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Animal Umwelt and Sound Milieus in the Middle English *Physiologus*

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ABSTRACT

The Middle English *Physiologus* features three different nonhuman animals — the lion, the mermaid, and the elephant — whose vocalized sounds resonate on literal and figurative levels. The networks of relationality that ascribe agency to these beings through the representation of sonic phenomena are complex in ways that exceed the conceptual boundaries of a textual “soundscape.” Drawing on recent studies of the terminology used to describe sound in critical theory and ethnomusicology, this article examines how thinking about these creatures in terms of their sound milieus affords greater precision in the identification of how sounds communicate nonhuman perception and perspective. I suggest that sound milieus in this text help us to better understand the nonhuman *umwelt*, or “world around,” to express an individual species’ distinct perspective and way of being in the world. The chapters on the lion, the mermaid, and the elephant, I argue, present singular and contrasting forms of sound milieus, which reference the human but simultaneously exceed the boundaries of human perception by drawing attention to how nonhuman species inhabit the world.

KEYWORDS

Umwelt; sound *milieu*; soundscape; agency; *Physiologus*; animal; Middle English

Ðe leun stant on hille; & he man hunten here
Oðer ðurȝ his nese smel smake ðat he neȝȝe,
Bi wilc weie so he wile to dele niðer wenden,
Alle hise fet steppes after him he filled. (*The Middle English Physiologus*, 1–4)

The lion stands on a hill, and when he hears man hunting, or scents man approaching with his nose, by whatever way he will go down to the valley, covering all his footprints after him.¹

The very beginning of the Middle English *Physiologus* plunges us into a nonhuman perspective in alliterative long line in which the lion, king of beasts and fabled heraldic figure, thwarts the human hunter with his ears and nose. This scene presents a widespread story about lions that circulated in medieval texts — that of the lion covering its tracks so that the hunter cannot follow him. The hunter is a creature of sight, relying on tracks to find his prey. The lion in this collection of metaphysical and moralizing tales of beasts is an altogether different type of sensory creature, inhabiting a wide, stimulating environment of his own that unites different sensory experiences — the aural and olfactory — to give him the upper hand and a good head start. This lion is at once the physical beast of African

fauna, a powerful allegorical figure of Christ, and a figment of literary imagination. He succeeds in tricking the Devil, who endlessly seeks to lead him to temptation, by relying firstly on his ears, and secondly on his nose.

The portrayal of other creatures' sensory experiences encourages readers of the text to arrive at a richer understanding of perspective, agency, and species contact in medieval depictions of nonhuman animals. Depictions of sound, in particular, push at the boundaries of what can otherwise be achieved solely through thinking in terms that stem from visual modes of conceptualization, humankind's most powerful sense. Represented sounds in the Middle English *Physiologus*, alongside the sounds of the poetry that communicates them, create networks of relationality between agents and various receivers of sounds — humans, other nonhumans, the receiver of the text — each inhabiting what I describe as their own “world-around,” or sensory environment, in the reader's imagination. Reading the text in this way exposes the boundaries of human sensory experience by suggesting distinct modes of inhabitancy experienced by other living beings. This is particularly the case with depictions of sound, rather than other sensory experiences such as taste or smell, because sound is the sense most closely related to language in many medieval texts.

The earliest European adaptations of the Latin text called *Physiologus* are the *Physiologus versio y*, *B-Isidore*, and *Dicta Chrysostomi* versions, which were probably originally produced in France by about the tenth century.² These texts founded a rich and complex literary tradition, being extensively translated from the fifth century onward into virtually every European vernacular. In this way, European readers or listeners, including anglophones, were introduced to the African fauna that dominated many of the original chapters.³ The original text takes its name from the presumed author and may have originally held the meaning “allegorist,” rather than the more widely affirmed “naturalist,” because of the ways that nonhuman behavior is presented for interpretation (Kay 2017, 7; Curley 1979, xii). The descriptions of the behaviors and characteristics of nonhumans in the *Physiologus* tradition usually support allegorical readings, interpreting the natures of animals according to various significances, often encapsulating a key point of Christian doctrine. These modes are developed further through a program of interpretation based on Scriptural precedent — that is, the fourfold method of exegesis combining referential and religious modes of interpretation: the literal or historic, the allegorical or metaphoric, the tropological (moral), and anagogic (eschatological or spiritual).

In this article I am primarily concerned with the expression of sound and auditory experience in a Middle English version of the *Physiologus*, which survives in a single manuscript, dated to around 1300.⁴ It is a version of a widespread medieval textual tradition, which produced some of the most popular and widely read texts of the Middle Ages, containing short chapters outlining the behaviors, called “natures,” of various nonhuman animals and birds. The Middle English *Physiologus* (henceforth *ME Physiologus*) concentrates on the representation of nonhuman behavior and, I suggest, sensory experience. In this text we meet a curious collection of creatures: firstly, the lion, then the eagle, serpent, ant, hart, fox, spider, whale, siren, elephant, turtledove, panther, and dove. The portrayal of animals seeing, touching, eating, smelling, and hearing other animals and humans gives the text a sensory, tactile quality — one that enhanced the success of the genre, but which is articulated in unique ways through the

poetry of this distinctive Middle English text.⁵ Far from what might be expected from a notoriously conservative medieval textual genre, in terms of the ways sound is represented and interpreted, animals such as the lion offer a capacious reconsideration of ocularcentric depictions of the world that nevertheless resonates on multiple interpretive levels. By considering how nonhuman figures inhabit their own sensorial worlds in this version of the *Physiologus*, we are enjoined to reattune ourselves to a becoming-sensation that refuses strongly anthropocentric referential positions, displacing the sovereign human subject as well as the sensory experiential biases that such subjectivity imports.

Like Latin versions of the *Physiologus* and medieval bestiaries, the *ME Physiologus* structures its animal entries into very brief descriptions of behavioral characteristics followed by short allegorical interpretations. This reminds us that the depiction of nonhuman behavior is a key to different forms of knowledge and understandings of the world. The main source material is the Latin *Physiologus Theobaldi*, a versified work comprising twelve or thirteen chapters that was used extensively across Europe as a text for teaching Latin in the schoolroom. The *Theobaldi* was probably composed by an otherwise unknown Italian-speaking *magister* of the eleventh- to early-twelfth century in either France or Italy. It is of particular interest to this discussion because the text self-designates as a *carmen*, or song, thus effecting what Sarah Kay (2016a) calls “the reorientation from visual to aural appeal” (89). This reorientation is likewise reflected in the attention to sonority and versification in the Middle English translation. The text itself accentuates this reading experience through a keen attention to the sounds of words describing animals, which exemplify what Brigitte Cazelles (2005), in other contexts, has identified as a collective access to knowledge based on modes of cultural transmission in an intellectual culture that generally prioritized sight (1–18). Furthermore, some animals are depicted exhibiting patterns of sonic behavior that were easily recognizable traits of the *Physiologus* tradition, as in the depiction of the lion’s redemptive roar, the mermaid’s song, or the tumbling and noisy elephant. The text also experiments with alternative poetic forms for different chapters — a feature derived from *Theobaldi* that literally amplifies the sonic representation of nonhumans.⁶ The text is therefore highly sensitive to how nonhuman sound is depicted on the level of metrics in ways that distinguish it from similar texts of this period, such as French and Latin bestiaries, or in natural philosophy (De Leemans and Klemm 2007, 166–73).

The most accessible critical tool available to us for thinking about sound in such contexts is the popular notion of the soundscape, derived from “landscape.” This term has caught significant critical attention in the field of sound studies as it allows theorists to describe a roughly conceptualized environment in which sounds feature independently but usually in relation to a broader whole (Schafer 1977; Fritz 2000). However, reading the scene of the lion covering his tracks as a soundscape could reinforce an anthropocentric referential position based on sight which is not implicit in the *Physiologus*. Rather, our key text highlights the lion’s response to sound and smell, and emphasizes this through alliterative verse. Interpretations of sound through the metaphor of landscapes also reinforce sight as humanity’s predominant sense in a hierarchy reflected through language since at least Augustine, and suggest a universality of sound which may hinder rather than help discussions of sound’s production and effect.⁷ In what

follows I examine the sounds produced by or in relation to creatures such as the lion in the *ME Physiologus*, proposing that instead of using the term “soundscape” to describe their sonic environments, we should instead be thinking in terms of the sound milieu.

The sound milieu serves a precise referential purpose, bringing to the fore the relationality of nonhuman sonic perception and agency. Developed in the fields of geography, sound studies, and ethnomusicology, the sound milieu brings new critical energy to discussions of how we experience sound. The milieu, or *mi-lieu*, meaning “in between,” suggests that relationality between an agent and an object (in this case sound), rather than the separate objects themselves (such as the subject/object dichotomy), is the most important area of enquiry, pointing forward to the auditor as well as backward to the initial vibration that caused sound. Defining sound as relational, rather than as an object in itself, entails conceptualizing sound by its relationship to the milieu; the sound milieu, however, is not a simple environment of sound. Makis Solomos (2018) suggests that “the way in which sound ‘appears’ — or, in other words, the equivalent of individuation . . . constitutes an *emergence*” (105).⁸ As Solomos notes: “if we take the *listener* as our subject, then it is understood that, through the act of listening, he interacts with a sound milieu, resulting in what we call sound” (104, original emphasis). Likewise, Roberto Barbanti (2018) conceptualizes holistic vibrations attuning all objects within their different milieus (74). These objects vibrate alongside the listening agents hearing those sounds, in turn highlighting their non-separation. Instead of a landscape of sound, then, we have vibration, relationality, and “becoming-sound,” highlighted in my example above by the lion’s response to sound and his anticipation of the human sensory experience. By tracing the ways that the representation of the sonic natures of animals in this text develop ideas of the relationality of sound between agent and auditor, I demonstrate that thinking in terms of sound milieus affords precision in defining how humans and nonhumans experience the world around them in this medieval text.

Roaring

Medieval disparities between sight and sound are highlighted in my epigraph by the different sensory ways the lion and the hunter experience the world: the lion hears man hunting before the hunter is able to see him, and he disrupts the hunter’s own interpretation of what he sees by erasing his tracks. This scene encapsulates the lion’s specific sensory experience of the world. It is through a process of aural, but also olfactory, stimulation that the lion takes a path down to the valley, covering his tracks as he goes in order to deliberately deceive the hunter. By way of this action, it becomes clear that he experiences his world primarily based on the senses of hearing and smell. These senses are superior to the human hunter’s, for whom the act of seeing, rather than hearing and smelling, is critical for a successful hunt. If a creature can be seen, it can be controlled, trapped, or hunted down. But as the lion anticipates the hunter’s actions, it can thwart the human by removing any visual traces that the hunter could follow.

By framing the lion’s behavior in such a way as to frame it with responsivity to sensory experience, the *ME Physiologus* expresses a particular form of leonine *umwelt*, or “world-around.” The term *umwelt* was used by Jacob von Uexküll to describe how individual species build and inhabit their own modes of perception. *Umwelt*, now a common feature of animal studies and zoocentric ethology (Broglio 2011, 62–9; Calarco 2008, 28), has

been translated as “milieu” (Solomos 2018, 103) as a way of expressing the parts of a broader environment incorporating an individual agent and the objects with which that agent interacts in a loop of perception and action based on sensory experience. These senses may be experienced through sight and sound, but also touch, taste, and smell. Uexküll’s now infamous case study — the tick — is a “blind and deaf bandit” who becomes aware of the approach of its prey “through the sense of smell” (2010, 45). The result of thinking in terms of *umwelt* is a form of subjective perception that forces us to reconsider how an animal’s sensory experience of the world is always represented through a process of translation as agent-oriented, while nevertheless presuming an exterior viewer, or an auditor in the case of sound. I insist here on “agent-oriented” rather than “object-oriented” to emphasize the roles of individual agents, embodied consciousness, and choices (conscious or subconscious) orchestrated by sensory perception. By attending to the networks of relationality created by sounds through the lion’s response to a specific stimulus, we can posit a distinct conception of the lion’s worldview that continually redefines what it means to experience the world as an animal and as a human.

The *ME Physiologus* does not merely portray the lion’s *umwelt* as part of a system of natural philosophy. Sensory experience is bound with relationality between agents, and this is especially revealed through the depiction of nonhuman sound milieus, a concept that encourages us to interpret sound-related representations of *umwelt*. Directly following the introduction to the lion and the hunter, the text features another famous and exemplary “nature” of the lion, in which the father lion roars to revive his stillborn cub on the third day after its birth. This relation highlights their non-separatedness through a shared experience of sound making and receiving: “Stille lið ðe leun, ne stired he nout of slepe/Til ðe sunne haued sinen ðries him abuten;/Ðanne reised his fader him mit te rem ðat he maked” (The lion lies still; he does not stir from sleep until the sun has shone thrice around him. Then his father rouses him with the roar that he makes; *ME Physiologus*, 9–11). The lion’s roar establishes a sound milieu through the exposition of the relation between vibratory sound, in this case the roar, and the reviving effects of that sound on the cub.

Relationality in the episode of the lion roaring encompasses not only connections formed between leonine agents, but also the allegorical frameworks through which the sound is interpreted. In the *ME Physiologus*, animal natures are interpreted directly through subsequent allegories called “significacio.” If the allegorical reading of the lion’s first nature as Christ, represented by him standing on the hill and avoiding the devilish hunter, was lost on the reader, then the father lion’s roar punches the lion’s phenomenological meaning as both living creature and living Christ simultaneously. In this section of the chapter on the lion, we learn that the lion’s sound emphasizes the allegorical interpretation of the roar, revealing how the lion/Christ watches over humanity as a shepherd for his flock:

Do ure Driȝten ded was & doluen, also his wille was,
 In a ston stille he lai til it kam ðe ðridde dai.
 His fader him filstnede swo ðat he ros fro dede ðo
 Vs to lif holden.
 Waked, so his wille is, so hirde for his folde. (*ME Physiologus*, 20–24)

When our Lord was dead and buried, as was his will, he lay still in the stone tomb until the third day. Then his father helped him rise from the dead so that he might give us life. He keeps watch — this is his will — as a shepherd for his flock.

As this allegory demonstrates, sound presents a type of meta-textual relationality where meaning is generated by an in-betweenness typical of this type of medieval text. The roar communicates not only the attentiveness of the father lion as a parent, but also the shocking force of Christ's resurrection encapsulated in this sonic phenomenon. The sound thus assumes the authority of God at the most significant event in the Christological story, when Christ's father helps him rise from the tomb on the third day.⁹

The lion's roar is a nonhuman sound that becomes the resurrection through a tension between literal and figurative levels of interpretation. Sound thus, as Emma Campbell (2020) argues, "enables the mobilization of multiple meanings" (148) and the articulation of the lion's milieu within the text's networks. By conceptualizing this scene as a sound milieu, which brings a focus to the relationality of sound networks, we can posit two types of nonhuman agency — the leonine and the divine — stacked onto each other in a pattern that places the lion's behavior and the act of resurrection on either side of a description of a roar. The representation of the lion's *umwelt* occurs in the *mi-lieu* in between the lion's vibration and the meanings the sound accrues, encouraging readers to shift their awareness of sound's multiple interpretive possibilities through the lion's worldview.

Representational world-making occurs not only on the levels of narrative and allegory but perhaps more immediately on the level of textual sound. Rather than a visualist form of interpretation anticipated by many illuminated medieval bestiaries, this text operates directly through the sound of language itself to disrupt humanity's instinctive interpretation of the language used to describe nonhuman *umwelt*. The phonic play of the lion's roar through verse form decenters language and provides a bridge to an authoritative spiritual "truth," which in this case is the raising of Christ from the dead after three days. The Middle English alliterative verse concentrates meaning by drawing relations between literal and figurative interpretations. The sleeping of the lion cubs is emphasized by the alliteration of "stille," "stired," and "slepe," which are echoed later in the allegorical interpretation by the return of this same consonant, /s/, to describe the "sleeping" of Christ: "In a ston stille he lai." A sonic and syllabic pattern also emerges with the raising of the cubs by the roar ("rem") of the father lion, which mimics the raising ("ros") of Christ from the dead by the Father. These sonic patterns are crucial to the function and comprehension of the text, focusing attention on the aural qualities of the versification as well as the stacking of meaning in the representation of the lion's sound milieu. The actual sound of the alliterative text thus frames a sound milieu for human readers, which opens a space for conceptualizing animal *umwelt*.

Each chapter of the *ME Physiologus* that represents animal sound creates fictional sound milieus, thereby expressing a particular species' sensory world. The notion of the sound milieu also resonates with the way in which the text is shaped into chapters based on particular species that the human reader meets. By considering sounds as forming discrete milieus our ears become attuned to moments of sonic relationality triggered by vibrations that decenter sovereign subjectivity as the locus of such experience. In the chapter on the lion, the reader is briefly immersed in the roar's literal and figurative

meanings through the sonic patterns of the text, demonstrating how sounds develop multiple modes of interpretation that nevertheless require a sovereign subject as reader and interpreter. The lion's sound milieu enjoins the reader of this text to listen again to how the lion's own vocalizations, and his responses to anthropogenic sound, situate him as an agent acting according to his specific *umwelt*, which contrasts with what a human reader might consider to be the primary unfolding of cognitive experience.

Mermaid Song

The sound milieu depicted in a later chapter of the *ME Physiologus* posits a dangerous relation between sound produced by a nonhuman creature and, this time, a human auditor. The mermaid's song conveys a form of nonhuman agency that expresses a network of relationality in which the human sailor loses consciousness and perception when he hears the song but gains wisdom if he succeeds in shutting out the sound. This alternative model of a sound milieu highlights the intricacies of species-specific *umwelten*, and the possible sensory paths that humans may tread as their own experience crosses with the nonhuman. The chapter in question begins with a description in alliterative verse of how the mermaid's body is like a maiden's, emphasizing the anatomy of the mermaid in the liminal ocean environment in which nothing is quite as it first seems:

De mereman is a meiden ilike:
 On brest & on bodi oc al ðus 3e is bunden:
 Fro ðe noule niðerward ne is 3e no man like
 Oc fis to ful iwis mið finnes waxen. (*ME Physiologus*, 392–5)

The mermaid resembles a maiden. Yet, in breast and body she is thus bound: from the navel downward she is certainly not like a person, but a fish truthfully with sprouted fins.

The description of the mermaid's multifaceted characteristics is significant for the interpretation of the subsequent passage describing her singing, in which we learn that her many voices, "manie stefnes," cause sailors to fall asleep, a trait also encountered in the bestiary tradition (McCulloch 1962, 166–7; Kay 2017, 17–20). The passage culminates in an oblique reference to Odysseus as an exemplum of Christian caution by introducing doubt about the accounts of mermaids from wise men, a specific set of super-auditors who have supposedly survived encounters with these creatures:

Dis wunder wuned in wankel stede ðer ðe water sinked.
 Sipes 3e sinked & scaðe ðus werked.
 Mirie 3e singed, ðis mere, & haued manie stefnes,
 Manie & sille, oc it ben wel ille.
 Sipmen here steringe for3eten for hire stefninge,
 Slumeren & slepen & to late waken:
 De sipes sinken mitte suk, ne cumen he nummor up.
 Oc wise men & warre a3en cunen chare,
 Ofte arn atbrosten mid here best ouel. (*ME Physiologus*, 396–404)

This marvel dwells in an unstable place where the water subsides. She sinks ships and causes harm. She sings sweetly — this siren — and has many voices, many and resonant, but they are truly bad. Shipmen forget their steering because of her uproar. They slumber and sleep and wake up too late: the ship is sucked downwards and does not come up again. But wise and wary men can return on occasion, often escaping with all the strength they have.¹⁰

The details of the mermaid's singing emphasize her agency and intention, building a description of her own *umwelt* that nonetheless relies on the expression of song and singing as relational; in her deliberate vocalization to cause harm or misfortune (“scade”), the mermaid deprives most human sailors of their own agency. The song forms a direct relation between the mermaid herself and the human sailors who hear it. Indeed, it requires these auditors in an agentive loop so that readers of the text can grasp the implication for themselves, as they may identify their own aural inferiority in the figure of the sailor. In this way, the song encapsulates the concept of the sound milieu as highlighting the non-separation of producer and auditor of sound. Entering into the sound milieu she inhabits entails giving up human agency and accepting relationality with plural visual and aural forms, even as this provides the reader with a glimpse of the wonder of a nonhuman way of experiencing the world. What the auditor of the siren's song would need to stay safe when entering her sound milieu is the responsive spontaneity exhibited in the behavior of the lion covering his tracks when he hears and smells the hunter.

The notion of singing renders the scene with the mermaid sonically complex in further ways. Defining her sound as sung suggests an act of intention that complicates the idea of an instinctive nonhuman expression of sound because it suggests a cognitive process more representative of human reason. The mermaid is the only creature in the *ME Physiologus* connected to singing, and therefore to song, thus providing an important case study for sonic representation. Her links to the roots of music only reinforce the power of her aural lure and give an insight into the ways that she inhabits the world — her own melodious *umwelt*. The sound milieu through which the mermaid mesmerizes the sailors is fraught with gendered and sonic tension, highlighting a strong current in medieval writing about music of identifying nonhuman “musical” sounds, such as those of sirens, as irrational when compared to human sounds, even when they possess elements of melodic composition. One effect of this is that medieval depictions of singing mermaids or sirens potentially create slippages between categories such as “irrational” beasts and women in comparison with the conception of a more “rational” form of masculinity (Leach 2006, 188–208). In the *ME Physiologus*, there are indications of a similar strain of misogynistic thought as the text traces the potential route away from a relation with the mermaid's song.

The mermaid's many threatening voices are amplified in the lexical choices that describe the emergence of a song that forms connections with the sailors in a network of relationality. The nouns “stefnes” and “stefninge,” describing both the mermaid's voice and the sound of her vocalization, offer a perplexing spin on her vocal production. The Middle English *stefn*, or *stefen*, can be used to describe a voice, or a form of utterance, be it a sound, noise, outcry, or even a melody (*Middle English Dictionary*, s.v. “steven(e)”). But this sense seems strange when applied to beings that are said to sing “sweetly” (Wirtjes 1991, 39n). Likewise, the adjective *sille* or *shil* may signal the strength, pitch, or type of sound as it is received by an auditor, including shrill or piercing sounds as well

as melodious ones. This vocabulary attests to the importance of an interpretive strategy for the sound produced by the mermaid in this sound milieu, rather than a spontaneous experience of sound.

The search for meaning in the turbulent waters of the mermaid's sound milieu reinforces a relationality that is less clear-cut than that found in the allegorical networks of other chapters. The interpretive framework for sound in this chapter redirects the meaning of the song in the allegory away from the type of Scriptural reference found in the chapter on the lion and toward judgment on human morality. The allegorical interpretation emphasizes that her song has a moral meaning quite distinct from doctrine, and this is expressed in a cross-species metaphor: the mermaid's song is a sign of hypocrisy for those who speak piously but who are wolves inside ("Widinnen arn he wulues al"; 410). The moral message attributed to the interpretation of the mermaid's song reinforces the need for wariness and caution with regard to the vocal lures of the world; a virtuous disposition is required to guard against this type of sound. This moral interpretation of the mermaid focuses on what she can teach a good Christian, rather than seeking to explain the nature of her vocal capacities or of sound networks. The emphasis is rather on the misogynistic interpretation of the female temptress from whom only wise men can escape, a sharp contrast from the chapter on the lion in which the lion's roar is recognizably an act of God from the moment it is uttered.

The mermaid's song challenges a generic interpretation of nonhuman sounds from within the sound milieu in which it operates. This time, however, the models of relational networks generated by sound are subject to manipulation by humans. The mermaid's singing points the anthropocentric focus of sonic interpretation back directly toward sailors, indicating two kinds of human *umwelt*: the sensory experiences of those who succumb to sound, and that of those who heed the warning of precedence. The former represent the wider sphere of humans passing through life, many of whom fall asleep to the true Word of God. The latter, through the image of the Odyssean ship, become a metaphor for the Ship of the Church passing through the dangerous waters of the world with ears fully plugged to block out temptation, a religious human *umwelt* that is cautious to sensory stimulation from the nonhuman. The mermaid's song is therefore a warning to the reader of the text to avoid both the temptations of splendor and power, and the aural allure of a sound that is not quite human.

Elephant Rescue

The chapter on the mermaid in the *ME Physiologus* presents a sound milieu that is potentially noxious to humans who enter it and disruptive to sovereign agency in the portrayal of cross-species contact. The succeeding chapter on the elephant presents a contrasting model, emphasizing collective nonhuman sound without the presence of a human figure. This chapter raises elephant roaring as an acoustemological issue — that is, one of knowing (epistemology) through sound (acoustics). Elephant roaring forms a collective sound milieu that invites reflection on the capacity of medieval texts to communicate a nonhuman perspective when the only human present is the reader of the text. The chapter on the elephant is self-contained, but the sonic phenomena ascribed to these creatures nevertheless invite reflection on the types of vibration made possible by

sound. This is a type of vibration that exists between and for elephants themselves, emphasizing their non-separation as a sonic species and collapsing the concept of the sound milieu into that of *umwelt*.

The text recounts the natures commonly attributed to the elephant: they are large and mainly found in India; they know no lechery until having eaten the mandrake; and the mother gives birth to her young in water (although there is no mention of the menacing dragon present in many bestiaries).¹¹ A sonic episode describes how the elephant, having no joints, must sleep resting against a tree. For a human to catch an elephant, a huntsman must saw through a tree and prop it up as a trap for the elephant to unwittingly lean against. The elephant inevitably tumbles over and must be helped back up by fellow elephants, a trick that they only manage with a tumultuous uproar and the help, finally, of a young elephant. Once he has collapsed, the fallen elephant proceeds to make a racket, with the English verb *remen*, used above to describe the lion's roar, now used extensively to communicate the elephant's anguish:

Ȝef ðer is no man, ðanne he falled,
 He remed̄ & helpe called,
 Remed̄ reufulike on his wise,
 Hoped̄ he sal ðurȝ helpe risen. (*ME Physiologus*, 469–72)

If there is no man [around], when he falls, he roars and calls for help. He roars pitifully in this way, hoping that he shall rise through help.

This lengthy passage of elephant-rescue gradually builds up narrative tension through a sense of interconnected sonic activity between nonhuman agents. The text qualifies which agents are participants in the sound milieu that is beginning to take shape — notably, the human is not a direct agent in this sound milieu, despite having provoked the circumstances for the elephant's predicament. The network of relationality that constitutes the sound milieu here is entirely focused on the sounds produced by the elephants for other elephants in a specifically collective representation of pachyderm *umwelt*.

When the fallen elephant roars, the implication of his vocalized sound is that he hopes to rise through the collective help of the herd. The notion of collective sound-making is played out in a micro-narrative in which a network of sound metaphors is called on to highlight sound's communicative capacity. A single elephant arrives on the scene and attempts to lift his fallen brother, with whom he cries out ("remed̄"; 478) for help. Even after another attempt with a great many adult elephants who have answered the summons, they have no success in lifting the fallen elephant, resulting in an unbridled collective uproar.¹² Only once all the elephants have arrived and roared together, like the blast of a horn or the clang of a bell, does the young elephant then step in. With the help of this small creature, the larger, fallen elephant is saved in a passage written not in alliterative verse but interlinked through couplets. Read as a sound milieu, this passage reveals a shared language of sonic expression between elephants because sounds are presented as a set of signals from one agent and received by another with a clear meaning dependent on shared species communication and sensory perception:

Danne remen he alle a rem
 So hornes blast oðer belles drem,
 For here mikle reming
 Rennande cumeð a ʒungling:
 Raðe to him luteð
 His snute him under putede
 & mitte helpe of hem alle
 Ðis elp he reisen on stalle
 & tus atbresteð ðis hunttes breid
 O ðe wise ðat Ic haue ʒu seid. (*ME Physiologus*, 483–92)

Then they all roar a roar like a horns blast or a bell's clang. Because of their great roaring, a young one comes running. He bends down to him and puts his snout under him, and with the help of all of them he puts this elephant back on his feet. And thus he escapes the hunter's trap, in the way that I have just recounted.

Read as a sound milieu, this passage demonstrates a shared language of sonic expression between elephants because sounds are presented as a set of signals from one agent and received by another with a clear meaning dependent on shared species communication and sensory perception. Were we to survey all the animal sounds in this text, this episode would certainly be the loudest and most vibrant contribution. Not only does it depict the largest number of animals making noise at any point in the text, it also features the densest passage of sound-related vocabulary in any one section, oscillating around the word *remen*. The words *remeð*, *called*, *blast*, *drem*, *reming*, and even perhaps *rennande* (to run, considering the elephant's size), each contribute to the representation of sound. Associations between sonic phenomena are enhanced by references to the “rem” and the “drem” of the elephants' roaring, with the “blast” of the horn constituting one of the loudest types of instruments in use during the Middle Ages, perhaps referencing the use of elephant tusks for horns (Montagu 1976, 16–7). The *ME Physiologus* thus emphasizes the association between sound and elephant tusks, generally called oliphants, mapping out a material sound onto the imaginary reality of sound relations between fictional elephants. The sound milieu thus manifests through vocal noises made by the elephants and human sounds produced through elephant horns.

The elephants' sound milieu is a noisy one, revealing the complicated and varied nature of their common form of vocal sound, a vibration that reveals the presence of the fallen and unites the herd in their effort to help save their companion. The allegory for the elephants' roaring uses a similar vocabulary to expand the communicative capacity of this sound milieu to incorporate the voices of the prophets in Christian doctrine. Unable to raise Adam and put him back on his feet, the prophets cried out loudly to Christ:

Ðo remedden he alle ore steuene,
 Alle heʒe up to ðe heuene.
 For here care & here calling
 Hem cam to Crist, heuen-king. (*ME Physiologus*, 503–6)

They all cried out in one voice, all high up to the heavens. Because of their distress and their calls, Christ, the king of Heaven, came to them.

The juxtaposition of the elephants with the prophets through their shared roaring draws a parallel between the elephants' own sound milieu (mapped out as their *umwelten*) and another that defines a vibratory connection between the prophets and the heavens. Whereas in the chapter on the lion, it was nonhuman and divine sounds that were stacked onto each other to reinforce meaning, here human and nonhuman sounds mirror each other to call to the heavens. The Word of God as it is revealed through elephant behavior expresses the collective sound of the prophets. The use of a shared vocabulary to describe the roaring of elephants and that of the prophets is indicative of relational networks forged by this sound milieu, revealing that both humans and nonhumans perform such vocal actions in the material world from distinct *umwelten*, nevertheless expressing co-dependent forms of sensory experience.

Although there is a shared communicative capacity of sound between the elephants and the prophets, there is nonetheless a gap in the reader's access to elephant *umwelt* that helps us to conceptualize the space in-between sonic species, auditors, and readers of the text. Despite a shared "language" between elephants and prophets, the sounds that each produce are not straightforwardly directed toward humans for human comprehension. The exclusion of the human hunter from the elephant-rescue narrative suggests that elephant roaring forges connections between elephants themselves that are not supposed to be heard by humans, just as the prophets' roaring cries are likewise directed straight to God. This may reference how, in a post-lapsarian world, humans can no longer understand or command nonhumans, as humankind dropped out of direct communication with beasts and birds, and thus with God, at the Fall.¹³ However, the young elephant allegorically signifies the redemption of humanity through Christ. The redemptive roaring of the elephants and prophets is therefore heard by one who becomes human, in this case, Christ, in a message that is reinforced in the *ME Physiologus* through textual allegory: "& tus Adam he underzede./Reisede him up & al mankin,/Ðat was fallen to helle dim" (And thus he died for Adam, and raised up him and all of mankind, that was fallen into dark Hell; 510–12). By holding both the literal and figurative meanings in mind, it becomes clear that the sound milieu built by the elephant-rescue narrative is not fully complete until the roaring has reached Christ, who hears the sound. The episode is therefore available for interpretation as both the expression of elephant *umwelt*, in terms that may exceed human comprehension, and as a sound milieu incorporating human readers and divine auditors.

The episode of elephant rescue is designed to inspire awe and intrigue through the portrayal of a memorable series of extra-human collective sound signals. The plurality of verbs and nouns to describe a single type of sound invites the reader to inhabit elephant *umwelt* by representing a sound milieu with no human present.¹⁴ Elephant roaring lingers at the boundaries of human language, nevertheless inviting human readers to imitate the sound and its message. It simultaneously provides a powerful depiction of nonhuman creatures using sound to create a network of relationality. Alongside the description of the elephants struggling to raise their fallen cousin, their targeted, communal sound-making leads to their eventual triumph over the absent hunter's trap. There is perhaps also a light touch of humor here, with the depiction of the fallen elephant struggling to rise associated with a specific, noisy lexical field that may have been used as a teaching point if this text were read or practiced, perhaps aloud, as part of an exercise in phonology in the classroom.¹⁵ This would establish a form of extratextual human sound-making that undermines the sovereign human subject and places the producer of sound in relation to elephants themselves.

Uncommon Vibrations

Sound milieus focus the ear on the agents producing and listening to sounds — hunters, lions, mermaids, elephants, sailors — and the ways that these sounds constitute an inhabitancy and an emergence of being. The sounds produced, experienced and interpreted by human and nonhuman agents in the *ME Physiologus* demonstrate how different species piece together their own perspectives and sensory worlds, their own discrete *umwelten*: the lion responds to the sound and smell of the hunter, and roars to revive his cubs; the mermaid's song is a lure but also a warning; and the elephants' collective roaring turns the focus of sound relations inward toward communication between agents of a single species, rather than explicitly directing the elephants' roaring toward ordinary human ears. These sensory worlds are produced by vibrations along a thread of in-betweenness between different agents that links sensory experience in this text to allegory. Some of these vibrations emphasize non-separatedness while others reinforce caution from models that would entirely collapse the distinction between human and nonhuman agency, or deprive humans of sovereignty.

Despite representing uncommon vibrations, however, the *ME Physiologus* establishes bridges between distinct models of nonhuman agency, the divine authority of Scripture, and human morality. Sound is a composite part of milieus in which agents are immersed in a network of relationality that includes the physical bodies of the agents producing or receiving sounds, the environments they inhabit alongside other agents, and, through strategies of versification, the reader's imagination. If we start with the sound milieu as a sound space in which becoming-sound operates through vibration, we are enjoined to reconsider old, rigid notions of anthropocentricity as the roars, calls, and melodious songs of nonhuman species exhibit networks of sound relations which the conservative nature/allegory structure of this text would at first seem to encourage us to pass over. By entering into these sound milieus, we discover patterns of nonhuman sonic behavior that might directly deprive humans of their mental faculties, or conversely signal a vibrant, noisy series of “world-around” perspectives that have little to do with human audition. These medieval models for inhabiting sound and the relationality of sonic phenomena remind us that, when it comes to nonhuman sound-making, the human experience of sound is but one model of sensory perception that is challenged by a perspective other than our own.

Notes

1. Multiple editions of the *Middle English Physiologus* exist. Line numbers in quotations refer to Hanneke Wirtjes' edition of 1991. See also Mary Allyson Armistead (2001) and Koichi Kano (2007). All translations are adapted from Armistead (2001).
2. Several other Latin versions of the text exist, known to scholars as A, B, C, Y, and Theobald. See McCulloch (1962, 8–9) and Kay (2017, 157–60).
3. Compilations of material later termed “bestiaries,” differentiated from the *Physiologus* proper, began around 1100, reorganizing chapters and adding additional material such as etymologies and further theoretical explanations for animal behavior based on the revival of Classical texts (Kay 2016b; Salisbury 1994, 9). For a detailed analysis of the dating and location of these early texts, see McCulloch (1962). See Scott (1998), who argues for no later than the third century for the Greek *Physiologus*. Other notable sources are Henkel (1976), Sbordone (1936) and Zucker (2004, 19–20). For an overview, see Kay (2017, 8–11, 157–62).

4. British Library MS Arundel 292, a parchment codex and plain in comparison to many medieval bestiaries in Latin and French, is a devotional miscellany including the Creed and Apollonius of Tyre in East Midland dialect, Henry of Sawtrey's *De purgatio Sancti Patricii*, Odo of Cherton's animal fables and a Life of Merlin in Latin, and a poem on the Devil's works in Old French. The author remains unknown, although it has been suggested that the scribe was a letter-by-letter copyist, which could indicate that the text was composed potentially up to half a century earlier than the date of the manuscript (Kano 2007, 327; Wirtjes 1991, xl–lii).
5. Kay (2017) makes a case for reading bestiaries through and with the skins upon which they were written, suggesting that some scribes deliberately chose leaves of parchment with holes or tears on which to depict animals who bore into or otherwise ruptured each other's skins.
6. Versification in the *ME Physiologus* is split across chapters: hexameter for the lion, siren, onocentaurus and panther; elegiac couplets for the eagle, ant, fox, stag, whale, and elephant; sapphic stanzas for the serpent; hypercatalectic dactylic trimeters for the spider, and adonics for the turtle dove.
7. Kelman (2015, 228) and Ingold (2007, 10–13). Augustine (1969, 10.35.54) illustrates the pervasive use of sight metaphors compared to sound metaphors in language. For commentary, see Biernoff (2002, 25–31) and Cazelles (2005, 2–4). For comparison, see Plato (2008, 61d–68e) and Aristotle (1998, A 980a).
8. Solomos here draws on individuation theory, notably that of Simondon (2005, 325). See Petit (2013, 49).
9. In *Theobaldi*, the father lion rouses his cubs with a roar: “Sed dans rugitum pater eus suscitatur illum” (but with a roar the father rouses him; Theobaldus 1972, 26). In the B-Isidore version, the lion does not cry or roar, but instead breathes into the faces of his cubs: “donec veniens pater eius die tercio insufflet in faciem eius et vivificet eum” (until the father comes to them on the third day and breathes on their faces and revives them; Morini 1996, 12). Translations from Latin are my own.
10. There is some debate on the translation of “mitte suk.” For discussion of translation issues, see Wirtjes, notes on 39–40.
11. There is, likewise, no occurrence of the noisy episode in which the mandrake screams when uprooted by human ruse, another narrative attached to the chapter on the elephant in some medieval bestiaries (McCulloch 1962, 115–9).
12. The similarities with the ways that elephant sounds are conceptualized as vibrations in the twenty-first century are striking: elephant vibrations can travel many miles, enabling communication between herd members over vast distances (Garstang 2007, 791).
13. I draw this model from that described by Alexander (2008, 35–7).
14. This plurality contrasts with other medieval traditions, such as glossaries and language treatises, which usually ascribe one verb per animal (Hsy 2018; Lewis 2022, 69–98).
15. Kay (2016a) draws attention to similar possibilities in *Theobaldi* and the poetry of Rigaut de Berbezilh.

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