term like "communication" to describe nonhuman animal language, as opposed to for instance "speaking," I now fall back on precisely this word. This has less to do with my philosophical perspective on this type of phrasing, than with the practical complication that paraphrasing "communication" as, perhaps, "dialogue" or "language exchange" would bring me in a tricky situation since doing so consequently alters the connotative meaning of the paraphrased content for the exact reasons that I have been presenting throughout this article. If anything, this issue only brings out yet another layer in the relation between "species" and "language," a layer I might explore at another place, but in the meantime, I will have to compromise with this footnote.

[64] Brumm and Zollinger, "Avian Vocal," 187; Brumm and Horn, "Noise Pollution," 254; Roca et al, "Shifting Frequencies," 1269; Wiley, "Noise Matters," 216.

[65] Murgui and Hedblom, *Ecology and Conservation*, 104.

[66] Meijers, *When Animals Speak*, 54.

[67] Murgui and Hedblom, *Ecology and Conservation*, 97.

[68] Gómez and Macgregor-Fors, "A Global Synthesis," 1134.

also lead to animal migration.[69] Nonhuman subjects leave areas affected by human activity when the changed living conditions prevent effective communication, forcing animals to migrate to areas that accommodate their communication methods; in anthropocentric environments, there is only room for animals with languages that can adapt. Were nonhuman animal language to hold an equal status to human language in popular imagination, then light pollution might be handled differently than it is currently, because in that situation, the risks of compromission or extinction of animal language practices would be considered equally disastrous as it would be for human languages. But since nonhuman languages are not *really* considered to be languages, their potential endangerment and extinction are not *really* considered disastrous by humans.

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[69] Murgui and Hedblom, *Ecology and Conservation*, 97.

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