# On Not Letting Sounds Be Themselves

Holly Watkins

**University of Rochester's Eastman School of Music, New York**

Music is the art of enlivening sounds. Music transforms the acoustic results of material excitation—of keys striking hammers, bows traveling across strings, columns of air vibrating in larynxes—into signs of excitation unbounded, depersonalized, writ large. Musical sounds constitute a lexicon of arousal whose interpretive possibilities span physical, physiological, emotional, and ideational realms. Yet music also teaches us that these realms cannot be separated so easily. Music's play of sonic and formal energies may simulate the release of mechanical or inorganic energies, but historically music has been partner to expressly organic pursuits. The danceable tune, the singing line, the invigorating rhythm, the seductive timbre—music not only enhances feelings of vitality but projects its own sense of animation. Even music that soothes and relaxes does so by entraining us to alternative metabolisms sonically realized. "We hear music as a mani-

*CR: The New Centennial Review*, Vol. 18, No. 2, 2018, pp. 75–98. ISSN 1532-687X.

festation of vitality," writes philosopher Kathleen Marie Higgins, "and part of our enjoyment is empathy with its liveliness" (2012, 18). Empathizing with music, we encounter a form of animation—not biological but not merely illusory either—that thrives where human, organic, and inorganic energies cross over and shade into one another.

Whose life resonates in music? The answer appears to be obvious: the lives of those who create it, play it, listen to it, dance to it, daydream to it. But music's liveliness is not reducible to that of the agents responsible for its sounding or its reception. Music is emergent, so that when, say, a melody is performed adequately, it becomes something more than just a sequence of sounds—it becomes something holistic rather than additive. That which coalesces out of tones or beats, such as a metrical pattern or recurring refrain, appears to take on a lifelike, self-maintaining character. Listeners are necessary participants in this phenomenon, but they are not its sole point of origin. What music does and what listeners hear are mutually constitutive.

Emergence, however, does not fully account for music's liveliness. The life of music—tenuous, metaphorical, contingent, and mortal—has multiple sources: not only the self-sustaining character of musical patterns but also the phylogenetic significance of hearing and the cross-modal interpretation of musical actions. Sounds alert us to dynamic forces in the environment, to the presence of predators and prey, to dangers and lures both animate and inanimate. Sounds are ambiguous: regular patterns (*drip-drip-drip* or *inhale-exhale*) and singular events (a *boom* or a *scream*) result from both unintended physical events and the intentional actions of living beings. Music retains that ambiguity; music is the art of possibly animate things. Music spurs us to imagine creating, being, or undergoing an almost endless variety of dynamic movements that, especially in the case of instrumental music, need not be heard as expressions of human subjectivity or embodiment.[1] Such imaginative work generally does not take place on a conscious level. Listening to music, we unconsciously experiment with being other. Music creates a multitude of virtual worlds, or virtual configurations of space and time, that listeners can vicariously experience as alternative forms of embodiment, affect, spirit, thought, or some combination thereof. Music makes us feel more present and embodied, but it also carries us away. In either case, music affords

This work originally appeared in CR: The New Centennial Review 18.2, fall 2018, published by Michigan State University Press.

experiences of selfhood that are broadly distributed across the terrain of body and mind. Music both diversifies the self and extends it toward other selves in motion, whether real or imaginary, human or not.

My current work grapples with the vitality of music in all the enigmatic senses I have just outlined, which cluster around two of music's most cherished aptitudes: to stimulate and simulate life.[2] One of my primary concerns is to elucidate how music brings its human practitioners into real and imagined contact with more-than-human vitalities. By the latter, I mean aspects of existence experienced by humans but not limited to them, such as possessing flesh capable of vibration, being in periodic motion (the breath, the heartbeat, the gait) as well as entrained to external periodicities (the cycles of days, months, and years), and engaging in semiotic practices whose formal properties span multiple arenas of living expression. If "theory" consists of "systematic reflection on our guiding assumptions," as Terry Eagleton has written, then my work places music in conversation with theory by interrogating the persistent distinctions between culture and nature, humans and nonhumans, that inflect discussions of music making and sound production (2003, 2).

One strand of my project consists of critiquing the modernist notion of "sounds themselves." Arising out of early twentieth-century phenomenology and informing the polemics of John Cage, the apostles of *musique concrète*, and later composers interested in soundscapes and sonic geographies, the notion of "sounds themselves" has been used to both describe the natural condition of nonhuman sounds and delineate the goal toward which contemporary musical creativity ought to be heading. The most familiar instance is probably Cage's 1957 essay "Experimental Music," which urged composers to go about "discovering means to let sounds be themselves rather than vehicles for man-made theories or expressions of human sentiments" (Cage 1961, 10). Benjamin Piekut observes that for the Cage of the 1950s, "nature is figured at its most traditionally modernist—that is, as raw sound" (2013, 140). This association derives from a modern Western understanding of the world, memorably diagnosed by Bruno Latour, that separates nature and humanity into two camps and reserves practices of meaning-making for humans (1993). The idea that nature is the domain of direct, immediate, or raw sound, then, is of relatively recent vintage, and it has been used to support claims that music

This work originally appeared in CR: The New Centennial Review 18.2, fall 2018, published by Michigan State University Press.

composed in imitation of nature as semiotic blank slate, as the home of sounds that, as the composer John Luther Adams has put it, "simply sound," are somehow more truthful than the varieties of nature-themed music predating modernism (1994, 16).

This article overturns these assumptions not by staging a contest between the music of different eras and styles but by testing the premise of "sounds themselves" against an understanding of nonhuman semiosis inspired by the work of Charles Sanders Peirce. I argue that viewing the natural world as the rightful home of essentially meaningless sounds opposed to the meaning-laden sounds of humans works against the desire so often expressed by advocates of such views—namely, to close the distance between human music making and nonhuman sound making. To further complicate claims that (some) modernist music operates in closer proximity to nature, I compare the dynamics of signification in two pieces that, on the face of it, have very little in common: a sound installation by Norwegian composer Jana Winderen and the movement "Vogel als Prophet" ("Bird as Prophet") from Robert Schumann's piano cycle *Waldszenen* (*Scenes of the Forest*), op. 82. My aim is to illustrate the abundance of semiotic processes permeating music of all stripes, an abundance obscured by musical sound's routine association with abstraction. Moreover, by addressing a piece of Romantic music that cannot be considered in any way protomodernist, I seek to counter the tendencies of posthumanist writers for whom only contemporary music, it seems, can bear the application of contemporary thought.[3] Finally, my references to note names, chord types, and formal processes, hopefully not too inscrutable to readers hailing from other fields, serve as a reminder that "theory," for music scholars, means music theory, or the specialized terminology used to describe musical sounds. While music theory and critical theory may seem to be only distantly related, increasing the conceptual traffic between the two could do much to further the renewed dialogue this special issue seeks to foster.

## Rewilding Sound

Let us begin by considering in more detail John Luther Adams's notion of "sounds themselves," as expressed in the 1994 essay "Resonance of Place."

This work originally appeared in CR: The New Centennial Review 18.2, fall 2018, published by Michigan State University Press.

Adams, best known for his "sonic geographies" of the Alaskan wilderness and Pulitzer Prize–winning composition "Become Ocean," contends that "attentive listening to wild sounds" can "expand our understanding of musical meaning" (1994, 16). When humans listen to sounds in nature, Adams argues, they employ a mode of hearing that predates the development of communication via symbols, whether linguistic or musical. When this kind of hearing predominates in musical experience, he suggests, a more primordial way of being flourishes within the civilized domain of culture. Listening with scant concern for meaning or message, we become aware of "those profound and mysterious connections between the sounds we make and the larger, older world" (17). Adams's remarks resonate with the perennial intuition that music occupies different semiotic terrain than language. Cage, for example, explicitly contrasted the experience of listening to new music, and presumably to natural sounds as well, with interpreting the sonic symbols of language. The new hearing, he proposed, was "not an attempt to understand something that is being said, for, if something were being said, the sounds would be given the shapes of words" (1961, 10). The direction of Adams's argument is thus all the more surprising: "Human music is generally a symbolic and a semantic phenomenon, in which the relationships *between* sounds mean more than the sounds themselves. But sounds as they occur in the world are not symbols, subjects or objects. Inherently, they do not represent or evoke anything other than themselves. They simply *sound*. Their greatest power and mystery lie in their direct, immediate and non-referential nature. If we listen carefully enough, occasionally we may simply hear them just as they are" (16–17). By basing his compositional practice on the prototype of natural sounds being "just as they are," Adams effectively appropriates and repurposes Cage's famous injunction to transfer "nature's manner of operation into art" (1961, 9).

But something about Adams's argument does not satisfy. Is it really true that sounds such as "the primal music of bird songs and animal cries, the voices of wind and water" do not, as he says, "represent or evoke anything other than themselves" (17)? Adams's notion of natural sounds as inherently nonreferential, as sounds that "simply sound," remains oddly insensitive to the signifying potential of acoustic phenomena. Part of the confusion, perhaps, arises from the fact that reference is usually understood on the model of

This work originally appeared in CR: The New Centennial Review 18.2, fall 2018, published by Michigan State University Press.

language, where words normally refer to something quite different from the sequences of sounds that compose them. According to Eduardo Kohn's interpretation of Peircean semiotics, however, reference is not (always) a matter of signs standing for something else entirely but of signs standing "for something in relation to a 'somebody'" (2013, 75). The smell of a mouse, for instance, stands to a snake for a source of food, but what the smell stands for is not separable from the mouse in the way that the sounds making up the English word *mouse* are separable from the generalized creature to which they refer.

If the signs interpreted by animals are referential in this manner, then semiosis serves the purposes of flourishing and survival—giving the lie to Cage's conviction that, in the words of Lydia Goehr, the sounds of nature supply the paradigm for "existing without purpose" (2008, 94). Animal sounds are made for other animals, some of whom are the intended recipients, while others are not. "What is a cry," ask Gilles Deleuze and Félix Guattari, "independent of the population it appeals to or takes as its witness?" (1987, 239). From a Peircean standpoint, animal calls signify primarily by way of iconicity and indexicality: they are recognizable as being like the sounds made by an individual or species and as utterances that indicate the presence, condition, and intentions of a sound-making creature. As Kohn writes, iconicity and indexicality are "representational modalities shared by all forms of life" (2013, 39). Even though wind and water may not make sounds for the purposes of communication, those sounds can still function as signs for sentient observers—as indices, say, of an oncoming storm or a source of refreshment. Any sound that attracts the attention of an observer can be either an index, in that it points to some dynamic thing responsible for making the sound, or an icon, whose similarity to (or lack of difference from) some other sound is noticed. Such sounds do not "simply sound" but convey meaningful information about the world. Adams concedes as much in the essay "The Place Where You Go to Listen" (1997). The essay tells the story of a skilled listener in the Alaskan wilderness, a woman who "heard small voices whispering: 'I am *uqpik*. I am river willow. I am here.' 'I am *asiaq*. I am blueberry. I am here'" (Adams 2001, 181). Even those not capable of hearing the speech of a blueberry bush can still hear the wind striking its branches or an animal rustling within it, indices that help observers construct "auditory scenes," or sonic representations of place.[4]

This work originally appeared in CR: The New Centennial Review 18.2, fall 2018, published by Michigan State University Press.

Glossing Peirce's third type of sign, Kohn explains that symbols "refer to their object indirectly by virtue of the ways in which they relate systematically to other such symbols" (2013, 32). While symbolic systems have been developed to their furthest extent by humans—as far as we can tell, anyway—a substantial quantity of ethological literature has documented the at least minimally symbolic function of certain animal calls. Peter Marler observes that nonhuman vocalizations were once considered purely affective, in keeping with the assumption that only humans are capable of symbolism (2000, 32). Ethologists have since shown that animal calls can convey information about location, movement, and impending danger in a fashion that borders on the symbolic, in that meanings arise out of clear and consistent differentiations between sounds. In an activity Frans de Waal calls "referential signaling," the vervet monkeys of Kenya employ a number of distinct alarm calls, each corresponding to the type of predator spotted in the vicinity (2016, 107–8). Even if such phenomena do not constitute full-blown symbolic systems, they do at least illustrate that animals who only heard "sounds themselves" in the utterances of their companions or rivals would not last very long.

What, then, is a sound itself, a sound "just as it is," and why have composers and listeners since at least the mid-twentieth century been so eager to ascribe that status to natural sounds? The concept has semiotic, philosophical, and technological implications, corresponding roughly to how Adams, Cage, and theorists of *musique concrète* have formulated it. For Adams, sounds that just sound have no semantic or symbolic meaning; for Cage, they have no purpose. For Pierre Schaeffer and later exegetes, such sounds are divorced from their sources with the assistance of recording technology and appreciated for their acoustic properties.[5] In all these cases, a preoccupation with sounds themselves says a lot more about the nature of particular listeners than it does about the sounds of nature. In short, not recognizing the semiotic character of natural sounds is a mark of one's distance from nature. At one time, all humans depended for their survival on apprehending the world as a panoply of signs. The beneficiaries (and victims) of modernization and industrialization, by contrast, rarely need to locate running water or prey to survive, and they (we) depend on technologically equipped specialists to grow and deliver food, predict storms, and identify other salient environmental pat-

This work originally appeared in CR: The New Centennial Review 18.2, fall 2018, published by Michigan State University Press.

terns. Indeed, the contemplative attitude toward ambient sounds that works like *4′33″* sought to cultivate was, as Richard Taruskin has pointed out, not handed down from nature but the product of Western aestheticism (2009, 275). This legacy is still evident in the writings of latter-day Cage enthusiasts such as David Rothenberg, who asserts that "music in nature is any series of sounds that can be appreciated for their depth, beauty, and artistry." To be musical, he continues, a natural sound need only be heard "as a beautiful form that can be enjoyed in itself apart from its purpose in the world" (2001, 6). Although this view would seem to be modulated in Rothenberg's later study (2011) of the arbitrary rather than purposeless character of aesthetic traits selected for in the wild, it is worth recalling Dario Martinelli's observation that although the biological register of the aesthetic is not "totally utilitarian," it is also not "totally useless" (2003, 264).

Taruskin offers a compelling alternative to the customary view that Cage derived the practice of letting sounds be themselves from Eastern meditation, yet one might also recognize the influence of modern information theory, in which what matters are the physical differences a signal encodes (and the challenges to its accurate transmission and decoding) rather than its meaning. In a foundational text, Claude Shannon writes, "The fundamental problem of communication is that of reproducing at one point either exactly or approximately a message selected at another point. Frequently the messages have *meaning* . . . These semantic aspects of communication are irrelevant to the engineering problem" (1948, 379). Translating this attitude to the musical sphere means that the listener, modeled on a tape recorder or oscilloscope, relinquishes concern with what music might mean and instead focuses on a shifting continuum of sonic differences. Cage tries to brighten what seems like a bleak scenario of immersion in auditory stimuli stripped of significance by positing a connection between deracinated sounds and human affect and imagination. "Hearing sounds which are just sounds," he muses, "immediately sets the theorizing mind to theorizing, and the emotions of human beings are continually aroused by encounters with nature" (1961, 10). If this is so, it is because sounds in nature are not just sounds but signs—signs, or indices, of presences in the world, signs that establish physical, affective, and interpretive relationships between listeners (whether human or not) and their sur-

This work originally appeared in CR: The New Centennial Review 18.2, fall 2018, published by Michigan State University Press.

roundings. Cage alludes to this broader semiosis when he states, in veritable Romantic fashion, that "trees, stones, water, everything is expressive" (Piekut 2013, 142). Expressive of what? Of presence, of the "I am here" of everything.[6]

Cage's and Adams's genuine fascination with the natural world makes odd bedfellows with the austere view of sound promoted by both composers, a view that forms much of the bedrock of modernist listening practices. Perhaps the rhetoric of "sounds themselves" continues to be attractive because it allows us to imagine getting beyond the claustrophobic realm of human purposes. It lures us into thinking that we are delving into the essence of sound, that we are getting past a kind of hearing that instrumentalizes the world according to our designs. In straining to hear sounds themselves, we try not to decipher, to interpret, to extrapolate, or to subjectify but to revel, presumably, in the sensuous immediacy of vibrations impinging upon ears and body. This desire has taken various forms over the years, from Cage's essays to Susan Sontag's polemics against interpretation to Carolyn Abbate's elevation of the drastic over the gnostic (Sontag 2013; Abbate 2004). A similar impulse can be witnessed in the rise of speculative realism and object-oriented ontology, both of which explore alternatives to the correlationism according to which what we can say about the world must be explicitly couched as the product of human modes of perception and cognition.[7] Getting absorbed in "sounds themselves" and shedding the compulsion to interpret, we seem to escape, however fleetingly, the imperatives of what anthropologist and systems theorist Gregory Bateson called "purposive consciousness," that form of linear thinking narrowly focused on human aims (1972, 434).

Does reveling in the sensuous qualities of sounds—especially natural sounds—get us closer to the cyclical, system-oriented perspective Bateson thought we needed to cultivate? If anything, such a listening posture only exacerbates the tendencies that concerned Bateson by isolating individual phenomena from larger contexts and extracting sensuous particulars from their place in larger systems—social, semiotic, economic, and so on. If ecology and systems theory have taught us anything, it is to be very cautious when invoking the notion of existence in or for itself. Treating things as though they do exist in a wholly independent manner, Bateson suggests, is a product of the

This work originally appeared in CR: The New Centennial Review 18.2, fall 2018, published by Michigan State University Press.

distortion wrought by human consciousness (1972, 444). Even though Rothenberg recommends "dwelling inside an ecology to know the significance of a wayward sound," his separation of beauty from purpose makes it seem as though apprehending the musicality of natural sounds depends on suppressing their larger ecological significance (2001, 5–6). To be sure, there is nothing to stop listeners from attempting the "reduced" listening prescribed by the ontology of "sounds themselves."[8] Plenty of modern music, for example, would appear to welcome such an approach. But when reduced listening is transferred from the concert hall to nonhuman habitats, it threatens to reduce the raison d'être of many natural sounds straight out of existence. In *How Forests Think*, Kohn writes that "signs are not exclusively human affairs. All living beings sign. We humans are therefore at home with the multitude of semiotic life" (2013, 42). In a similarly ecological spirit, composer David Dunn remarks, "What we hear from other forms of life and the environment they reside in is information that is unique and essential about patterns of relationship in context" (2001, 98). If "sounds themselves" are a fiction or, more generously, an asymptote toward which human perception aspires in very limited instances, then human sound making in general evinces the same entwinement of meaning and form exhibited elsewhere in nature, a situation that attests to the connections between, in Adams's words, "the sounds we make and the larger, older world" (1994, 17).

## Conundrums of Musical Semiosis

In a recent essay, Gary Tomlinson has suggested that music is specially poised to reveal these connections, even in cases where it has been understood primarily in terms of symbolic representation (his example is the leitmotivic texture of Richard Wagner's operas). Starting from the premise that semiosis extends "out toward the broadest reaches of the biome," Tomlinson argues that listeners encounter mostly indexical signs in music—signs he describes as "standing near to, gesturing at, pointing to, or indeed causing their objects" (2013, 191, 194). Indices, Tomlinson maintains, are minimally referential; they lack the "aboutness" that, in his view, icons and symbols possess (194–95). Because many more creatures respond to indexical signs (such as the sounds

This work originally appeared in CR: The New Centennial Review 18.2, fall 2018, published by Michigan State University Press.

made by their own and other species) than symbolic ones, Tomlinson classes music among what he calls "informational processes of wide extrahuman dispersion" (197).

Tomlinson's thesis regarding the close connection between musicking and nonhuman semiosis is undeniably appealing, especially given music's conspicuous affective impact, its formal resemblances to certain kinds of animal communication, and the "embodied and palpable" nature of its signs (197). Indeed, music is psychoactive in a manner that attests to the indexlike contiguity between its sonic attributes and the affective states it is capable of inducing—soft, gentle singing for a lullaby, say, or full-bodied, percussive chanting for a war song. But given that Tomlinson reverses the customary way of understanding indices—he refers to them as *causing* their objects rather than being caused *by* them, as the index smoke is caused by its object, fire—it appears that something more than Peircean indexicality is involved in such cases. Moreover, if the listener's responses, rather than musical sounds, assume the role of indices that point to the music that causes them, then one would still need to specify how particular configurations of musical sounds come to wield this causal power.[9]

Tomlinson's approach to musical signification presents further difficulties. For instance, although he builds upon Naomi Cumming's full-length Peircean study of music *The Sonic Self*, he passes over Cumming's resituation of the bulk of musical indexicality back into the domain of iconicity, such that a vocal or instrumental "cry" does not signal actual distress but, in Cumming's words, "represent[s] that state 'iconically' at a more abstract level" (2000, 91). In other words, a musical cry constitutes a *likeness* of a vocal contour appropriate to the communication of distress. For Cumming, musical expression is typically iconic in this fashion, whereas the reference of indices is "grounded in their time and place of use" (93). Just as the rotations of a weather vane index the movement of wind, the sounds produced by voices and instruments index the dynamic actions of human bodies. Musical expression, by contrast, unfolds in a virtual world that is distinct, though not entirely separate, from the kinetic arena of sound production. So while Tomlinson, in his book *A Million Years of Music*, argues that tempo and dynamics serve as "energetic indexes," and that vocal contour and rhythmic organization index states of

This work originally appeared in CR: The New Centennial Review 18.2, fall 2018, published by Michigan State University Press.

affective and physical arousal, Cumming would understand these features as iconic—as indices once removed or virtualized but not by consequence any less effective (Tomlinson 2015, 268). This second-order indexicality, or the creation of virtual worlds out of networks of intramusical relations, probably should not be equated with the indexical signification taking place across the "broadest reaches of the biome."

My aim here is less to criticize Tomlinson than to demonstrate that music does not submit willingly to Peircean semiotics so much as it critiques that semiotics from within. Put another way, music blends aspects of iconicity, indexicality, and symbolism in a fashion that is, if not wholly unique, then uniquely difficult to disentangle.[10] To see this, let us ponder an option Tomlinson rejects: namely, that tones and chords are members of a symbolic (rather than indexical) system by virtue of their systematic interrelationships. The advantage of this perspective is that it makes room for the conventionality, and thus the cultural variability, of musical expression. Cumming calls a symbol "a conventionally stipulated relation (as in most words), requiring knowledge of the convention for its interpretation" (2000, 86). Of course, music generally does not traffic in one-to-one relationships between signs and referents; music does not speak in words, nor are its units of signification as easily parsed as the words of a sentence. Yet music does resemble a symbolic system in that the correspondences between musical materials and what they signify for acculturated listeners are at least partly governed by convention. In this respect, Kohn's remark that symbols "refer to their object indirectly by virtue of the ways in which they relate systematically to other such symbols" does apply to music, if reference is understood as roughly equivalent to expressive significance (2013, 32).[11] Although there is no predetermined relationship between a flat-II chord, or a progression containing that chord, and particular affective or gestural meanings, the expressive qualities of tonal music arise in part from conventionalized differentiations among complexes of musical material and the ability to recognize their resulting connotations. Whatever the alleged indexical meanings of major and minor thirds, for example, the contrasting expressive worlds of major and minor tonalities emerged by way of increasing discriminations within and extensions of the tonal harmonic system.[12] It is in this sense that we can appreciate Adams's

This work originally appeared in CR: The New Centennial Review 18.2, fall 2018, published by Michigan State University Press.

remark that human music is a "symbolic and semantic phenomenon in which the relationships *between* sounds mean more than the sounds themselves."

Taking the Peircean approach a step further, one might argue that music's capacity for quasi-symbolic reference rests on a broader basis of iconicity. What this means is that the discrete pitches of music are neither indexical, symbolic, nor meaningless. Rather, discrete pitches are icons *of each other*. This microlevel iconicity differs from the macrolevel resemblances between melodic contours and expressive vocalization, say, or between musical rhythms and physical gestures. Discrete pitches, short melodic motives, and brief rhythmic patterns are icons that proliferate by way of repetition and variation (this applies to some animal songs as well). At this more basic level, icons are, in Kohn's words, "semiotic phenomena, even though they largely lack an indexical component that can be interpreted as pointing to anything other than another instance of the patterns they instantiate" (2013, 185). It is the likenesses among pitches, not their indexicality, that allows them to form what Tomlinson calls arrays, which, in the case of human music, serve as the basis for elaborate musical systems. Discrete pitches represent neither meaningless sounds nor deracinated information but a new kind of sign, a sign whose relational possibilities inaugurate the virtual spaces of music. These spaces are broadly symbolic in that their referentiality or expressiveness is, in Kohn's terms, "ultimately the product of a series of highly convoluted systemic relations among icons" (56).

In sum, while music indeed constitutes a complexly embodied and affectively replete mode of communication whose conditions of possibility stretch beyond the boundaries of the human, it does so by way of an arsenal of semiotic strategies that includes the systematic discriminations of the symbolic register. This conclusion, though at variance with Tomlinson's, shares in his concern to distinguish between human music and the sonic expressions of other creatures without overstating their points of disconnection. It is not that nonhuman sounds are "sounds themselves" whereas human sounds are drenched in meaning, but that human music, like human language, features a degree of systematic intricacy that appears to be unique in the living world. A more agnostic conclusion would be that even if some nonhuman animals communicate using a mixture of symbolic,

This work originally appeared in CR: The New Centennial Review 18.2, fall 2018, published by Michigan State University Press.

indexical, and iconic signs that play out in a virtual realm, we humans would be unlikely to recognize it.

## Icons of Absence

The economy of musical signification changes considerably in cases where discrete pitches no longer serve as the primary artistic material. In many contemporary pieces, the systemic, symbolic relationships among tones that Adams singled out for comment cease to be major players in the compositional game. For the Cage of "Experimental Music," dispensing with discrete pitch was the first step toward ushering "nature's manner of operation" into the aesthetic domain. Recording technology would seem to represent another step, in that composers can now collect "wild sounds" and insert them into sound collages whose expressivity bears little resemblance to that of pitched music. A recent example is the 16-channel sound installation *Ultrafield* by Norwegian composer Jana Winderen, which was included in the exhibition *Soundings: A Contemporary Score* mounted at New York's Museum of Modern Art in 2013. Winderen's piece featured sounds recorded beneath and around a lake near Oslo—flowing water, melting ice, and the ultrasound emissions of bats and underwater insects transposed into the range of human hearing.[13] While the source material of Winderen's piece may appear to be more natural than the discrete pitches of tonal music, the installation nonetheless relied on a decontextualization not unlike that found in common-practice music, in which the indexical relations between tones and the performer's actions are rendered secondary to intramusical iconicity. That is, *Ultrafield* obscures the originary indexicality of its source sounds to instantiate the virtual space of the installation and the likenesses (and differences) in which it traffics (*that sounds like running water, that sounds like the chirp of an insect*). The bat vocalizations and other ultrasonic sounds are doubly decontextualized by recording and transposition. Winderen's compositional method consists of transforming what were once indices into a nonsystematic arrangement or assemblage of icons.

Although *Ultrafield* could be understood as supporting the commonplace observation that technology expands human perceptual capacities, "allowing

This work originally appeared in CR: The New Centennial Review 18.2, fall 2018, published by Michigan State University Press.

us," as the museum placard put it, "to experience sonic realities that are otherwise out of reach," I found myself meditating on a very different prospect as I sat in the dark room housing the installation. What *Ultrafield* indicated to me was that its source sounds, in their broadly semiotic significance, really were out of reach. Listening to transposed versions of ultrasonic sounds only confirmed that I was not really hearing those sounds—that I will never fully understand, for instance, what it is like to be a bat.[14] The powerfully affecting sense of both hearing and not hearing stimulated by Winderen's compositions serves as a reminder that technological access to (or, rather, creation of) "sounds themselves" does not equal access to the embodied and contextual meanings those sounds have for nonhuman others. Adams acknowledges this when he warns that using field recordings in compositions risks reducing living sounds to raw material: "Removing wild sound from its natural context can trivialize and lessen the rich ambiguities inherent in both wild sound and human music" (1994, 17). Dunn concurs, arguing that "The sounds of living things are not just a resource for manipulation; they are evidence of mind in nature and are patterns of communication with which we share a common bond and meaning" (2001, 98).

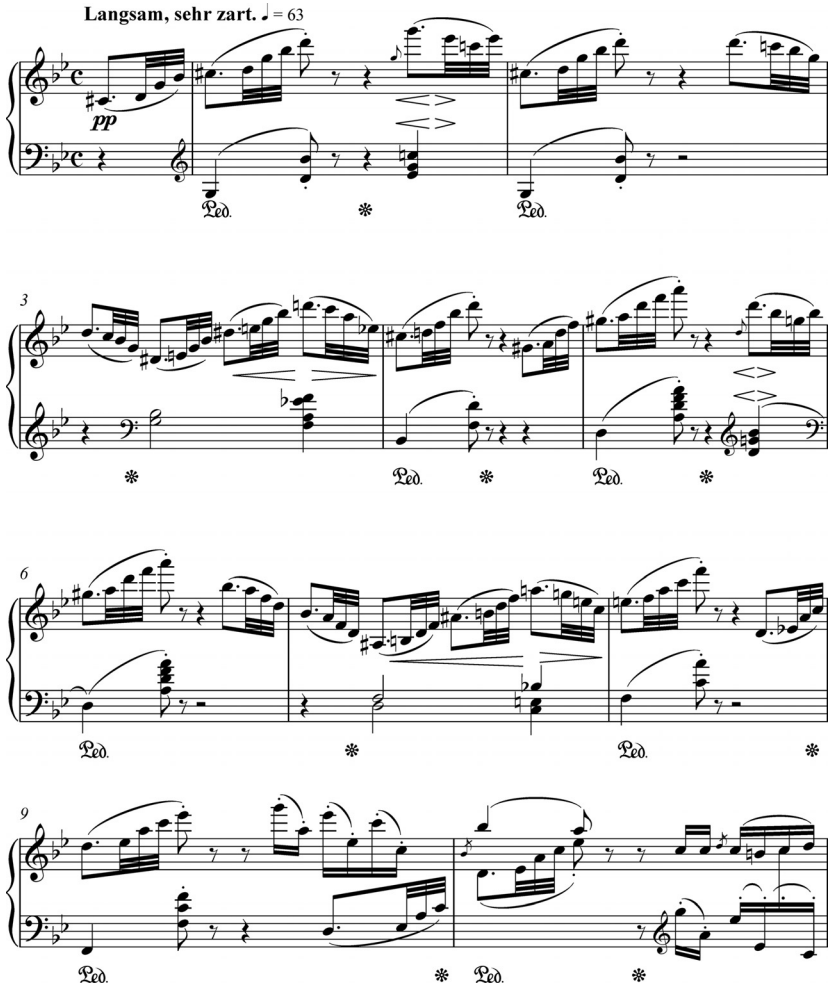
Winderen's compositions preserve some of the ambiguity to which Adams alludes by putting listeners in the paradoxical position of hearing what they cannot hear.[15] The attentive listening to wild sounds that informs her music, then, might go some way toward spurring wonder and humility in the face of what does not sound for us in nature.

## How *Waldszenen* Thinks

Let us return to music in which, as Adams maintains, "the relationships *between* sounds mean more than the sounds themselves." In Schumann's *Waldszenen*, we encounter a complex network of iconic, indexical, and symbolic relationships that creates its own possibilities for how music can constitute a "sonic geography." The seventh movement, "Vogel als Prophet," imagines a territorial sound "reterritorialized as music," to borrow Elizabeth Grosz's Deleuzian phrase. The virtual song of Schumann's *Vogel* is "not positioned in a definable geographical territory but within a plane of composition

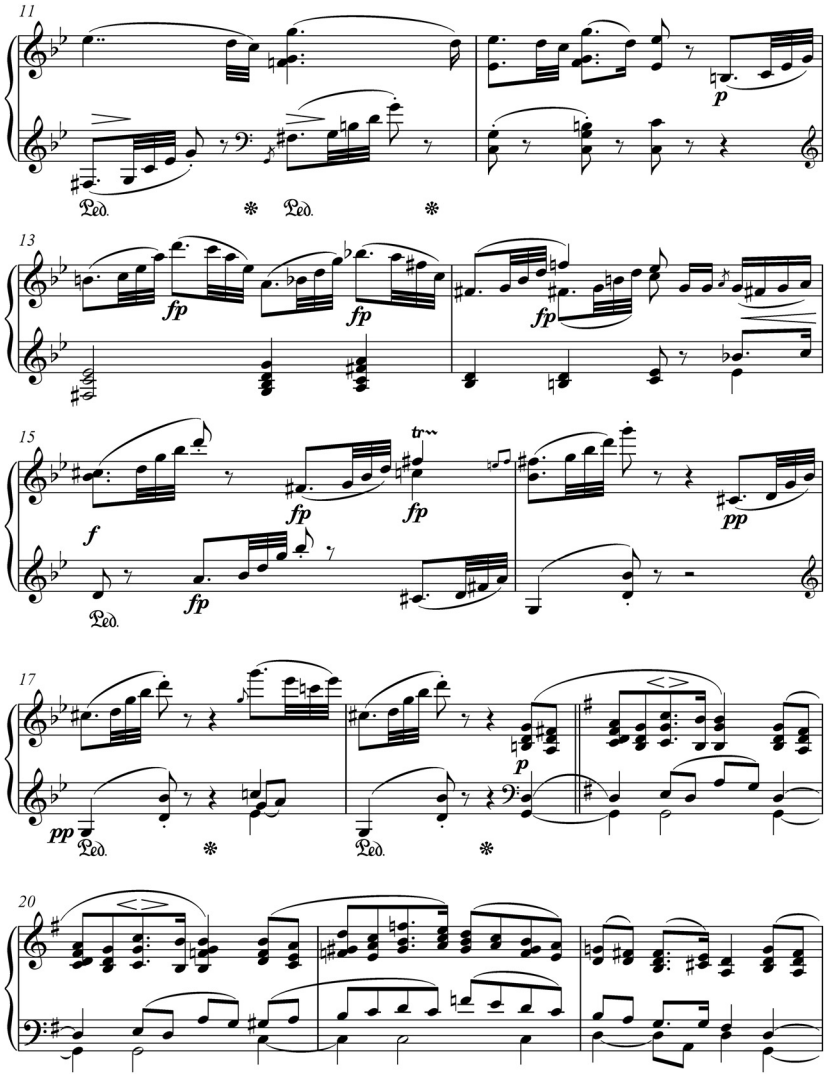
This work originally appeared in CR: The New Centennial Review 18.2, fall 2018, published by Michigan State University Press.

in which it summons up primordial fears, desires, and pleasures . . . only to direct them, reterritorialize them, on the plane of music itself" (Grosz 2008, 58). The movement opens with a melody whose expansive tessitura, twittering thirty-second notes, and inscrutable silences suggest the song of nothing human (example 1). Rhythmic patterns and melodic shapes proliferate as icons or likenesses of one another: a dotted eighth note followed by three thirty-second notes; arpeggiated triads preceded by chromatic appoggiatu-




**Example 1. Robert Schumann, *Waldszenen*, op. 82, movement 7, "Vogel als Prophet," measures 1–27.**

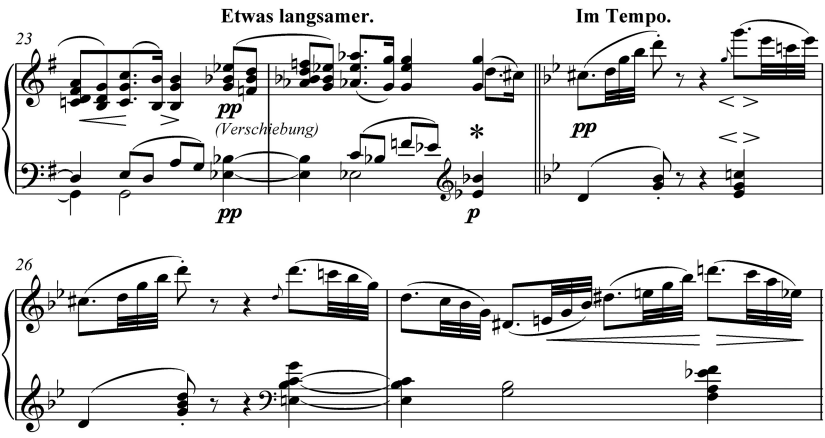
This work originally appeared in CR: The New Centennial Review 18.2, fall 2018, published by Michigan State University Press.




**Example 1. Continued.**

ras. Following the thread of the melody depends largely on recognizing the repeating rhythmic pattern as well as the intervallic similarities between transpositions, variations, and inversions of the opening four-note figure while not noticing, in Kohn's sense, the differences between them (2013, 51). At this level, musical signs are about each other, although they may also be about

This work originally appeared in CR: The New Centennial Review 18.2, fall 2018, published by Michigan State University Press.




**Example 1. Continued.**

affect and gesture. Elements of the music piggyback on one another in a manner resembling what Kohn calls "the iconic propagation of self-organizing thought," where thought is understood not as a special type of mental activity but as the dynamic proliferation of signs (177). It may seem unnecessary to point out that the techniques of variation and elaboration, on which so much music is based, rest on a semiotic foundation of iconicity as the mediation of likeness and difference. But if all semiosis involves meaning, then the iconicity of music effectively refutes the notion of music's meaninglessness as well as Tomlinson's claim that musical experience offers an "*a priori* to aboutness" (2013, 197).

Even as rhythmic and melodic likenesses ricochet through the texture of Schumann's piece, the *unlikeness* of the melody to others in and beyond the cycle spurs listeners to wonder what kind of utterance this is meant to be, what it expresses, what it is getting at. The melody invites those familiar with the title to hear it as the vocal peregrinations of some fantastical bird—as the indexical utterances of an imaginary creature. Subsequent shifts in thematic material and expressive register indicate that the bird is not the only animal on the scene. Schumann's piece is also about a nonhuman sound and how it is heard by a human listener—heard, that is, as prophetic by someone *in the world of the piece*. In this sense, "Vogel als Prophet" is about what Adams referred to as "attentive listening to wild sounds."

This work originally appeared in CR: The New Centennial Review 18.2, fall 2018, published by Michigan State University Press.

The virtual listener to this virtual birdsong is not just hearing sounds that "simply sound." The first phrase, which lasts from the initial upbeat through the first half of measure 2, sets forth the virtual wilderness of the piece. The call's off-kilter appoggiaturas invest it with a degree of otherness, as if the bird's utterances do not quite fit into the conceptual framework of the human perceiver. This is largely due to the delayed resolution of the appoggiatura's dissonances: although each C♯ proceeds to a D, it is only with the arrival on the highest D—and thus with the traversal of a sixteenth rather than a second—that the call truly reaches a place of repose. Further elaboration of the call culminates in an arrival on the relative major B-flat (measure 5), and this harmonic pattern recurs in the restatement of the opening call in D minor and subsequent turn to F major (measures 5–8). Although it is strange to think of birdsong modulating in this way, the music nonetheless carves out a space for the bird that corresponds to neither total domestication nor complete incomprehensibility. After a series of phrases that traverse third-related harmonic areas, a pattern whose neatness is skewed by those persistent appoggiaturas, the passage beginning in measure 9 suggests, to my ear, that the responsiveness of the imaginary listener gains a certain momentum along with the vocalizations of the bird. Motivic material deriving from the opening call is passed between right and left hands, while the right-hand melody briefly flirts with a simpler, appoggiatura-free, more human kind of singing (pickup to 11 through 12). It is as if the imagination, or even the voice, of the human listener enters into dialogue with the bird's cries—cries whose capacity to signify, to inspire the further proliferation of signs, displays the future orientation characteristic of prophecy. This dialogue does not last long, however, as the original birdcall returns in measures 16–18.

A sudden shift to the human world follows at the end of measure 18 with the entry of a chorale-like tune in G major. The chorale's metrical displacement, more seen than heard, places it slightly at odds with the sonic space of the birdcall; these two sanctuaries, so to speak, are not entirely contiguous. While it would be easy to jump to the conclusion that *this* is the prophecy toward which the movement has been heading, the chorale is a little too bland to enjoy any such honor. Could it be that the piece juxtaposes the enigmatic semiosis of natural signs, whose meaning is not fully penetrable by human

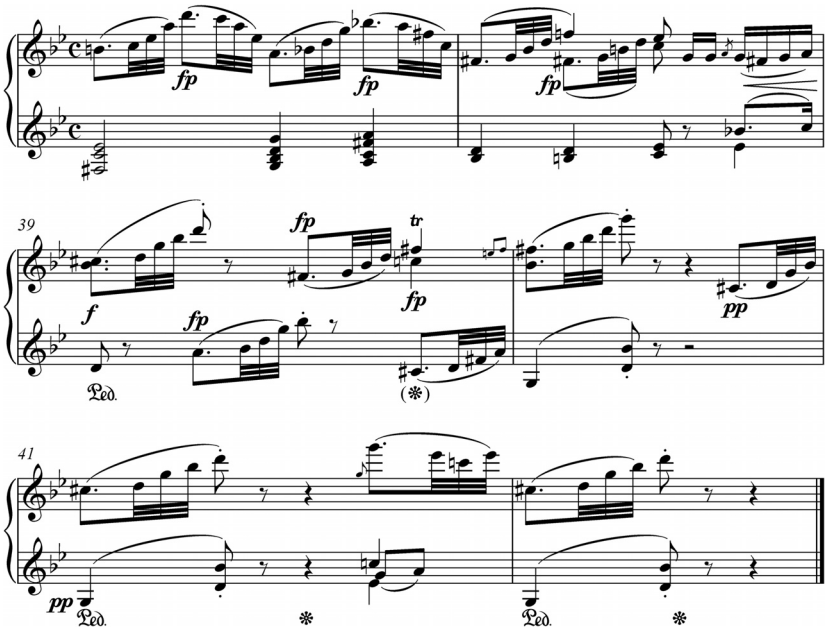
This work originally appeared in CR: The New Centennial Review 18.2, fall 2018, published by Michigan State University Press.

ears, with the all-too-familiar offerings of conventional religion? As if resigned to its own lack of interest, the chorale (and the virtual world of human music nested within the piece) holds the fictional listener's attention only for a short time. At the marking "Verschiebung" (soft pedal), which also means "displacement," the melody wanders away from its tonal and rhythmic moorings, slows down, and moves into E-flat major. Alternatively, perhaps the chorale, as a feature of human society, stays where it is, while the fictional listener's attention drifts back to the wild world of avian song.

These almost entirely disparate musics are linked by one of those tiny motivic connections Schumann relished: the lowly half-step, which characterizes both the birdsong's appoggiaturas and the chorale melody's (displaced) first and third beats. At the end of measure 24, the chorale's dotted half-step is transposed to D-C# so that its inversion C#-D can launch the return to the birdsong. The last beat of measure 24 is an uncanny moment indeed; one cannot judge where the human music ends and the bird song begins. This moment could be thought of as a paralinguistic instance of what Friedrich Kittler has termed the "minimal signified," or it could be understood in more formal terms as a pattern of utterance shared across species lines (1990, 42–43). Schumann's half-step, a hybrid of human and avian modes of expression, encourages the recognition that iconic similarities are meaningful in their very iconicity, in their ability to reveal the common formal ground traversed by creatures whose physiologies and phylogenies are profoundly different. At the same time, the appearance of similarity warns us to be on the lookout for difference—which in this case means the possibility that a human half-step might be more like a sixteenth to a bird, with much more room to maneuver.

"Vogel als Prophet," in short, is itself prophetic of a listening attitude that rejects the notion of nature as the domain of "sounds themselves" in favor of appreciating—to the extent that we are able—the full-bodied semiosis of nonhuman others. But, the reader may counter, is this not happening merely within the virtual environment of a piece of human music? Does Schumann's piece really have anything to do with the songs of real birds? The ending of "Vogel als Prophet" may offer a provisional answer—which might seem strange, considering that measures 25–42 repeat almost exactly what was

This work originally appeared in CR: The New Centennial Review 18.2, fall 2018, published by Michigan State University Press.




**Example 2. Schumann, *Waldszenen*, op. 82, "Vogel als Prophet," measures 37–42**

heard in measures 1–18 (example 2). Laura Tunbridge notes that the effect of these final measures is "one of departure rather than conclusion; we leave the bird fluttering around the branches, and then we simply move on to the next scene" (2007, 191). The rising flourish and wispy dyad that close the movement merely reiterate what has by now been heard many times over; a definitive sense of tonal closure is deferred to *Waldszenen*'s final movement, "Abschied" ("Departure"). The human visitor's departure from the forest provides the concluding gesture, yet the forest as a site of living thought (to borrow a phrase from Kohn), of the abundant proliferation of signs, continues as before. Places remain, birds keep calling, flowers keep growing, hunters and wanderers come and go. The inconclusiveness of "Vogel als Prophet" points beyond itself to the open-ended, multisensory environments of the outdoors. After giving the piece a good listen, why not leave the space of aesthetic consumption and continue the semiotic adventure elsewhere? At the risk of courting accusations of sentimentality, one could do worse than emulate Kant's "beautiful soul" who trades the gallery and concert hall for field and meadow, eager to

This work originally appeared in CR: The New Centennial Review 18.2, fall 2018, published by Michigan State University Press.

discover "a train of thought that he can never fully unravel" (1987, 167). Nineteenth-century character pieces and twenty-first-century sound installations may inspire respect for the wider world of living sound, but, as composer R. Murray Schafer once wrote, "The rest is outside your front door."[16]

## NOTES

1. See Cox (2011).
2. See my forthcoming book (Watkins 2018). This essay includes material from the book's introduction and chapter 6, which has been reproduced by permission.
3. See, e.g., Wolfe (2010), Morton (2013a; 2013b), and Cecchetto (2013).
4. See Bregman (1999).
5. See Kane (2014).
6. This is not to say that we have anything like transparent access to the world; what we take to be present is necessarily shaped by our perceptual and cognitive faculties as well as by technological apparatus.
7. See, e.g., Meillassoux (2008) and Harman (2018).
8. Nothing, that is, other than the design of the auditory system itself, which, as Dale Purves remarks, does not actually "reveal the physical world" (Purves 2017, 12).
9. Christopher Norris raises similar objections in his response to Tomlinson's article (Norris 2014).
10. Albert Atkin writes, "Peirce was aware that any single sign may display some combination of iconic, indexical, and symbolic characteristics" (Atkin 2013).
11. Compare David Lidov, who writes that "the apprehension of relations or rules or regularities, such as a tonality, [gives] rise to *symbols*" in a Peircean sense (Lidov 2005, 125).
12. Purves, for instance, argues that major and minor thirds correspond to prominent spectra of excited and subdued human speech (2017, chapter 7).
13. It is not clear from Winderen's website how many of the sounds were originally in the ultrasound range.
14. I refer, of course, to Thomas Nagel's classic essay "What Is It Like to Be a Bat?" (Nagel 1974).
15. Compare Dunn's 2008 composition *Listening to What I Cannot Hear*, an assemblage of ultrasonic sounds made by human artifacts and living things.
16. Cited in Drever (2002, 22).

## REFERENCES

Abbate, Carolyn. 2004. Music—Drastic or Gnostic? *Critical Inquiry* 30, no. 3: 505–36.

Adams, John Luther. 1994. Resonance of Place. *North American Review* 279, no. 1: 8–18.

This work originally appeared in CR: The New Centennial Review 18.2, fall 2018, published by Michigan State University Press.

———. 2001. The Place Where You Go to Listen. In *The Book of Music and Nature: An Anthology of Sounds, Words, Thoughts*, ed. David Rothenberg and Marta Ulvaeus, 181–82. Middletown, CT: Wesleyan University Press.

Atkin, Albert. 2013. Peirce's Theory of Signs. *The Stanford Encyclopedia of Philosophy*, ed. Edward N. Zalta. http://plato.stanford.edu/archives/sum2013/entries/peircesemiotics/ (accessed May 1, 2018).

Bateson, Gregory. 1972. *Steps to an Ecology of Mind*. New York: Ballantine Books.

Bregman, Albert S. 1999. *Auditory Scene Analysis: The Perceptual Organization of Sound*. Cambridge, MA: MIT Press.

Cage, John. 1961. *Silence*. Middletown, CT: Wesleyan University Press.

Cecchetto, David. 2013. *Humanesis: Sound and Technological Posthumanism*. Minneapolis: University of Minnesota Press.

Cox, Arnie. 2011. Embodying Music: Principles of the Mimetic Hypothesis. *Music Theory Online* 17, no. 2: 1–24.

Cumming, Naomi. 2000. *The Sonic Self: Musical Subjectivity and Signification*. Bloomington: Indiana University Press.

Deleuze, Gilles; and Félix Guattari. 1987. *A Thousand Plateaus: Capitalism and Schizophrenia*, trans. Brian Massumi. Minneapolis: University of Minnesota Press.

Drever, John Levack. 2002. Soundscape Composition: The Convergence of Ethnography and Acousmatic Music. *Organised Sound* 7, no. 1: 21–27.

Dunn, David. 2001. Nature, Sound Art, and the Sacred. In *The Book of Music and Nature: An Anthology of Sounds, Words, Thoughts*, ed. David Rothenberg and Marta Ulvaeus, 95–107. Middletown, CT: Wesleyan University Press.

Eagleton, Terry. 2003. *After Theory*. New York: Basic Books.

Goehr, Lydia. 2008. *Elective Affinities: Musical Essays on the History of Aesthetic Theory*. New York: Columbia University Press.

Grosz, Elizabeth. 2008. *Chaos, Territory, Art: Deleuze and the Framing of the Earth*. New York: Columbia University Press.

Harman, Graham. 2018. *Object-Oriented Ontology: A New Theory of Everything*. London: Pelican Books.

Higgins, Kathleen Marie. 2012. *The Music between Us: Is Music a Universal Language?* Chicago: University of Chicago Press.

Kane, Brian. 2014. *Sound Unseen: Acousmatic Sound in Theory and Practice*. New York: Oxford University Press.

Kant, Immanuel. 1987. *Critique of Judgment*, trans. Werner S. Pluhar. Indianapolis, IN: Hackett Publishing Company.

Kittler, Friedrich. 1990. *Discourse Networks 1800/1900*, trans. Michael Metteer, with Chris Cullens. Stanford, CA: Stanford University Press.

Kohn, Eduardo. 2013. *How Forests Think: Toward an Anthropology beyond the Human*. Berkeley: University of California Press.

Latour, Bruno. 1993. *We Have Never Been Modern*, trans. Catherine Porter. Cambridge, MA: Harvard University Press.

This work originally appeared in CR: The New Centennial Review 18.2, fall 2018, published by Michigan State University Press.

Lidov, David. 2005. *Is Language a Music? Writings on Musical Form and Signification*. Bloomington: Indiana University Press.

Marler, Peter. 2000. Origins of Music and Speech: Insights from Animals. In *The Origins of Music*, ed. Nils L. Wallin, Björn Merker, and Steven Brown, 31–48. Cambridge, MA: MIT Press.

Martinelli, Dario. 2003. Symptomatology of a Semiotic Research. In *Musical Semiotics Revisited*, ed. Eero Tarasti, 261–71. Imatra, Finland: International Semiotics Institute.

Meillassoux, Quentin. 2008. *After Finitude: An Essay on the Necessity of Contingency*, trans. Ray Brassier. London: Continuum.

Morton, Timothy. 2013a. *Hyperobjects: Philosophy and Ecology after the End of the World*. Minneapolis: University of Minneapolis Press.

———. 2013b. *Realist Magic: Objects, Ontology, Causality*. Ann Arbor, MI: Open Humanities Press.

Nagel, Thomas. 1974. What Is It Like to Be a Bat? *Philosophical Review* 83, no. 4: 435–50.

Norris, Christopher. 2014. Small Change When We'Are to Bodies Gone? Response to Gary Tomlinson. *Opera Quarterly* 29, nos. 3–4: 203–11.

Piekut, Benjamin. 2013. Chance and Certainty: John Cage's Politics of Nature. *Cultural Critique* 84: 134–63.

Purves, Dale. 2017. *Music as Biology: The Tones We Like and Why*. Cambridge, MA: Harvard University Press.

Rothenberg, David. 2001. Introduction: Does Nature Understand Music? In *The Book of Music and Nature: An Anthology of Sounds, Words, Thoughts*, ed. David Rothenberg and Marta Ulvaeus, 1–10. Middletown, CT: Wesleyan University Press.

———. 2011. *Survival of the Beautiful: Art, Science, and Evolution*. New York: Bloomsbury Press.

Shannon, Claude. 1948. A Mathematical Theory of Communication. *Bell System Technical Journal* 27, no. 3: 379–423, and no. 4: 623–56.

Sontag, Susan. 2013. *Against Interpretation and Other Essays*. New York: Picador.

Taruskin, Richard. 2009. No Ear for Music: The Scary Purity of John Cage. In *The Danger of Music and Other Anti-Utopian Essays*, 261–79. Berkeley: University of California Press.

Tomlinson, Gary. 2013. Parahuman Wagnerism. *Opera Quarterly* 29, nos. 3–4: 186–202.

———. 2015. *A Million Years of Music: The Emergence of Human Modernity*. New York: Zone Books.

Tunbridge, Laura. 2007. *Schumann's Late Style*. Cambridge: Cambridge University Press.

Waal, Frans de. 2016. *Are We Smart Enough to Know How Smart Animals Are?* New York: W. W. Norton.

Watkins, Holly. 2018 (forthcoming). *Musical Vitalities: Ventures in a Biotic Aesthetics of Music*. Chicago: University of Chicago Press.

Wolfe, Carey. 2010. *What Is Posthumanism?* Minneapolis: University of Minnesota Press.

This work originally appeared in CR: The New Centennial Review 18.2, fall 2018, published by Michigan State University Press.